

STARSHIPS & SPACEMEN

CARRY OUT
MISSIONS IN
THE FINAL
FRONTIER



SCIENCE FICTION ROLE PLAY

LEONARD H. KANTERMAN



Fantasy Games Unlimited, Inc.

STARSHIPS & SPACEMEN

Capt. Leonard H. Kanterman, M.D.
U.S. Army Medical Corps



Fantasy Games Unlimited, Inc.

P.O. BOX 182
ROSLYN, N.Y. 11576

U.S. COPYRIGHT NOTICE

Copyright 1978 - Leonard H. Kanterman

All rights in this book are reserved. No part of the book may be used or reproduced in any manner whatsoever without permission, except in case of brief quotations embodied in critical articles or reviews.

For information contact Fantasy Games Unlimited Inc.

Cover art & illustrations copyright 1978 - Rick Bryant.

Dedicated to: My wife Susan, without whose patience this game would not be;

AND

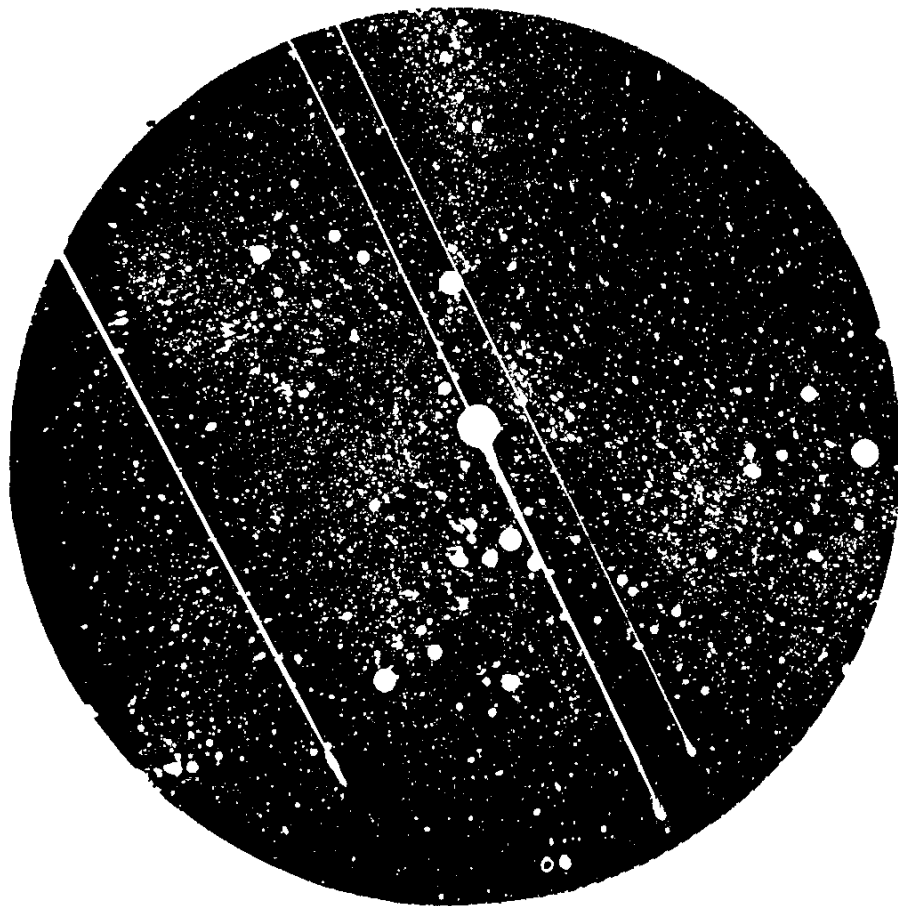
The original crew: Lee Buckley, Anita Cohen, Charles Elsdon, Scott McPartland, Tim Slack, and Steve Ulberg.

EDITORIAL INTRODUCTION

In the Spring of 1976 we first heard from Leonard Kanterman and attended our first play test session of Starships & Spacemen. Each play test brought changes and clarifications to the rules and the game itself until it was completed by the summer. Now, at long last, we present to you what we feel a Science Fiction role playing game should be.

S&S is playable with our earlier game, Galactic Conquest, and as we stated there, it is a complete game in its own right. Fantasy Games Unlimited plans future Science Fiction games for this series and these will continue to be fully complete games which can be played together with other games from FGU.

SCOTT B. BIZAR
Editor



CONTENTS

I		
1.1	INTRODUCTION.....	1
1.2	Science Fiction Rationale.....	2
1.3	Equipment Needed for Play.....	4
II.	CHARACTERS	
2.1	Generation of Characters.....	5
2.2	Abilities.....	6
2.3	Branches and Subclasses of the Space Fleet Service.....	8
2.4	Non-Player Characters.....	11
2.5	Experience & Ranking.....	12
2.6	Races.....	13
2.7	Equipment.....	16
III	SPACESHIPS	
3.1	Spaceship Capabilities.....	20
3.2	Ship Statistics by Type.....	26
3.3	The Ship's Energy System.....	27
3.4	Enemy Ships.....	29
3.5	Ship-to-Ship Combat.....	30
IV	GALACTIC & PLANETARY ADVENTURES	
4.1	Setting Up the Galaxy.....	34
4.2	Time Scale & Sequence of Play.....	34
4.3	Hazards of Space.....	36
4.4	Galactic Random Encounter Tables.....	41
4.5	Setting Up a Star System.....	42
4.6	Time Travel.....	44
4.7	Diseases.....	45
4.8	Starbases.....	47
V	ALIEN ENCOUNTERS	
5.1	General Comments.....	48
	Planetary Random Encounter Tables.....	49
5.2	Humanoids.....	50
5.3	Animals.....	53
	Mammals.....	53
	Flyers.....	54
	Fish & Water Creatures.....	56
	Insects.....	59
	Reptiles.....	60
5.4	Plants.....	61
5.5	Machines.....	62
5.6	Psionics.....	63
5.7	Miscellaneous.....	65
5.8	Alien Artifacts.....	66
5.9	Combat.....	70
VI	THE STARMASTER	
6.1	General.....	73
6.2	Experience Points.....	75
6.3	Inspiration and Sources.....	76
	APPENDIX, SAMPLE MISSIONS.....	78

STARSHIPS & SPACEMEN

INTRODUCTION

Starships and Spacemen (hereafter, S&S) is a multi-player, science fiction, role-playing game. An explanation of each of those three qualifiers will enable players new to this type of game to grasp the key concepts involved.

First of all, "multi-player". This game is intended for play by 3 or more individuals. One of them is not a player at all, but is more of a referee. This individual, the Starmaster (or SM), must do an extensive amount of preliminary work to set up the game. AS a referee he must know and interpret the rules and adjudicate situations as they arise. The role of the SM is covered more fully in section 6.1. The other individuals are the players. While there is theoretically no limit to the number of players, we have found that the game is most manageable with 2 to 5 players, depending, of course, on the ability and experience of the SM.

Next, "science fiction". Science fiction is a very popular genre among wargamers, especially aficionados of fantasy role-playing games. It was therefore almost inevitable that the twain would meet in a science fiction role-playing game. S&S postulates a universe in the 23rd century where interstellar travel in the light-year range can be accomplished in a matter of days. The science fiction "story" or rationale of S&S is given directly after this brief introduction. In S&S, the players travel through space in a starship, exploring star systems and landing on planets, and deal with various hazards interposed in their path by the SM both in space and on the various planets.

Lastly, "role-playing". S&S is unlike a conventional board wargame that involves a fixed mapsheet and counters which represent combat units. Instead, it is similar to other role-playing games in that each player generates a character (whose abilities are determined by random die rolls) and then manipulates and controls that character's actions in the various situations that occur. It cannot be overstressed that the player of the game should play a role as he determines his character's actions. That is, the player should form a concept in his own mind as to what type of person his character is and then act in accordance with these ideas. The character's type should obviously be based on his abilities, as determined by the roll of the dice. Players should always try to act in character; while this may not prove advantageous in one particular set of circumstances, it leads to a much better game overall.

To conclude this introduction, the concept of "victory" or "winning" must be discussed. The "object" for each player is simply to have fun. Nobody "wins"

a game such as this (although everyone can lose, if the situations the SM sets up are boring or frustrating). There is also no "time limit", other than exhaustion. The SM sets up a sector of the galaxy for the players to explore; if they don't finish their mission in one session, they may return at a later date for other sessions (and can even include new player's characters at other times).

1.2 Science Fiction Rationale

With the development of hyperdrive in the 22nd century, which enabled spaceship travel covering distances of light years in a matter of days, it was inevitable that Earthmen would begin to explore their galaxy. It was just as inevitable, once they had begun to do so, that they would encounter other sentient races, including others with the capacity for interstellar travel.

Naturally these first encounters were fraught with anxiety and more than a touch of xenophobia on both sides, and some injudicious actions occurred. The first ship commanders, being of a military tradition, tended to shoot first and ask questions later. As a result, the Terrans made powerful enemies of the leading spacefaring race: the Zangids. The Zangids were humanoids, resembling Oriental Terrans, and were an aggressive race with ambitions of galactic domination.

The First Interstellar War began in 2217, between the Zangids and the Terrans. The Zangids, having more experience in galactic warfare than the Terrans, did quite well initially. A Terran space fleet was destroyed near Alpha Centauri in 2220, leaving the home system vulnerable. Fortunately for the Terrans, the offensive capabilities of spaceships vis-a-vis planets was quite limited, so military actions remained confined to space, and a war of retaliatory "planet-busting" was avoided.

The Terrans were having a difficult time until a bright fellow at Terran Spacefleet HQ was able to piece together, out of several seemingly unrelated reports, some interesting deductions. If the Zangids were bent on galactic domination, perhaps there existed other sentient races who suffered under their rule and who would be willing to combine forces against a mutual enemy.

The Terrans began to seek out intelligent races as allies against the Zangids. The first to join up with them were the Taurans. The Taurans were ultralogical humanoids who thought with computer-like efficiency, but in whom evolution had achieved this at the total expense of emotion. The Zangids and the Taurans had a sort of uneasy truce: the Zangids were unable to conquer the Taurans, despite their efforts to do so, while the Taurans regarded the Zangids as merely "misguided" and did not seek to suppress them. The Taurans decided to throw in their lot with the Terrans because they viewed them as being more useful in the development of the galaxy and the other races within it (as the Zangids rule was harsh and stifling). The Taurans also helped institute the practice of placing a science officer aboard each ship to act as a cooling influence upon the military officers and to try to explore nonviolent means of achieving objectives.

With the Taurans, the Terrans began to form a Galactic Confederacy. The next race to join the Confederacy were the Andromedans. This race of shy, sensitive humanoids had never developed space travel, but had other amazing abilities. The Terrans took to the Andromedans with great affection (due, at least in part, to the Andromedan ability of tele-empathy or emotion projection) while the Andromedans saw the Terrans as their "liberators". The Taurans were skeptical of the value of such empathic creatures ruled by their emotions, but the Andromedans

were able to prove their value in unique situations on many occasions.

The final race in the Confederacy were the Rigel. These people had an interesting history. They were the descendants of a group of Terrans who had been sent into deep space in suspended animation in the late 1990's, when it appeared that Earth was about to destroy itself in a nuclear holocaust. Traveling at sublight speeds, these hand-picked specimens of genetic perfection found themselves on a planet towards the end of the 21st century. Life was hard on this barren world but the people's motivation was high, as they believed themselves to be the last remnant of humanity. By the mid-2100's, however, the society had fragmented into tribal groups. It was at this point that the Zangids appeared, trying to impose their will on these stubbornly independent humans. The Zangids enslaved the humans, who fought back with guerilla tactics. A favorite technique was the capturing of Zangid women, to prevent permanent colonization by the Zangids. The Zangid women were attracted to these fierce, semi-barbaric people, and intermarriages occurred. It was the product of such a union who led the final rebellion. In one night, the entire Zangid garrison was killed, and the women carried off to found a new breed. It was this breed that became the Rigel.

The Zangids attempted retaliatory raids on the Rigel. It was in the midst of one of these raids that the Terrans arrived on the scene. The Terrans dispersed the Zangid fleet, and expected to be welcomed warmly by the people of the Rigel. They were surprised to find that the tough, independent Rigel were wary of the Terrans. In Rigel mythology Earth had been destroyed and they believed themselves the last true humans.

With the Terrans on the scene, the Zangids changed their attitude towards the Rigel. The female Zangids were especially influential in this as they were greatly attracted to the Rigel and wanted friendly relations. After a somewhat curious turn of events, the Rigel became mercenaries: experienced, professional soldiers willing to fight for either side. The price of their service -- the neutrality of the planet as a military training station.

With new allies and the occasional use of Rigel mercenaries, the Terrans were slowly gaining the upper hand in the war against the Zangids. At the end of the 23rd century, however, a new force appeared in the galaxy: the Videni.

The Videni were religious fanatics on a holy war to conquer or convert the galaxy. No one knew from where they came, only that they followed a Mahdi. On each of their ships was a priest to insure complete, unquestioning devotion; heresy was dealt with swiftly and effectively, if sometimes brutally.

The Zangids saw in the Videni the opportunity to at last get the better of the Terrans. They believed that once the Terrans had been suppressed, the Videni would go their own way leaving them, the Zangids, as administrators. So the Zangids effected a mass conversion to the belief of the Mahdi.

It is at this point that the action of the game occurs. Somewhat after this time period the Videni discovered the false nature of the Zangid conversion and turned on them. The Terrans were able to see that the Videni were the most dangerous intruder of all, and convinced the Terrans to ally with the Zangids (their former enemies). Together they were finally able to contain the Videni.

1.3 Equipment Needed for Play

You will need the following to play S&S, in addition to the rules:

- a copy of the character sheet for each character ("xerox" the inserted sheet)
- blank hexagon sheets, graph paper, and other scratch paper
- pens, pencils, or other writing instruments; one for each player
- dice: at least 3 six-sided dice, preferably more
 - Other multi-sided dice - a 20-sided die is mandatory, other polyhedra dice can be useful.

NOTE: Many times in the rules the players will be instructed to roll a die to determine one outcome or another. For what type of die is to be used, the following general guidelines should be employed.

- (a) Generation of character abilities = sum of 3 six-sided dice.
- (b) Use of equipment, weapon firing = one 20-sided die.
- (c) Whenever a player must roll less than or greater than a score in one particular ability = one 20-sided die.
- (d) Inflicting damage = six-sided dice as follows:
 - 1-6 pts or any multiple = 1 die
 - 2-12 pts = 2 dice
 - 3-18 pts = 3 dice
 - 4-24 pts = 4 dice
 - 5-30 pts = 5 dice
- (e) Random encounter matrices = a series of die rolls with 1 six-sided die.
- (f) Alien characteristics = six-sided dice.

NOTE: The metric system is used throughout this game. There are two reasons for this. The first concerns the science fiction rationale of the game. By the 23rd century, the archaic English system will certainly be abandoned in favor of the more rational metric system. (Indeed, at the present time, the entire world except the United States has already done so.) The second is more personal; I would like to see wargamers made more familiar with metrics.

For those of you who are unfamiliar with the metric system, the following approximate conversions are offered. These are not exact conversions, but the arithmetic is simpler than the exact figures.

Distance:

1 meter (m) - 1 yard or 3 feet
 1 Kilometer (km) - half a mile (actually 0.6 mile)
 Speed of light - 300,000 km/sec

Temperature:

Freezing: 0° C
 Boiling: 100° C
 $\text{Temperature in C} = 1/2 \times (\text{F} - 32)$
 $\text{Temperature in F} = 2 \times \text{C} \text{ plus } 32$

Mass:

1 kg. = 2 pounds (an average human is between 50 and 70 kg.)

For simplicity's sake, the time system has also been metricized. One stellar

day equals 20 hours of 50 minutes each.

II. CHARACTERS

2.1 Generation of Characters

To begin the game, each player must generate a character whose actions he will control during play. Each character is delineated by his score for each of 8 primary abilities. These 8 abilities are: Marksmanship, Intelligence, Technical Skill, Contact Skill, Charisma, Strength, Psionic Potential and Loyalty. A character's scores will determine his probability of success for any given action the character attempts. In addition, the scores may be required as minimum requisites for a branch or subclass of the Space Fleet Service the character wishes to join.

Four of the abilities are "inborn" and, as a rule, cannot be improved by experience. They are: Charisma, Strength, Psionic Potential and Loyalty. The other 4 are "acquired" abilities, and can be improved by experience.

To determine a character's score in each of the abilities, the player rolls three 6-sided dice and adds the results. This method is employed in turn for each ability except two: Psionic Potential and Loyalty. For these abilities, the player determines his Psionic Potential or Loyalty "base" (which depends on the character's race and sex), and adds the result of one 6-sided die roll.

There are three methods for the assigning of die roll scores to the various characteristics. In all methods, the 6 scores other than Loyalty and Psionic Potential are generated first. Then the scores for Loyalty and Psionic Potential are generated.

Method 1: Totally random. The player rolls for each value in turn, assigning the score rolled to that ability. This method, similar to that used in most other role-playing games, is best for players who don't care what branch or subclass their character has. It must be kept in mind that, with this method, it may be quite difficult to find a subclass that will fit the character's randomly assigned abilities, as most subclasses require high scores in two different areas.

Method 2: Assignment after each roll. The dice are rolled and the player, upon learning the score, determines immediately which score he will assign the value to, 1 roll at a time. This method is suitable for players who have a definite preference as to what type of character they would like to have. It is recommended because it retains an element of risk, in that a player may obtain a better score in his desired category after he has already assigned a "safe" score to that ability. Note that the values may be assigned to abilities in any order desired, unlike Method 1.

Method 3: Assignment after all rolls. The dice are rolled 6 times, and the player, once he has obtained all the scores, assigns them to the 6 abilities in any manner he so wishes. Like Method 2, this method is suitable for player with given preferences. However, there is no element of risk; this method is not as highly recommended as #2.

Players should include their final assigned values in the corresponding spaces on the "character reference sheet".

Races: A player may choose to be any of the following four races.

- (a) Terrans
- (b) Taurans--the superlogical, computer-like aliens
- (c) Andromedans--the shy, sensitive, psionic aliens
- (d) Rigel--the highly skilled mercenaries of space

While using Method 1, race should be chosen after all the scores have been determined, at the allowance of the SM. For example, a character with a low intelligence score should not be allowed to be a Tauran, while one with a low marksmanship should not be allowed to be a Rigel. While using methods 2 or 3, race should be chosen before all die rolls, and the values assigned to abilities according to the attributes of the race with the advice of the SM.

Choosing a race other than Terran will affect the base scores for some abilities (raising some while lowering others), and gives some additional bonuses as well as penalties. The SM should be in charge of the choosing of races, and should keep in mind that the Confederacy's ships are manned by a mostly-Terran crew with a sprinkling of aliens. More on the specifics of each race will be covered in section 2.6.

2.2 Abilities

ACQUIRED ABILITIES:

- (a) Marksmanship--Prime requisite for joining the military branch.
Affects probability of obtaining a hit with a ranged weapon.
Affects probability of performing an action which requires unusual dexterity (climbing a wall, jumping a ditch, etc.)

Racial variations: Rigel +2 and Andromedans -2.

- (b) Intelligence--Prime requisite for the scientific branch.
Secondary requisites for the Command, Alien Life, Navigation, and Engineering subclasses.
Affects probability of obtaining information from the ship's computer, sensors, and analyzers.

Racial variations: Taurans +1 and Andromedans +2.

- (c) Technical Skill--Prime requisite for the technical branch.
Secondary requisites for Fire Control, Medical, and Engineering subclasses.
Affects probability of operating technical equipment.
Affects probability of repair of ship's damage.
Affects probability of understanding the mechanisms of alien artifacts before trial use.

Racial variations: Rigel -1, Andromedans -2, and Taurans +1.

- (d) Contact Skill--Secondary requisites for Fire Control, Alien Life, Communications, and Navigation subclasses.
Affects probability of successfully contacting an alien race for purpose of communication.
Affects probability of success for "blind" operation of teleporter.

Racial variations: Andromedans +2, Female Terrans +1, and Rigel -1.

INBORN ABILITIES

- (a) Psionic Potential--Determines which, if any psionic powers the character may employ.
Employed in psionic combat situations

Racial variations: Psionic Potential Base: Terrans, male 0, Female 3; Taurans, Male 4, female 7; Rigel, male -3, female 0; Andromedans (any) 12.

A player is allowed to select psionic powers equal to his total psionic potential score according to the schedule of cost below. A player may select his abilities in any manner he chooses, with any power or combination of powers acceptable as long as their total cost is less than or equal to his total psionic potential. For a full explanation of psionic powers, see Section 5.6 Psionics. Once chosen at the start of the game, psionic powers may not be changed.

Psionic Cost Table

Empathy, 3
ESP 5
Telepathy, 6
Tele-empathy, 7
Tele-Kinesis, 8
Tele-illusion, 10
Hypnosis, 13
Molecular Control, 20* (* cannot be chosen by player characters due to prohibitive
Tele-energenesis, 20* cost)

Example: An Andromedan with a total psionic potential of 15 (12 plus die of 3) could choose: tele-empathy (7) and tele-kinesis (8); ESP (5) and tele-illusion (10); Empathy (3), ESP (5), and tele-empathy (7); or any other combination totalling less than or equal to 15.

- (b) Charisma--Secondary requisites for Command and Communications involved in command, especially of non-player characters; involved in psionic powers. Involved in combat morale considerations

Racial variations: Terrans, female +1, Andromedans +2, and Taurans -2.

- (c) Strength/Constitution/Hits--Secondary requisite for Security; number of hits a character can sustain before being killed in combat. Affects close-combat strength.

Affects probability of not succumbing to arduous situations (unfavorable gravity, hunger, disease, fatigue, etc.)

Affects probability of accomplishing actions which require unusual physical strength (breaking down a door, etc.)

Racial variations: Terrans, female -2, Andromedans -1, Rigel +2, Taurans -2.

- (d) Loyalty--Depends on race
Secondary requisite for Security
Affects willingness to follow orders or risk personal danger
Affects chance of being swayed from duty by aliens

Racial variations: Loyalty base - Terrans, 10; Taurans, 7; Andromedans, 8; Rigel, 4.

NOTE: REGARDLESS OF ANY BONUSES, A SCORE MAY NEVER EXCEED 20.

2.3 Branches & Subclasses of the Space Fleet Service

There are three major branches of the Space Service: military, scientific, and technical. Each of these branches has several subclasses which are specialty areas within the branch. Each branch and subclass has its own special responsibilities, abilities, and limitations. In addition, a character's promotion depends on accomplishments within his own field.

Once chosen at the start of the game, a branch may never be changed. Within that branch, however, a player may change subclasses but only at the time of a promotion and no in the middle of a mission. Players are never obligated to choose a subclass, but there are special bonuses (and limitations) for doing so. Remember that if random assignment of scores is used (method 1), a player's character may have a difficult time in finding a subclass which fits his own peculiar distribution of scores.

Prime requisites are the attributes required for joining one of the three major branches. These are, respectively, marksmanship for military, intelligence for scientific, and technical skill for technical. The score in the prime requisite must be at least 9 or better to join the branch. In the unlikely event that, using Method 1, a character's scores in all three of the prime requisites are below 9, it can be assumed that the character would be ineligible for space duty and would be assigned a desk job. The player may roll again for each of the prime requisites until he obtains one score of 9 or better.

NOTE: ALL CHARACTERS MUST JOIN ONE OF THE THREE BRANCHES (although joining a subclass is strictly optional).

The minimum score required in the secondary requisites for any subclass is always 12 or better. In some cases, a secondary requisite for a subclass is the same as the branch's primary requisite - the score needed is 12.

MILITARY BRANCH: Prime requisite, marksmanship. Main responsibility is engaging in combat with aliens; can employ a wide variety of weapons. Military officers earn experience primarily through defeating enemy aliens in combat.

COMMAND subclass: Secondary requisites, intelligence and charisma. Responsible for all major command decisions (such as which planet to explore, whether to fight or talk, etc.), although they are encouraged to obtain advice from the other services in making such decisions. A major source of experience points from command officers is the successful accomplishment of missions as set out by the SM. The Command officers are also responsible for the safety of the ship and the members of the crew, and are subject to demotion for failure to act in accordance with these interests.

SECURITY - GUARD subclass: Secondary requisites, strength and loyalty. Responsible for guarding prisoners. Main fighters in a combat situation, able to use the most heavy weaponry.

FIRE CONTROL subclass: Secondary requisites, technical skill & contact skill. Responsible for the firing of offensive weapons during ship-to-ship combat. Although the command officer decides if the ship is to fire, it is the fire control officer who decides the sequence of firing, of which weapons at what range. The presence of a fire control officer commanding a ship's weapons gives a bonus to the chance of obtaining a hit in combat. Fire control officers get bonus experience points for successful ship-to-ship combats.

SCIENTIFIC BRANCH: Prime requisite, intelligence. Main responsibility is to obtain friendly contact with enemy aliens and to gather data on new alien races and new scientific phenomenon. Science officers are quite limited in their choice of weaponry. In addition, because of their interest in alien life, they may never "shoot to kill" an alien, known or unknown, friendly or enemy, except in a life-or-death situation. Even then, such activity is subject to review by Space Fleet HQ (i.e., the SM) for justification; if not justified, the officer is subject to demotion. The science officers are also responsible for the following of the directives of Space Fleet HQ in matters of contact with alien races (i.e., the doctrine of non-interference). Science officers get no experience points for engaging in combat.

ALIEN LIFE subclass: Secondary requisites, intelligence and contact skill. On ships with mostly Terran crews, this position will usually be held by an alien. Main responsibility is to contact new alien races, and experience points are earned in this way. Also responsible for gathering data on scientific phenomena. Can gain points in combat by taking a prisoner alive.

MEDICAL subclass: Secondary requisites, technical skill and the psionic power of empathy. (Player must have a psionic potential of at least 3, so he can choose empathy). Most medical officers are Terrans (male or female). Main responsibility is for the health of the crew. Medical officers must characterize and find a cure for all diseases and epidemics, with the help of the ship's computer, and gain points primarily for this. Medical officers also are able to remove points of damage from characters, whether in the ship's sick bay, or, to a lesser extent, with a portable wound healer. Medical officers are also responsible for the mental health of the crew and are able to withdraw any character from active duty (including the ship's command staff) for medical reasons. Note: Because a doctor is exposed to most strains of bacteria and viruses by patient contact, he is immune to the effects of most diseases.

TECHNICAL BRANCH: Prime requisite, technical skill. Main responsibility is to operate the ship: plot a course (according to the directives of the command staff), steer clear of hazards of space, keep track of energy expenditure and authorize its use, operate the teleporter, and repair damage done to the ship. A second responsibility is the identification of new machines and technological devices encountered. Technical officers are able to operate a wide variety of equipment useful in a combat situation that other officers cannot operate. Like military officers, they can engage in combat (although they do not have access to the more advanced weapons available to military officers, they can use basic weapons and can shoot to kill in non-emergency situations), and gain experience points for engaging in combat as well as operating the ship successfully and identifying and using new technical devices. Technical officers also have a special bonus ability in that they have a chance of detecting that lifelike creatures are really androids. This is of great use to scientific officers; for, while they cannot try to harm living aliens, they have no such limitations in dealing with robots or androids (who are not alive, but only

intelligent machines).

COMMUNICATIONS subclass: Secondary requisites, contact skill & charisma. Responsible for communications with friendly and enemy ships, planets, and bases. Also help to pinpoint location for "blind" teleportation.

NAVIGATION subclass: Secondary requisites, intelligence and contact skill. Responsible for plotting the ship's course and avoiding hazards. A main source for bonus experience points is in completing trips within the time limit given by the SM. (although they are penalized for trips over the time limit). Navigation officers get a bonus for detecting space hazards before they are contacted and also get a bonus for breaking off combat situations (evasion and/or pursuit).

ENGINEERING subclass: Secondary requisites, technical skill & intelligence. Main responsibility is the expenditure of energy. They must authorize the expenditure of energy, and try to keep this to within the prescribed daily limits. They can veto the command staff's general course of action on the basis of energy limitations. The engineering staff also has the ability to repair a limited amount of damage to the ship.

Suggested crew composition: Every ship should have, as player's characters, at least one member of each of the 3 branches. Every ship must have a minimum of 1 command officer and 1 alien life officer.

Note that the absence of a specialty officer does not absolutely prevent in any way a ship form engaging in a certain activity, although the ship will not have the bonuses associated with a specialist. For example, any military officer can order the firing of ship weapons if there is no fire control officer. Likewise, any technical officer can plot a course or operate the teleporter.

2.4 Non-Player Characters

The SM may, at his discretion, include non-player characters to fill out the ship's complement. Such characters should be of the lowest level of rank and experience and should have ability ratings such that they are either non-specialists (especially in the technical branch, as this seems to be the least popular among players) or security guards.

If, during the course of a game, a player's character should be killed, he may, at the SM's discretion, return to playing by taking over either a non-player character or by generating a new character (counting this against the ship's total complement). Of course, the new character should start off at the lowest level of rank and experience.

Many players have the tendency to use non-player characters as "cannon fodder", sending them in against all sorts of danger. To counteract this tendency, players must determine whether or not the non-player character will obey an order for hazardous duty. This determination depends on the loyalty of the character and the charisma of the player giving the command, as well as the races of the two characters. Basically, the player must roll (on a 20-sided die) a number less than the non-player character's loyalty score. The following modification to the die roll is made:

- (a) If the player giving the order is of the same race as the non-player character, subtract 1 from the die for every 2 points of charisma.
- (b) If the player giving the order is of a different race, subtract 1 from the die for every 3 points of charisma, losing all fractions.

Example: Captain Jerk, a human command officer with a charisma of 14, wants Ilya Kuryatkin, a human security guard with a loyalty of 12, to go down to a planet. Since Jerk is of the same race as Kuryatkin, he would subtract 7 from the die roll, so on an unmodified roll of 18 or less, Kuryatkin obeys. If Jerk was to order Cerulean Blue, an Andromedan science officer with a loyalty of 9, he would only subtract 4 from the die roll, so Cerulean would obey on an unmodified roll of 12 or less. Note: a player may never order another player-character to perform an action, regardless of rank. A player always controls the action of his own character.

On the naming of characters: A player may give his character any name he desires to. The following guidelines are suggested:

Terrans - any suitable Earth language name (not restricted to English).

In our playtest group, we had some fun naming the non-player security guards after game designers, giving them low attributes (especially in intelligence), and ordering them into the jaws of death.

Taurans - Taurans have one, hyphenated name, each part of one syllable with the name ending in "k". We generated a whole family with the second syllable "nek" -- Red'nek, Bottle'nek, etc. Taurans may also be given any Yiddish name -- Shlock, Schlemiel, Schmendreck, Yente, Bubbele, etc., as they are the descendants of the Ten Lost Tribes.

Andromedans -- named after various hues of colors, especially shades of blue: Cerulean Blue, Gentian Violet, Aquamarine, Sapphire, Royal Purple, etc.

Rigel -- Rigel do not let their last name be known. They are colloquially known by their first name with a suitable nickname, indicating their fighting

skill, such as Savage Sam, Ferocious Fred, etc. Anyone who learns a Rigel's last name has a degree of coercion over them, as they can threaten the Rigel's family on his home world.

2.5 Experience & Ranking

All player characters start out at the lowest level of experience. (The SM may alter this to give more variety, according to the system below.) Rank levels in the Space Fleet Service are roughly correspondent to naval ranks used today. Note that all characters are officers; there are no "enlisted men" in the SFS, and the lowest rank of officer is Ensign. As players participate in encounters and utilize the abilities of their characters to solve problems and engage adversaries successfully, they will accumulate experience points, as awarded by the SM (See Section 6, The Starmaster, for further details on the awarding of experience points). As the character gains a set amount of points, he will be promoted and obtain higher rank.

Unlike other role-playing games, the mechanism of promotion is the same for all characters, regardless of their branch, subclass, or race. The same ranking hierarchy is used, and the same number of experience points are required for promotion in any case. The variation in promotion is that the earning of experience points depends on the player's branch.

Promotion has the following advantages:

- (a) For each promotion, a player may add 1 to any one of his acquired skills.
- (b) For each promotion, the player may draw more equipment (see 2.7, Equipment).
- (c) As command officers obtain promotions, they may requisition better ships of higher class.
- (d) (Optional) - Players may get a bonus in commanding non-player characters to perform various tasks. The player may subtract an additional 1 point from the die roll for each level above the character he is trying to order. Players may never order a character whose rank is higher than his own to perform an action.

Rank Level	Title	Exp. Pts. Required	Bonus	Command Ship
1	Ensign	0	none	Destroyer
2	Lieutenant, j.g.	500	plus 1 to acq.	Destroyer
3	Lieutenant	1000	plus 1 to acq.	Cruiser
4	Lieutenant Commander	2000	plus 1 to acq.	Cruiser
5	Commander	5000	plus 1 to acq.	Bat. Cru.
6	Captain	10,000	plus 1 to acq.	Bat. Cru.
7	Commodore	20,000	plus 1 to acq.	Bat. Cru.
8	Rear Admiral	40,000	plus 1 to acq.	Dreadnought
9	Vice Admiral	50,000	plus 1 to acq.	Dreadnought
10	Admiral	60,000	plus 1 to acq.	Dreadnought
11	Fleet Admiral	75,000	plus 1 to acq.	Dreadnought
12	Admiral-in-Chief	100,000	plus 1 to acq.	Dreadnought

NOTE: Remember again, that regardless of bonuses a score may never exceed 20.

Promotion and Subclasses: Only characters of the Command subclass can advance beyond the rank of Vice-Admiral. Alien Life, Medical, and Engineering officers

can advance to the rank of Vice-Admiral but not beyond. All other subclasses may advance only to the rank of Commodore.

Initial Rank Option: If the SM wishes his characters to start at a moderately advanced level, have each player roll one 6-sided die for his rank. 1,2,3 - Ensign; 4 - Lieut. j.g.; 5 - Lieut; 6 - reroll, and the number obtained is the rank level (up to 6, Captain).

2.6 Races

After determining his character's abilities, a player may choose his character's race. There are four races: Terrans (or humans), Taurans, Andromedans, or Rigel.

The SM should help a player choose his character's race, with the following limitations. Most of a ship's crew should be Terran, although, as an alternative, a ship could be created with a mostly Tauran crew. A player's choice should correspond with the abilities he had determined for his character. For example, a character with a high technical skill should not be allowed to be an Andromedan, or a character with a low strength to be a Tauran. A ship is limited to having 1 Andromedan, for reasons given under the section dealing with them. For Taurans and Rigel, a ship should be limited to 1 or 2 of each type for every 10 Terrans.

TERRANS

Terrans are the "backbone" of the Space Fleet, and fill most positions. Male Terrans do not have any of their ratings altered. Female Terrans have their ratings altered as follows:

subtract 2 from strength
add 1 to charisma
add 1 to contact skill

Loyalty Base: 10 (both male and female)
Psionic Potential Base: Male 0
Female 3

Terrans have iron-based metabolisms.
Preferred Branches & Subclasses: any.

RIGEL

The Rigel are galactic mercenaries, offspring of Terrans genetically selected to propagate the human race (when it was feared the Earth would be destroyed in the 1990's) and Zangids. They are tough, aggressive fighters. As mercenaries, their loyalty is somewhat less than perfect. Should they see an opportunity to advance themselves or their race at the expense of the Confederacy, they will take it. However, they are not actively in league with the Zangids or Videni against the Confederacy and, in most cases, their own interests will coincide with the Confederacy's interests.

Like humans and Zangids, the Rigel have an iron-based metabolism. They are tall (180-190 cms) and trimly built, with intense steel-blue eyes and a shock of black hair.

Abilities: subtract 1 from technical skill and contact skill; add 2 to marksmanship

and strength

Loyalty Base: 4

Psionic Potential Base: Male -3

Female 0

Additional Bonus: Rigel can always pick 1 unit of equipment over that allowed by their rank level.

There is a strength bonus of +2 for Rigel males and +1 for Rigel females.

Preferred Branches and Subclasses: Military, esp. command.

Avoided Branches and Subclasses: Scientific, esp. Medical.

TAURANS

Taurans are green-tinged humanoids, form a high gravity planet. They are more comfortable in high gravity environments, and somewhat clumsy in low gravity. Their gravity also accounts for their greater strength. They are highly intelligent and technologically developed. They are tall (over 2m) and have pointed ears. Their greenish hue is caused by their copper-based metabolism, making them subject to different diseases than humans. They have high constitution and strength, making them less vulnerable to radiation as well as being able to neglect physical needs (like hunger and sleep) for long periods of time.

The Taurans have achieved their almost computer-like abilities of thought by the almost total sacrifice of emotion. They act according to the principles of logic, not emotion. They are able to resist even the most charismatic member of the opposite sex. Like humans, there are only 2 sexes (male and female) who have no further differences.

Taurans have the following additional abilities, and are considered psionic.

Taurans can voluntarily enter a state of suspended animation. If done voluntarily, they remain in touch to a enough of a degree as to return from this state voluntarily at any time.

Nerve Pinch: Acts as an automatic stun against any humanoid in any close combat situation. (Length of stun depends upon the target's constitution).

As a compensation for their suppression of emotion, the Taurans have a rutting period once every 2 years. (This coincides with the 13-month gestation and 11-month rearing period until Taurans reach puberty, and suppress all emotion). Upon entering the rutting, they must find a mate of the opposite sex (also a Tauran) within 1 month or they will fall into a permanent state of suspended animation, which can be broken only by another rutting Tauran. As time passes, the Tauran becomes more and more enraged as he begins to fear he will not find a mate, and will attack any or all members of different sexes of other races.

Taurans view humans as useful, but are not exactly friendly to them. Humans like Taurans, and female humans have a tendency to fall into irrational, and unsatisfiable, love with them. Taurans do not view Andromedans as particularly useful, but do not dislike them. Taurans regard Zangids as misguided, but detest the fanatic, irrational Videni. There may be any number of Taurans on a ship, and, indeed, entire ships are known to exist manned mainly by Taurans.

Abilities: subtract 2 from charisma
 add 2 to intelligence and strength
 add 1 to technical skill

Psionic Potential Base: Male, 4; Female 7.
 Bonus to strength: Male +2; Female +1.
 Preferred Branches & Subclasses: Alien Life, Engineering.
 Avoided Branches & Subclasses: Command, Medical.

ANDROMEDANS

Andromedans are furry, blue humanoids. They come from a low-gravity planet, and are thus more comfortable in low gravity environments. Their body temperature is somewhat lower than humans so they are more comfortable in cooler environments. They are short (about 1.5 m) and walk stooped over. They speak with a slight lisp. They are blue because their metabolism is cobalt-based and as such, they are subject to different diseases than humans or Taurans.

There are 3 sexes of Andromedans, all 3 being necessary for reproduction. The 3 sexes are called by humans, very inaccurately, male, female and intersex. All 3 sexes contribute genetic information to the offspring. The males contribute 3 doses, the intersex 1, and the females 2. The females carry the litters until birth, at which time the intersex (which have a marsupial-like pouch) carry the young and rear them. The litters are always 3 in number, one of each sex. Each Andromedan family group is incestuous. This general lack of outside genetic input has led to serious limitations in the Andromedan's abilities. They are fairly weak (which is also related to the low gravity) and poorly advanced technologically. As such, they have never gotten used to machines and weapons (reflected by their low marksmanship and technical skill).

However, the Andromedans have finely developed psionic powers and other abilities as compensation for these limitations. All Andromedans, regardless of sex, have a psionic potential of 12. All Andromedans have one other ability, the ability to turn themselves invisible for limited periods of time (1 hour per day). Invisibility provides 100% protection from attack from creatures that rely primarily on visual cues. Also provides 25%-75% protection from creatures that can use other cues. (Wild dogs, who rely primarily on smell, only have a 25% chance of avoiding an invisible character; flying creatures, who rely primarily on sight, 75% to 100%). Invisibility obviously provides no protection at all from blind creatures (like bats, who rely on sonar) or non-living attackers (robots).

Andromedans have an additional biologic consideration. Three times a year, they molt, and shed their blue fur. During this time, they remain invisible for a total of 3 days, their presence being noted only by a trail of blue fur. They are unwilling to participate in any missions and unable to use any other powers during molting, but return to normal after the 3-day molt.

As a rule, there will be only 1 Andromedan to a ship. They are ones whose litter-mates have been killed, and thus lack a family group. Two Andromedans, once brought together, will do anything they can to find a third one and thus complete an ersatz family group. They will use all their powers to

this end, even to the detriment of the ship and the other characters. Once the family is formed, they settle down to have litters.

Andromedans and humans are greatly attracted to each other, by an inter-species platonic (nonromantic, nonsexual) love. The Taurans could take or leave them, although Andromedans are frightened of the Taurans, whom they cannot distinguish from Videni. Both Videni and Zangids hate Andromedans. Andromedans are fascinated by multiple birth phenomenon, and are greatly attracted to twins, triplets, etc., of any species.

Abilities: subtract 2 from marksmanship and technical skill
 subtract 1 from strength
 add 2 to contact skill and charisma
 add 1 to intelligence

Loyalty - 6

Preferred Branches and Subclasses: Scientific, esp. Alien Life

Avoided Branches and Subclasses: Military, esp. Security
 Technical, esp. Engineering

2.7 Equipment

A player is entitled to choose certain items of equipment with which to outfit himself. A player may choose a number of units equal to his rank level plus 1. Rigel get an additional bonus of 1 unit. Thus, a level 1 human ensign is entitled to only 2 units, while a level 6 Rigel captain can take 8 units. Note that the "cost" in units varies; some pieces of equipment cost only one-half unit, while others count as two, three, or more units. In any case, it is the number of units, not the actual number of pieces, which is considered. For example, 2 units can be taken as 4 half-unit items, 2 one-unit items, or 1 two-unit item. The rationale behind this allotment system is that the more complex, and more expensive items are entrusted only to proven officers.

Players should note that certain units of equipment are limited as to their use by different branches and subclasses.

Since equipment allotted is the officer's personal responsibility, loaning of equipment is not permitted. If an officer is killed in action, his equipment may be used by anyone who salvages it.

HALF-UNIT (all can be used by any officer)

1. Radiation suit with Oxygen Tank: Provides protection from heat, cold, radiation, and poisonous gases. Oxygen tank can be detached and used separately. The suit is not armor, and provides no protection against weaponry of any type. However, the suit is self-sealing. If penetrated, the wearer suffers any damage incurred by weapons, but is still considered protected from radiation and temperature.

The suit is very tiresome to use without a jetpack. A player using a suit must roll every game-hour for exhaustion. If he rolls less than his score for constitution on a 20-sided die, he may continue. If his roll score is equal to or greater than his score, he is exhausted, and must wait for 1 game hour to rest before continuing. No exhaustion for tank only.

Maximum Altitude: 100m - high gravity: 500m - medium and low gravity.

Jetpack: can be used with or without radiation suit. Enables player to fly for short distances. The jetpack hinders fine movements, and subtracts an additional 2 from marksmanship and technical skill. (If using a radiation suit and a jetpack, these penalties are combined, for a total of 4 subtracted from the scores).

Maximum Speed: 100 km/hr. Time Limit: 2 hrs/day - low and medium gravity: 1 hr/day - high gravity.

3. Universal translator: Necessary for communication with aliens. Aliens will not be able to detect that device is in use. If properly disguised, the officer will be indistinguishable from a native. In order to have meaningful communication with an alien, the operator must roll less than his contact skill on a 20-sided die. Once contact has been established, it can be maintained or re-established freely. If communication fails, no further attempt is possible and the aliens will probably be hostile to the party (except in certain situations as determined by the SM).

4. Communicator: Necessary for communication between players on a planet's surface and the ship. Necessary for contact for teleporter pick-up, to avoid "blind" teleportation.

ONE UNIT

1. Hand Laser (military or technical only).

Standard ranged weapon. Has pistol mount that can be used; weapon can be concealed if pistol mount is not used. Has the following settings: illuminate - no damage, just lights up area. Heat - limited range, 1-3 pts of damage, special damage to certain creatures (like ice creatures). Kill - standard combat setting, 2-12 pts of damage. Overload - limited range, blows up like a time bomb after 5 minutes. Range is 100 m maximum for kill and illuminate, 5 m for heat and overload.

2. Electro stun Gun (scientific or technical only).

Standard ranged weapon for scientific officers, secondary for technical. Can be concealed like hand laser. Maximum range 100m. One setting. If a hit is scored, the die is re-rolled for any damage. 1,2 - no damage; 3,4,5 - 1-6 pts of damage; 6 - 2-12 pts of damage. Always stuns target; length of stun depends on target's constitution.

3. Spring Rifle (military only; or Rigel)

An anachronistic ranged weapon that fires a needle-like sliver rather than being an energy weapon. Can only be used by characters with a marksmanship of 15 or better (or any Rigel). The spring rifle requires no "recharging" like the energy weapons, so it can be fired three times (at three different targets) during 1 round of combat. Each hit does only 1-6 pts of damage. Range - 1000 m.

4. Auto-analyzer (scientific only)

Used to analyze alien life forms and natural phenomenon. Character using it must roll, on a 20-sided die, a score less than his intelligence for each use to obtain the information he desires. See section 3.1 (i). Computers, for types of questions and information that can be obtained. The analyzer can also be set up to act as an alarm, with 100 m range. The auto-analyzer works via a computer link-up.

5. Medikit (scientific only)

Consists of the following items:

- (a) diagnostic scanner - employment requires a roll less than intelligence to determine nature of ailment.
- (b) wound healer - removes 1 - 3 pts of damage immediately. Can be used as often as desired, but only once per character per day. Character cannot be healed by both this and sick bay on the same day. Use of wound healer by Medical Officer removes 1-6 pts instead of 1-3 pts.
- (c) air hypodermic with charges:
 - universal sedative: acts as automatic stun (time depends on constitution)
 - universal stimulant: counteracts exhaustion from gravity for 1 hour, wakes Taurans out of suspended animation state.
 - universal antibiotic: cures most known bacterial and viral ailments.
 - universal antidote: cures most known poisons.
 - anticancer vaccine
 Each of the charges is mutually incompatible; use of more than one charge on a character in one day cancels effects of all charges.

6. Planetary radar tracking unit (technical only)

Can be used to track objects on a planet's surface, homing in on signals beamed from a transmitter (that can be attached to any object).

TWO UNITS

1. Laser Rifle (military and Rigel only)

Same settings as laser pistol, but with longer range and greater damage. Range for kill or illuminate is 1000 m; for heat and overload, 50 m. Kill does 3-18 pts of damage per hit.

2. Energy Screen (technical officers only)

This device forms a screen of 10 m radius, that helps protect, to some degree, any players within this radius from damage from energy weapons. Acts against energy weapons only (like laser, electrostun gun) but has no effect against physical weapons (like spring rifle). The officer operating the device must roll 1 20-sided die for each 5-minute period it is in use; if his roll is less than his score for technical skill, it works. The energy screen absorbs from 25% to 75% of all damage from energy weapons, according to a die rolled individually for each hit: 1-25%, 2-35%, 3-45%, 4-55%, 5-65%, 6-75%.

3. Force Field Generator (technical officers only)

Has the same characteristics for range, damage absorbed, etc., as the Energy Screen, but works only against physical weapons (like the spring rifle) and not at all against energy weapons.

4. Sonar Generator (technical officers only)

This device sends out ultrasonic waves, which have no effect on humanoids but can affect other species. Like the energy screen, the technical officer operating it must roll less on a 20-sided die than his technical skill in order to operate it. The device has a range of 100 m. The device will turn away any attackers with ultra-sensitive hearing. It is upsetting to Andromedans, who suffer a stun result if within 100 m at the time of use. It is effective against such types as dogs or cats, but has no effect on insects or plants. It is also useful against certain exotic types (like ice creatures and crystal creatures) which are shattered by the sound waves. Generally, causes a stun and 1-6 pts of damage against any affected target within range.

5. Metabolism Stabilizer (scientific only)

Places character in suspended animation, like the natural Tauran state.

THREE UNITS

1. ABC (any officer except Medical)

Has three modes: A - atomic flame, 100 m range, 3-18 pts damage
 B - epidemic spray
 C - poison gas

B and C modes must be pre-loaded with epidemic strains or with poison as devised on the ship. (See section 3.1, Computer). When using A mode, user must be wearing radiation suit to avoid effects of atomic flame. With B & C modes, the user need not wear a suit if he is of a race immune to the effects of the spray. This weapon can only be used in "hot war". The radiation suit does not affect marksmanship with this weapon only.

2. Electronic Interference Devices (technical officer only)

Can jam, and thus prevent use of, radar units, field generators, energy screens, communicators, and robots. Has no effect on other weapons or equipment, like lasers, jetpacks, etc. To use, technical officer must roll less than his score for technical skill with a 20-sided die. The weapon's effects can be directed to effect only certain types of equipment, to effect only enemy equipment, etc. Range 100 m.

3. Nerve Disrupter (Rigel only)

This is a field weapon, which affects all within 100 m except the user. It is a horrible weapon, causing great pain and convulsions. A 20-sided die is rolled for each character within range. If the die roll is greater than the player's constitution he is affected; if less than or equal to, no effect. Any character so affected will suffer 1-3 pts of damage for every 1-minute round of combat until he is sedated or (if Tauran) goes into suspended animation. Once the field is turned off, the convulsions will subside, and the player will be back to his previous state after 1 day's rest.

4. Robot Dog (technical officer only)

These dogs look and act like normal dogs, but are actually robots. They will attack for their "master" (technical officer) if he rolls less than his technical score with a 20-sided die. The dog's eyes are actually hand lasers which are treated as two separate attacks with a marksmanship of 3 dice. The dog can also operate with a close attack strength of 4 dice.

5. Telepathic Dog (characters with telepathy only)

These intelligent creatures are under telepathic command from their master, and will come to their master's aid in distress. Their obedience is automatic. These dogs have only the ability for close combat, at a strength of 3 dice.

FOUR UNITS

1. Field Armor (security and Rigel only)

These units are a combination of three items, and provide protection for the wearer against the dangers of heat, cold, and radiation (like a radiation suit), energy weapons (like an energy screen), and physical weapons (like a force-field generator). The suit absorbs 25%-75% of each hit from physical or energy weapons, by a die roll like the generators, but such armor always works. Considerations of exhaustion apply to use of this suit, like radiation suit, unless a jetpack is also used. Subtract 3 from each of marksmanship and technical scores while using the suit.

2. Matter-antimatter Generator (technical officers only)

This takes any handy object and converts it into antimatter. It takes 1-minute round to convert the object, and after that it can be directed at any object within 100 m. The conversion to antimatter and the direction each require a separate die roll for success, less than the technical skill on a 20-sided die. Each use creates 3-18 pts of antimatter. When antimatter strikes matter, the matter and the antimatter dissipate each other in equal proportions. If any antimatter is left after a hit, it will seek matter to finish dissipation. If the tech officer creates the antimatter successfully but, on his second roll, fails to control it, he suffers the antimatter attack.

Note: The use of weapons is explained in greater detail under "Combat", 5.7.

III. SPACESHIPS

3.1 Spaceship Capabilities

There are four types of combat vessels in use by the Galactic Confederacy Space Fleet Service, in addition to non-combat freighters. The four types of ships (from weakest to most powerful) are the destroyer, cruiser, battle cruiser, and dreadnought.

The players in S&S form the crew of a spaceship, setting out from a friendly SFS Base to explore such areas of the galaxy, with its star systems and their planets, as the SM has devised. The players always employ a combat-type ship, although they may encounter freighters. The ship employed depends on the considerations of the SM, within the framework that the class of ship is limited by the rank of the highest ranking officer in the command subclass (who is responsible for the ship).

Each ship is characterized by its equipment. A ship's equipment will be considered in the following categories:

- (a) General Design; (b) Energy System; (c) Movement; (d) Offensive Weapons;
- (e) Defensive Screens; (f) Planetary Transport; (g) Tractor/Pressor Beams;
- (h) Sick Bay; (i) Computer.

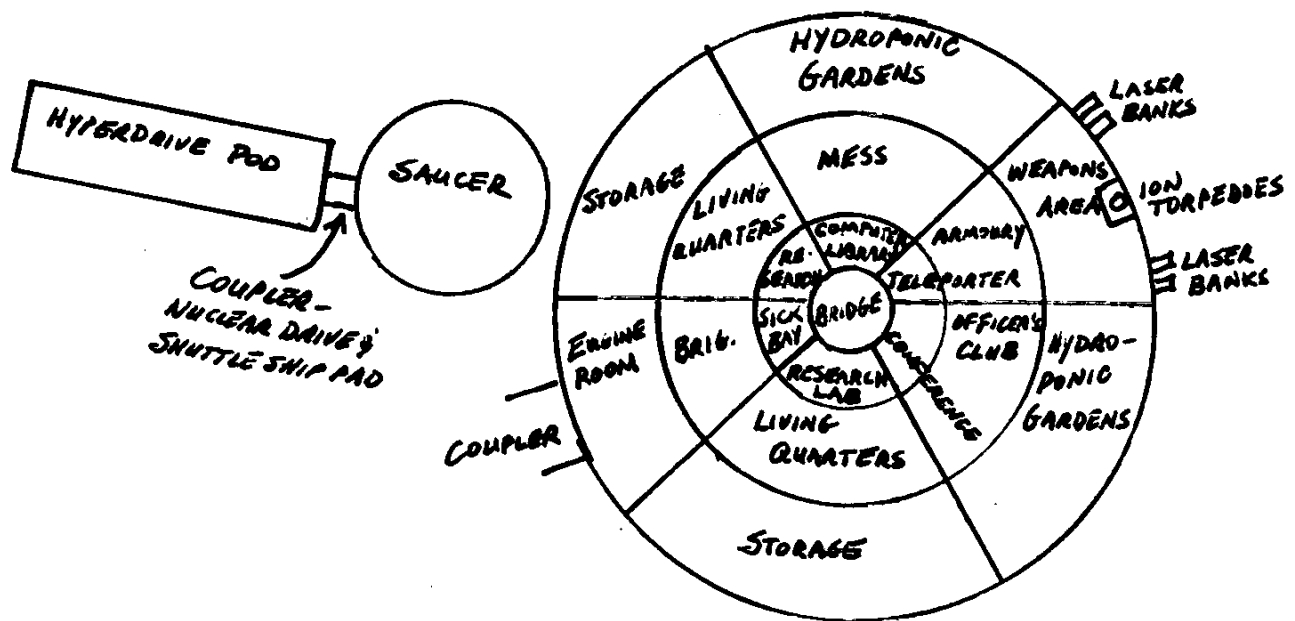
(a) General Design: The ship body is saucer-like in design, with a pod containing the energy drive of the ship extending from this saucer. The pod is detachable. The energy drive pod contains the hyperdrive elements necessary for interstellar travel. The saucer itself contains the nuclear drive, which is capable of sustaining life support systems if the pod is jettisoned and which also enables travel within a system. The nuclear drive is not capable of light-speeds (like the hyperdrive) and cannot be used for light-year movement between star systems. A ship without its hyperdrive pods is thus crippled and limited to the system it is within.

The saucer-like body can be considered to be a single or multi-level structure. Within the body are such areas as:

1. The Bridge - where all command facilities are located.

2. Living Quarters & Mess; Officer's Club - personal service areas.
3. Sick Bay - the medical service area
4. The Brig - where prisoners are kept
5. Research Labs
6. Hydroponic Gardens - for growing food
7. The Teleporter - used for travel to a planet's surface
8. Storage areas; Armory - where material including weapons are stored.

The SM may "lay out" a ship's interior as he desires. A suggested plan is given below for a cruiser.



(b) Energy System: The "heart" of ship operations is the energy system or PPB. This is contained within the hyperdrive pods. Any action the ship undertakes--hyperdrive interstellar travel, firing of offensive weapons, use of defensive screens, planetary transport by teleporter--requires energy. In addition, any damage taken by the ship in interstellar combat is reflected in terms of energy.

The ship's PPB is more extensively explained in Section 3.3. In general, the PPB is the amount of energy which can be regenerated totally during one day. The PPB is thus the ship's energy "allowance", and the players must be careful with their expenditure of energy or they will find the ship's regenerative capacity rapidly diminishing if they overspend. In addition, since ship damage is in terms of energy, a ship is destroyed when its total energy expenditure and damage exceeds and exhausts the ship's possible maximum regenerative capacity.

(c) Movement: The ship has two types of movement: interstellar drive, accomplished by hyperdrive, and travel within a system, by nuclear drive. The hyperdrive is located in the pod, the nuclear drive in the saucer.

Interstellar movement is performed on the SM's galactic map, (see section 4.1)

which is at a scale of 1 hex equals 1 light-year and 1 "turn" equals 1 day. Hyperdrive Speeds are in terms of Warp Factors. Each warp factor equals a drive of 1 light year per day. Thus, the hyperdrive speed of a ship, in warp factors, is the number of hexes the ship may travel in one game turn. For example, a ship moving at warp 4 could move 4 hexes on the galactic map in one game turn.

A ship's minimum hyperdrive speed is warp 1, its maximum warp 8. Acceleration and deceleration may be done freely, at no cost, although once a ship's speed is set for a given day's travel it cannot be changed. A ship may start travel at any speed, and may change speed as much as desired on any one day. All ships have the same hyperdrive warp characteristics, regardless of type.

Interstellar movement must be pre-plotted on the galactic map before being executed. Course corrections can be made if an obstacle is encountered, although speed cannot be changed.

Hyperdrive travel expends energy depending upon the Warp Speed used. In addition, the direction of travel must be considered during hyperdrive. On the galactic map, a ship must always face one of the 6 hexsides, and may only move straight forward unless the ship is turned to face another hexside. A ship may turn as many hexsides as desired, but an energy cost must be paid for each hexside turned (as the hyperdrive must be realigned). A ship may turn any number of hexsides within a given hex, and may make as many turns as desired within one game day, as long as the appropriate energy cost is paid.

Travel between planets within a system is accomplished by nuclear drive, which is in the coupler between the hyperdrive pod and the saucer. Travel within a system does not employ a map. The players merely state where within the system they would like to move. The energy cost for any movement at nuclear drive is the same. The time taken for a move at nuclear drive depends on the distance, and is given by the SM. Hyperdrive may not be used for travel within a system, and nuclear drive cannot be used for movement between stars. (Since nuclear drive is at sublight speeds, it would take one year to travel a single hex at nuclear drive!) Considerations of facing and turning do not apply at nuclear drive.

(d) Offensive Weapons: SFS ships have two types of offensive weapons. These are the ship's lasers--tremendously upgunned versions of the hand weapon, powered by hyperdrive; and ion torpedoes. Lasers are the primary, long-range weapon of a ship. Each firing of the lasers requires an expenditure of energy, but there is no limit as to how many times the lasers can fire (and no delay between firings), as long as the appropriate energy cost is paid. Ion torpedoes require no energy to fire. They are shorter-ranged than the lasers, but more destructive. Each ship carries a limited number of ion torpedoes, and must keep track of how many have been fired. Once a torpedo has been fired, it is removed from the ship's total complement.

Ship lasers have setting similar to the hand weapons: heat, illuminate, kill, and overload. Most firing at enemy ships is done on the "kill" setting. The heat and illuminate settings may have use in certain situations (such as melting an ice cloud). The "overload" setting is the ship's doomsday weapon,

for self-destruction.

Ship lasers have no effect on a planet's surface or core, as the light energy is scattered so effectively by atmospheric particles that its impact on the surface is minimal. (Atmospheric scattering does occur with the hand weapons as well, and is the reason for their range considerations). Ion torpedoes can be used against a planet. A 6-sided die must be rolled for such an attack. If a 1 is rolled, the torpedo penetrated the atmosphere successfully and hits the planet. If 2 through 6, the torpedo explodes harmlessly in the upper atmosphere. If a torpedo hits a planet, the die is rolled again for its effect. If 1, 2, 3, 4 or 5, the torpedo destroys the area of planet where it hits, with no other adverse effects. All life within this area is immediately destroyed. 100-km. If 6, the impact sets up a chain reaction that destroys the planet and creates a radiation storm that immediately effects every character on the ship. (See section 4.3 for effects of radiation storms) Needless to say, the SFS frowns on the use of planet-busting by torpedo attack.

(e) Defensive Screens: A ship's main defensive capability is reflected by its screens. Screens help absorb some of the damage taken in ship-to-ship combat, and also provide some degree of protection from some of the hazards of the galaxy (radiation storms and certain types of clouds). However, screens are quite a drain on a ship's energy system. Screens can be raised at either half-strength or full-strength.

When screens are up, the ship's teleporter may not be used, as the screen's field interferes with this method of transporting. Shuttle ships may be launched or landed through the screen.

Ship screens can be turned on or off at will, but each use of screens entails the energy cost for an entire day's use.

Spaceships are of such great size that they never land on a planet. Repair work is done by docking at a space station. To go from a ship in orbit around a planet to the planet's surface requires specialized transport.

(f) Planetary Transport: Ships have 2 methods of transport between the ship and a planet's surface. These are the ship's teleporter and shuttle ships. Both methods can be employed to send men and/or material.

The teleporter acts by means of molecular reorganization. It converts the molecules of an object into pure energy, sends the energy to the desired location, and then reconverts and reassembles the object into its previous form. Use of the teleporter is expensive in terms of energy. Each type of ship has a limit to the number of people or objects that can be sent via teleporter at the same time. The teleporter is a short-range device. It can be used only for transportation from ship to planet or vice versa, and not between planets within a system. It is possible to teleport from one location to another on a given planet, or to the interior of a planet, or between two points within a ship, or between two ships which are relatively close to each other. Any situation where the exact accuracy of teleportation is crucial is considered "blind" teleportation. For example, teleporting to a planet's surface is not "blind" or critical--if off by a meter or so, the object still would land safely. Teleporting to the inside of a specific building, or within or between ships, however, is critical. A slight error could result in re-materialization within a wall or in the vacuum of space! For this

reason, the contact skill of the operator is involved in all such "blind" teleportation. The operator must roll one 20-sided die, and must score less than his score for contact skill to land the objects successfully. If he fails to do so, the objects (including people) are considered destroyed.

Teleportation is considered to be instantaneous. However, there is a lag period between uses of a teleporter to "recharge" the unit. This lag is determined by rolling 1 6-sided die and multiplying the result by 5 minutes of game time. Thus, the lag can vary between 5 and 30 minutes of game time before the teleporter can be used again. Having an engineer operate the teleporter allows 1 to be subtracted from the die roll.

The teleporter can also be used as a device to contact the "psionic plane". This is further explained in section 5.6 under psionics. The teleporter projects the converted energy representation of an object into the plane of pure thought energy. Transport to or from the psionic plane is considered to be "blind" teleportation, and requires a roll based on contact skill to achieve transportation successfully in either direction.

The teleporter can be used as a means of recall to the ship, as well as transportation to a planet. If the object is in contact with the ship by means of a communicator, this recall can be done automatically. If, however, the object is not in contact, such teleportation is considered to be a variant of blind teleportation. A roll depending on the contact transported. If this roll fails, no adverse effects occur to the desired object. However, an undesired object (of the SM's choice) is beamed aboard instead. In general, this will be something dangerous or hostile, and will probably attack the teleporter crew immediately.

Shuttle ships are small, unarmed and unarmored vessels used for ship to planet transport. They can also be used for transportation between planets within a system. Shuttle ships have only nuclear drive. They can travel between planets using the same system of movement as spaceships. There are no energy costs for using shuttle ships, as they have their own self-contained nuclear drives.

Shuttle ships can be used to transport large parties or large amounts of equipment, which would be too expensive in terms of energy to teleport. Use of shuttle ship involves some time. It takes 1 hour of game time to load and prime a shuttle ship. Travel between planets takes the same amount of time as for spaceships, and depends on distance. Travel to a planet's surface from a ship's orbit takes 1 hour of game time. In an emergency situation, it is possible to "prime" a shuttle ship instantly; this requires an energy cost, however.

Each shuttle ship can carry up to 50 people or 1 robot tank (which cannot be teleported).

As above, a shuttle ship has no weapons, no screens, no teleporter, and no sick bay. A shuttle ship is destroyed by an hit from any type of ship weapon. On the planetary surface, it is not damaged by fire from any type of weapon but can be damaged by natural cataclysms (earthquake, avalanche, volcano, etc.).

(g) Tractor and Pressor Beams: The ship has a capability for attracting or

repelling objects through space. This is limited by size and mass of the object (limited to spaceship size), as well as distance (200,000 kms--not far enough for use between planets). The beams can only be used within a system under nuclear drive, and not while under hyperdrive. There is an energy cost for use depending on distance, but unrelated to mass. It costs the same to transport one man in a suit as it does for an entire ship, if the distance is the same.

The beams are capable of exerting force on an enemy ship only if that ship is using nuclear drive. Hyperdrive force exceeds the holding power of the beams, and the ship can break free.

(h) Sick Bay: Each spaceship has a sick bay, with a limited bed capacity. Time spent by a wounded character in sick bay helps to remove damage inflicted. For each day spent in sick bay, two 6-sided dice worth of damage is removed.

A player must also spend time in sick bay to recover from the effects of radiation poisoning or from a disease. There are quarantine facilities in sick bay to prevent spread of disease.

Adjacent to sick bay are medical research labs, which the ship's medical officers can use for research on new drugs, on cures for diseases, etc.

(i) Computer: The ship's computer, and its sensors, are methods of obtaining information. Certain information is automatically given to the players. For example, when they orbit a planet, they are always informed of the 4 environmental characteristics of the planet (gravity, temperature, atmosphere, and radiation). Other information is obtained only if a certain die roll is obtained--for example, advance warning of a cloud or radiation storm.

In addition to these functions, the computer has an open-ended function of answering player's questions in an attempt to discover new information. When answering these types of questions, the SM plays the role of the ship's computer.

In order to ask questions, a player must first get "on-line" with the computer. To achieve this, he must roll a 20-sided die and score less than his intelligence. The player then rolls a 6-sided die; this is the number of questions he may ask at that time. A player may try to get "on-line" only once a day. Any number of players may try each day.

When answering questions, the SM must keep the following in mind. Computers are very stupid. They are only able to answer yes-or-no questions. In addition, the SM must pay close attention to the exact phrasing of a question as stated literally, regardless of the player's intention. For example, a question like, "is it possible that this artifact is causing the weather disturbances" must be answered "yes", because it is of course possible. It may not be probable if that artifact was actually an ancient weapon, but it is possible.

There are 4 main opportunities for computer questions. One is when players encounter a hazard of space during interstellar travel. The second, while orbiting a planet before landing in an attempt to find something out about life on the planet (other than its environment). Thirdly, it is useful when

medical officers are trying to characterize and cure a disease. Fourthly, the computer can be used (via the auto-analyzer link) to find out about creatures and phenonemon on a planet's surface, and to devise effective biological and chemical agents to use against any creatures (with an ABC sprayer).

Here are two examples of the use of omputer questions:

1. The players are circling a planet they know is medium gravity, temperate climate, breathable atmosphere, but radiation contaminated. A science officer gets "on-line" and gets 4 questions.

"Is there any life on the planet?" "Yes"

"Is there any humanoid life on the planet?" "Yes"

"Are there any Zangids or Videni?" "No"

"Is there non-humanoid, animal life as well?" "Yes"

2. The Terrans have come down with a strange disease. The doctor gets "on-line" and gets 6 questions.

"Is the disease caused by a bacteria?" "No"

"A virus?" "Yes"

"Will the universal antibiotic cure the disease?" "No"

"Is it contagious?" "Yes"

"Will putting the victim in suspended animation have any effect on the course of the disease?" "Yes"

"Will ultrasonic radiation kill the virus?" "No"

(Note that placing a victim in suspended animation may be harmful, not helpful; because of phrasing, the doctor only knows that it will have some effect.)

3.2 Ship Statistics

DD

- (a) Destroyer: Named after famous battles, especially great military disasters. (e.g., Bunker Hill, Fredericksburg, Sedan, Little Big Horn, etc.,)
 Crew complement: 10
 Command, minimum rank: Ensign
 Power Pile Base: 50 energy units (one-half pod)
 Teleporter Capacity: 3 at a time
 Laser Banks: 1
 Ion Torpedoes: 6
 Shuttle Ships: 1
 Sick Bay Capacity: 2

CS

- (b) Cruiser: Named after explorers, especially astronauts (e.g., Armstrong, Glen, Shepard, Schirra, Borman, Gagarin)
 Command, minimum rank: Lieutenant
 Crew complement: 20
 Power Pile Base: 100 energy units (one full pod)
 Teleporter Capacity: 4 at a time
 Laser Banks: 2
 Ion Torpedoes: 9
 Shuttle Ships: 2
 Sick Bay Capacity: 5

- BC
- (c) Battle Cruiser: Named after scientists, especially astronomers (e.g., Newton, Copernicus, Kepler, Tycho Brae, Galileo)
 Crew complement: 50
 Command, minimum requirement: Commander
 Power Pile Base: 200 (two full pods)
 Teleporter Capacity: 6 at a time
 Laser Banks: 3
 Ion Torpedoes: 12
 Shuttle Ships: 3
 Sick Bay Capacity: 10
- DN
- (d) Dreadnoughts: Named after stars and galaxies (Betlguese, Antares, Polaris, Proxima Centauri, Altair, Vega, Canopus)
 Crew complement: 100
 Command, minimum requirement: Commodore
 Power Pile Base: 500 (five full pods)
 Teleporter Capacity: two rooms, each with a capacity of 6 at a time
 Laser Banks: 5
 Ion Torpedoes: 24
 Shuttle Ships: 5
 Sick Bay Capacity: two sick bays, each with a capacity of 10
- FR
- (e) Freighters: Named after Transportation Lines (Orient Express, B&O, Cunard, QE II, TWA, BMT, Silver Streak)
 Crew complement: 10
 Command, minimum requirement: Ensign (Merchant Fleet)
 Teleporter Capacity: 1 at a time
 Laser Banks: 5
 Ion Torpedoes: 24
 Shuttle Ships: 5
 Sick Bay Capacity: two sick bays, each with a capacity of 10
 Screens: None

3.3 The Ship's Energy System

The heart of a ship's operation is its Power Pile Base (or PPB). The PPB has a capacity for energy production per day, expressed in Energy Units (or EUs). The PPB is, simply stated, the number of EUs which can be regenerated in one day without any permanent deduction from a ship's power plant.

EUs must be expended for almost any ship action: movement, life support, teleportation, and combat. In addition, any damage a ship receives is expressed in terms of EUs. Players must keep track of how many EUs a ship expends in one game-day. If this total is less than or equal to the ship's PPB, the ship can totally regenerate its power for the next day, and does not suffer any loss. If the total is greater than the PPB, the difference between the amount spent and the PPB is permanently subtracted from the ship's PPB.

For example, a cruiser has a PPB of 100 EUs. If the ship spends, say, 90 EUs, it is under its PPB limit, and it still has the same 100 capacity for the next day. If the ship instead overspends, say 120 EUs, 20 EUs (the difference be-

tween the total spent and the PPB) are subtracted from the PPB permanently. For the next day, and from then on, that ship has a PPB of only 80.

As a result of this, a ship which spends double its PPB (or suffers such a loss in combat) is considered destroyed. This is because the entire PPB is lost, and the ship does not even have enough power left the next day to maintain life support systems. In the above example, if the cruiser spent 200 EUs, it would have a PPB of 0, and would be considered destroyed. When a ship is lost, all members of the crew are considered dead (unless they managed to get off the ship via teleporter or shuttle ship before the ship incurred the final EU loss).

It should be obvious from the above that ships must be very careful in their energy expenditure, especially if space combat is a possibility. PPB may be restored to full capacity only by docking for repairs at a starbase (see sect. 4.8)

ENERGY COST TABLE

1.	Galactic travel - 5 EUs per warp factor on hyperdrive		
2.	Intrasystem travel - 5 EUs for any travel at nuclear drive (per day)		
3.	Galactic travel - 5 EUs per hex side turned (no cost at nuclear drive)		
4.	Entering a planet's orbit - 5 EUs		
5.	Leaving a planet's orbit - 5 EUs		
6.	Life support systems - 5 EUs per day (mandatory)		
7.	Teleportation - 5 EUs per person <u>each way</u>		
8.	Laser Fire - 5 EUs per laser bank (each bank consists of 2 lasers)		
9.	Ion Torpedoes - free		
10.	Tractor or Pressor Beam - depends on distance - 1 EU/20,000 km		
11.	Screens:	<u>Half Screens</u>	<u>Full Screens</u>
	Destroyer	15 EUs/day	30 EUs/day
	Cruiser	30	60
	Starship	60	120
	Dreadnought	120	240

Screens used for any part of a day incur the total cost for the day.

12. "Priming" Shuttle Ship - 5 EUs (if instantaneous; 1 hour delay, free)

Example: A cruiser wishes to travel from its own base to a star 6 hexes away. Assuming no turns are needed, the total cost for such a move would be:

*5 for leaving the starbase
 30 for moving at warp 6 (5 for each warp factor)
 5 for life support (always mandatory)
 40 EUs*

Let us assume that the cruiser would like some degree of protection from screens. It could raise full screens at a cost of 60 EUs, and thus spend its PPB of 100. However, this would not leave any reserve for emergencies (such as unexpected turns, firing of weapons, etc.). Instead, the ship chooses to raise half-screens at a cost of 30 EUs, for a total of 70 EUs, and thus retains a reserve of 30 EUs.

Let us assume that the ship arrives at its destination without incident. The ship enters the orbit of the planet they wish to explore (at a further cost of 5 EUs). The captain of the ship now decides he would like to send down a landing party. His teleporter has a capacity of 4 individuals, so he could send down a party of 4 (at a cost of 20 EUs) and still be under his PPB.

3.4 Enemy Ships

The Zangids are known to have ships in the destroyer, cruiser, and battle cruiser classes. The Videni, on the other hand, are known to have only destroyers and cruisers.

Zangid ships are armed with laser banks only; they lack ion torpedoes. In all other respects (PPB, screens, teleporter, crew, and shuttle ships) they are exactly the same as their Terran counterparts.

Videni ships are somewhat different from Terran and Zangid ships. For one, they lack both of the conventional weapons of Terran ships, lasers and ion torpedoes. They do have their own unique weapon--the atomic fireball. Each fireball costs the Videni ship 5 EUs to create. Videni ships cannot raise screens. Videni ships do have teleporters, but the teleporter capacity is only 2 at a time, regardless of ship class. They lack shuttle ships. In addition, Videni ships lack sick bays and medical officers. These modifications are the result of the Videni philosophy of total commitment to the state. The individual's life is unimportant; if an individual is wounded, he is disposed of. An attempt to save his life would be considered a waste of time. There is no motivation to try to escape from danger, and thus there are no shuttle ships. Videni ships tend to act in combat situations as suicide "fireships", attempting to achieve as much damage on the enemy as possible before they are destroyed. Videni ships never surrender, and never try to escape, but always fight to the last breath.

Videni ships are armed with a Shielding Mechanism, which prevents their detection by visual and most other sensory means. The Shielding Mechanism can only be used with nuclear drive, not impulse drive, and thus Videni ships can be followed by their ion trail while at hyperdrive. In order to fire a fireball, the Videni must lower the Shielding device. The Shielding device costs as much as half-screens to run.

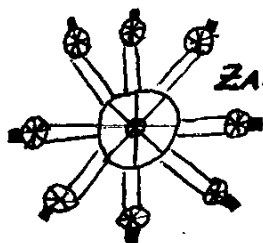
Space Carriers

Zangid and Videni Technology veered somewhat from Terran lines in the development of military starships. Rather than building larger ships (like dreadnoughts) to provide extra firepower, they devised ships which served as attack platforms, for small mobile craft which could operate independantly.

Zangid Sting Carriers consist of a large, spherical central station (about the same size as a cruisers' pod) and eight movable "arms", each of which holds a small, spherical Drone Stinger. Drone Stingers are unmanned, computer-controlled craft which can be launched from the carrier and then operate independantly. The carrier can launch 1 stinger each combat round. Each stinger can move up to 50,000 kms each round and fires one laser shot, using the normal range tables, each round. The carrier itself has no weapons and no screens (which would prevent stinger launching and control), but can take up to 200 EUs in damage. The carrier has hyperdrive and nuclear drive; the stingers, only nuclear. A stinger cannot fire until it is detached. A stinger is destroyed by any hit by a laser or ion torpedo. The carrier can control independantly as many stingers as it has launched, but once the carrier is destroyed, the stingers become inoperable (they rely on central computer direction).

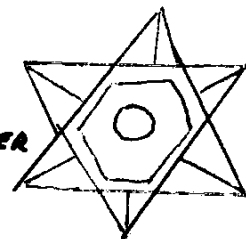
The Videni, who hold the value of individual life in low regard and believe in salvation through death in battle, have developed slightly different carriers. The "Kamikaze Carrier" consists of a hexagonal core with a delta-winged fighter craft "petal" attached to each side. Each fighter petal is manned by a single individual. The carrier may detach any or all of its fighters in one round. Each fighter, like each drone stinger, can move 50,000 kms each round. Unlike the stingers, however, the fighters attempt to close to minimum range (under 10,000 kms), at which point they self-destruct and produce an atomic fireball which automatically hits its target. The fighters thus have only 1 opportunity to attack, at minimum range, while drone stingers can repeatedly use laser fire as long as their home carrier is intact. The Videni fighters, however, are independent of the mother ship; once launched, they must be destroyed (like stingers, by any hit from a laser or ion torpedo) or they will close to minimum range and explode. Videni carriers have no screens, and also lack the Shielding Device; they have no weapons and can only take 100 EUs in damage. As a matter of fact, once they have launched their fighters (and they tend to launch all 6 at once), the carrier usually just waits for the fighters to complete their attack and then voluntarily self-destructs, and the target ship undergoes 2 fireball attacks (which depend on range). The carrier waits to self-destruct only because its destruction would automatically destroy any fighters before they could attack. The carrier will not self-destruct only in the event that the target ship is destroyed and/or evades, thus breaking off combat.

NOTE: Because of their extreme destructive power, carriers are more a match for a battle cruiser or dreadnought than a destroyer or cruiser.



ZANGID STING CARRIER

VIDENI KAMIKAZE CARRIER



3.5 Ship to Ship Combat

This game is not primarily a game for space combat between enemy ships. This subject has been addressed by many other games. However, on occasion, the situation for ship to ship combat may arise and the following system is suggested for combat resolution. Any other system the players prefer may be used, as long as it is tied in to the general concept of EUs.

The first, and most important, consideration in this combat system is range. In general, most engagements will begin at a range of 500,000 km (extreme range for ship weapons). The range will close swiftly, as ship's are capable of closing by 50,000 kms per round of battle. The SM will plot the movement of enemy ships and plan their firing, while the players will plot the movement of their own ship and its firing.

This combat system does not involve a battle board. The facing or attitude of

one ship to another is not important. In addition, in multiship actions, all ships are assumed to be approaching from the same direction, and such considerations do not apply. There is no "outflanking" or "surrounding"; only the range (in kms) must be kept track of.

In general, enemy ships will close the maximum allowed each round up to a range of 50,000 kms. Friendly ships may either stand or attempt to close, at their option. Leaving the field by moving away from an attacking ship is not allowed, as this is considered cowardice in the face of the enemy; any officer participating in such action (with the exception of the evasion rules below) is automatically subject to demotion of one rank. Minimum range = 10,000 kms.

Laser Fire: Confederacy and Zangid ships both have lasers. Lasers are relatively long-range weapons. Each laser bank consists of two guns. Thus, energizing a bank (by paying the 5 EU cost) allows two shots at an enemy ship. One bank can be directed at only one target. However, a ship with more than one bank can fire each bank at separate targets. Each laser hit does between 5 and 30 EUs of damage to the enemy ship--roll 1 die and multiply by 5. Lasers can be fired as often as desired, if the cost for energizing is paid each time.

Ion Torpedoes: Only Confederacy ships have these weapons. These are shorter ranged weapons which are limited in number. They do not cost any energy to fire, but once fired are used up permanently.

Fireballs: Only Videni ships have these weapons, and these are their only weapons. Fireballs have an intermediate range between ion torpedoes and lasers. Each fireball costs 5 EUs to fire.

Both ion torpedoes and fireballs do double the damage of lasers per hit, 10-60 EUs--1 die times 10.

Screens absorb a certain percentage of damage when used up. The amount of damage absorbed is determined for each hit individually. Half screens absorb from 10% to 60% of damage (1 die times 10%), while full screens absorb from 15% to 90% (1 die times 15%).

Combat Routine: All ship fire is considered to be simultaneous. A ship may fire each of its weapons once per round of battle, as long as the appropriate energy cost is paid.

To determine if a hit is obtained, the players roll a 20-sided die, and compare the result obtained to the number required for a hit with that particular weapon at the range given. Note that if a ship has a fire control officer, he rolls the dice for combat, and he adds "2" to the minimum number required for a hit with any weapon at any range.

Ship-to-Ship Combat

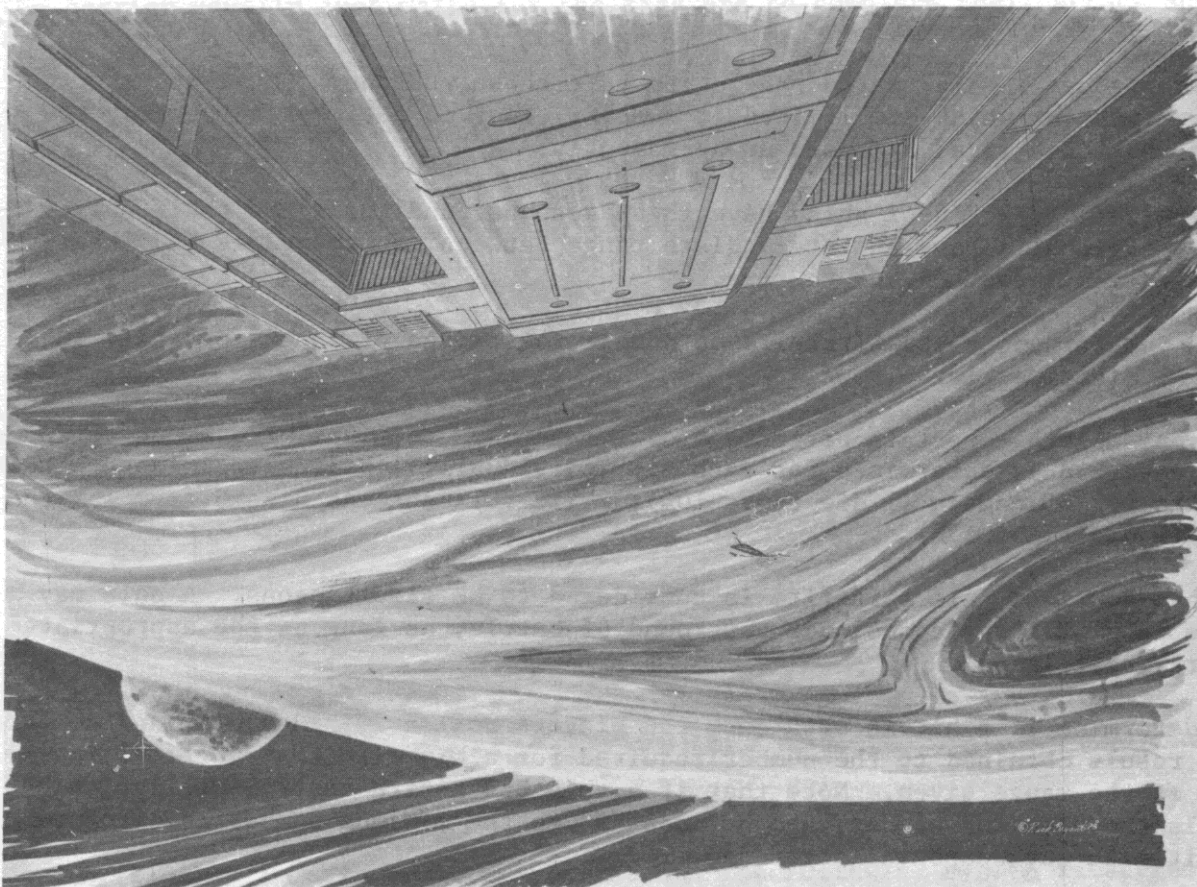
Minimum hit # = # which must be rolled on a 20-sided die to hit target. Fire Control Officer adds 3 to minimum hit number at all ranges.

<u>Minimum Hit</u>	<u>Range</u> <u>Lasers</u>	<u>Ion Torpedoes</u>	<u>Fireballs</u>
16 or less	25,000	10,000 km	20,000 km
15 " "	50,000	20,000	40,000
14 " "	75,000	30,000	60,000
13 " "	100,000	40,000	80,000

cont.

Minimum Hit	Range	Lasers	Ion Torpedoes	Fireballs
12 or less	125,000	50,000 km	100,000	
11 " "	150,000	60,000	120,000	
10 " "	175,000	70,000	140,000	
9 " "	200,000	80,000	160,000	
8 " "	225,000	90,000	180,000	
7 " "	250,000	100,000	200,000	
6 " "	275,000	125,000	250,000	
5 " "	300,000	150,000	300,000	
4 " "	350,000	175,000	350,000	
3 " "	400,000	200,000	400,000	
2 " "	450,000	225,000	450,000	
1 " "	500,000	250,000	500,000	

Zangid and Terran ships have lasers. Each laser bank consists of 2 lasers.
 Only Terran ships have Ion Torpedoes.
 Only Videni Ships have Fireballs.



For example: A battle is taking place at a range of 100,000 kms between a Terran cruiser and a mixed force of a Zangid destroyer and a Videni destroyer. The Terran ship has 2 laser banks, and its full complement of 9 ion torpedoes. It also has a Fire Control Officer. The Terran ship first decides to try to knock out the Videni ship. It fires both laser banks at the Videni, a total of 4 die rolls (2 guns in each of two banks). At the range of 100,000 kms, the Terrans require a die roll of 15 or less to hit. This number would have been 13, except the Terrans had a Fire Control Officer, who raises the minimum die roll 2. The cost of this fire is 10 EUs, 5 for each bank. The Terrans choose not to

use up any ion torpedoes this round, as the chance of hitting at this range is small. The Zangid ship fires its one laser bank, 2 die rolls with a minimum hit number of 13 at a cost of 5 EUs. The Videni loose a fireball for 5 EUs; at 100,000 kms, the minimum hit number is 12.

The next round, both enemy ships close another 50,000 kms while the Terrans hold their position. This time, the Terrans split their laser fire, directing one bank at each ship. They again have 4 rolls, at a cost of 10 EUs, with a minimum hit number of 17. They also fire an ion torpedo at the Videni ship, hoping to finish it off. The minimum hit number for this attack is 14 (12 plus 2 for Fire Control). The Zangids fire their one laser bank at the Terrans again, with a minimum hit # of 12. The Videni loose another fireball for 5 EUs, with a hit # of 14.

Evasion and Pursuit: Zangid and Federation military philosophy holds that self-preservation is a consideration in combat. Thus, such ships will not "fight to the death", but will try to evade and break off combat once a certain amount of damage has been sustained. When a ship has 25% or less of its total possible hits remaining, it must attempt to evade. Note that the total possible hits is equal to double the PPB. (i.e., a cruiser with a PPB of 100 is destroyed when it takes 200 EUs of damage). Note that the EUs expended by a ship, in firing and for screens, is also counted in this total. Thus, a ship which has expended a good deal of energy is more vulnerable than a fresh one. For example, the above cruiser would have to evade if it had taken 150 EUs damage (only 50 left). For evasion, each side rolls 1 die. If the evader's die roll is greater than or equal to the pursuer's, combat has been broken off. If less, he is caught, and combat continues. A navigator adds 1 to the die roll for either side. Evasion is considered to be done at hyperdrive--5 EUs must be expended for evading, as this is done at warp 1. A ship may not attempt evasion with more than 25% remaining--this is considered cowardice in the face of the enemy with the same sanctions as above. Failure to evade when indicated is considered reckless endangerment, and the commander of the ship is demoted two ranks. Videni ships never try to evade. If a Videni ship sustains damage so that 25% or less remains, the ship self-destructs. This self-destruction has the effect of two fireball attacks on all ships within range. The die is rolled to see if the fireball(s) hit, and then for damage.

Note: If a ship is destroyed in combat, all characters on that ship are considered killed.

Example (continued from above): The Terran fire fails to destroy the Videni, but the Videni ship has less than 25% left. The Videni self-destructs; both the Zangids and the Terrans undergo two fireball attacks each. The attack on the Zangid ship is done at minimum range, the attack on the Terrans at 50,000 kms. Unexpectedly, the Zangid ship survives, and with more than 25% left. The Terran ship, on the other hand, was unlucky, and is left with less than 50 EUs, or under 25%. The Terrans must try to evade. The Terrans have a navigator, and roll a 2, while the Zangids roll a 3. The navigator adds 1, so the result is a tie, and the Terrans evade successfully.

IV. GALACTIC & PLANETARY ADVENTURES

4.1 Setting Up the Galaxy

It is the function of the SM to prepare, before the play of the game, the galaxy which his players are going to explore. It is suggested that the SM determine a "scenario" or *raison d'être* for the players' actions and devise the galaxy with at least a few features conforming to that scenario. The scenario may be of any nature the SM chooses: from something as specific as "eliminate all Zangid activity in the Sigma VII system" to something as general as "explore the quadrant for the possibility of planets suitable for colonization". (see appendix for examples of "Briefings" used for scenarios).

The SM should pre-plan, on hex paper, the location of the major features of his galaxy. In most cases, this will include a starbase (the player's "home base") an ultimate destination, perhaps one or two intermediate destinations, and several hazards of space. Hazards may also be determined randomly. Each hex on the S&S galactic map equals 1 light year.

The galactic map in S&S is a two-dimensional affair. However, should players wish to add the element of three-dimensionality, they may employ a system similar to that in SPI's Star Force (which considers a two-dimensional hex to extend in a column in the third direction). Also see FGU's Galactic Conquest for rules pertaining to 3-dimensional movement plotting.

The SM's map is the "master" map, and has the locations of all pre-planned hazards. He gives the players a "preliminary" map, containing only the starbase and the destination hexes, without any hazards. The players can plot their moves on this map and fill in hazards as they encounter them. Another device to employ is the "last known location" of space phenomenon or enemy ships. If desired, the SM may use a map from another science fiction game as the "known galaxy" and make up extensions for "unknown space". For this purpose, SPI's Star Force is again recommended, because of its astronomical accuracy and compatible scale. Players should note, however, that the use of Star Force components is a totally personal decision to be made by the SM, and not at all required for the play of the game.

4.2 Time Scale & Play Sequence

The play of the game commences with several day-long turns of interstellar travel, as the players leave their home starbase and travel to their destination as given by the SM. Interstellar travel is performed at hyperdrive. Hyperdrive warp speed is in terms of light-years per day; (since each hex is

a light year, it is also the speed in hexes per day). Each "turn" during this phase is equal to one day. The players must pre-plot their ship's movement at hyperdrive for each day before executing it, and calculate all energy costs for movement. The actual movement of the ship is then executed hex-by-hex. The ship's hyperdrive speed cannot be adjusted once set for the day's turn. However, the ship is allowed to make turns and other course corrections as hazards are encountered. Of some hazards, the players will have no advance warning and will have to resolve the encounter without any chance at evasion. At other times, the players will have some advance warning and will be able to attempt evasion.

Once the players have reached their target star system, the time and space scales of the game are altered. Ship movement within a system is done at nuclear drive; any movement at nuclear drive has the same energy cost, and uses a much simpler system than hyperdrive movement. Basically, the players merely say that they desire to go from one planet to another, they pay the energy cost, and the SM informs them of how long it will take to do so, in "game time". Within a star system, "turns" are now considered to be in hours; there are 20 hours per game day. Energy cost and regeneration remains the same, and is considered per day.

After the players have decided to explore a given planet, they will probably decide to send down a landing party. There are two methods to do this: by teleporter, which is instantaneous but energy-expensive, or by shuttle ship, which is slower and more exposed but entails no energy cost. Once down on a planet, the players will proceed to explore its surface. Depending on the distances involved, turns will again be considered to be in hours, but if necessary they can be further subdivided into periods of 5 or 10 minutes (there are 50 minutes in a game hour). If the players encounter an adversary and wish to engage in combat, the time scale is again diminished further. Combat occurs in "rounds" of 1 minute each. Each player's character is allowed one action during any one round of combat. Combat continues in "rounds" until fought to a conclusion, at which time play is returned to the scale of 5 or 10 minute "periods" or 1 hour "turns", whichever is appropriate. Interstellar combat between ships also takes place in "rounds" of 1 minute each.

The "sequence of play" can be considered as follows:

A. Interstellar Travel (1 turn - 1 day)

1. Plot movement
2. Calculate energy cost for movement planned
3. Execute movement hex-by-hex on galactic map
4. Resolve any encounters as they occur, then completing movement
5. Calculate energy cost actually expended, and determine regeneration

B. Travel within a Star System (1 turn - 1 hour)

1. Announce and execute movement between planets
2. Calculate energy costs and regeneration.

C. Planetary exploration (1 turn - 1 hour; 1 period - 5 or 10 minutes)

1. Decide on landing party size and composition
2. Execute travel of landing party by teleporter or shuttle ship.
3. Resolve any encounters on the planetary surface: attempt communication or combat.
4. Combat: if combat occurs, resolve in rounds of 1 minute each
5. Discover alien artifacts (if any)

Within this sequence, the players may attempt to ascertain information from the ship's computer at any point.

Time Limit: The SM should place a time limit, in game days, on the player's mission objectives to avoid excessive caution (like travelling 1 hex a day with full screens up constantly). Such a time limit should include time for interstellar travel at moderate speed (warp 3-5), time to spend exploring a system and its planets, and a "safety allowance" of 1-2 days for the unexpected (varied by the number of pre-plotted hazards that could possibly interfere with the player's progress. For each day spent over this time limit to accomplish a mission, the SM should dock each player 50-100 experience points (depending on their responsibility for the delay).

4.3 Hazards of Space

A. CLOUDS: There are 4 known types of clouds - gas, dust, crystal (psionic), and foamy. Any type of cloud can be detected by a ship's sensor from one hex away as a result of the peripheral debris associated with clouds. Detection occurs on a roll of 1,2, or 3 on one die (1,2,3 or 4 if the ship has a navigator). Once a cloud has been detected, the ship can continue to detect its presence as it travels in any direction and can thus avoid entering the cloud if it so desires. If a ship fails to detect a cloud, it plunges into the cloud if its course is so plotted, and suffers any adverse effects immediately.

Gas Clouds: These clouds foul up a ship's navigational instruments. The slower a ship is going, the greater chance it has of being fouled up. Roll the die and compare the result to the table below to see if a ship is affected. If the ship is affected, the ship's facing is repositioned randomly. From this point on, the ship can only give orders for travel like "straight ahead", "right", or "left", without knowing where they are headed until they emerge from the cloud. Thus, a ship can fumble around inside a cloud for quite some time, unaware of where the edge is. Once a ship emerges from the cloud, the players are informed of their exact position in space and the area of cloud traversed (as their instruments now function fully).

Dust Clouds: These clouds consist of minute microscopic and atomic particles, and can inflict quite a bit of damage on a ship's structure unless the ship's shields are up. The faster a ship is going, the more likely a dust cloud is to affect it (the particles collide with greater velocity). Roll the die on the table below to see if a ship is affected. If affected, the ship suffers from 10% - 60% of PPB in damage (10% times 1 die roll). If the ship has half-screens, this is reduced to 5% - 30% (5% times 1 die roll); full screens, and the ship is unaffected by dust clouds.

Note: Screens do not provide any protection against the other 3 kinds of clouds (gas, crystal, or foamy).

<u>Gas Cloud</u>	<u>Die roll (2 dice)</u>	<u>Dust Cloud</u>
Warp 1	10 or less	Warp 8
2	9	7
3	8	6
4	7	5
5	6	4
6	5	3
7	4	2
8	3	1

Crystal Clouds: These clouds, consisting of twinkling crystals, are psionic

accelerations. They act to accelerate the latent psionic powers of a being that is normally non-psionic. They thus have no effect on Vulcans or Andorrians, who are naturally psionic. One individual is affected, randomly chosen, for each hex of the cloud traversed. Psionic powers develop slowly after exposure, 1 power per day. The total number of powers attained equals the number of hexes traversed by the "transformed" character. For example, a ship passing through 4 hexes will (after 4 days) have 1 character with 4 powers, one with 3 powers, one with 2, and one with 1 (the first character was transformed at the first hex, and thus traversed 4 hexes since entrance; the second, transformed at the second hex and traversed 3 hexes, etc.)

Psionic Powers develop in the following order (easiest to hardest)

1. Empathy
2. ESP - mind reading
3. Telepathy - thought projection
4. Tele-empathy
5. Telekinesis - movement of objects by thought force
6. Tele-illusion
7. Hypnosis

(See section 5.6 Psionics for explanation of powers)

Psionically accelerated characters undergo the following changes in their other attributes. They attain a charisma of 18; three dice are subtracted from their loyalty.

If a psionic character's loyalty is reduced to 0 or below, he will begin to actively try to take over the ship. All other psionically transformed characters will aid him in this, regardless of their loyalty, as will any crew members with a loyalty of 8 or less. Characters remain psionic until killed. They can be rendered harmless by brainwashing (by means of a neuronal neutralizer, known to exist somewhere in the galaxy) or by being placed in suspended animation.

Psionic acceleration should be kept secret until the character attempts mutiny.

Foamy Clouds: These clouds resemble a giant cloud of giant bubbles, and are antilogical in nature. For one thing, they are intelligent clouds and once they become aware of ship presence (by the ship moving adjacent) the cloud will follow the ship in any direction at any speed, blocking the ship's forward progress. A ship cannot "go around" such a cloud. The cloud has no apparent effects until the ship has left the cloud. At this point, Taurans (the most logical species) begin to go haywire, singing, reciting poetry, and becoming oblivious to any technical or scientific matters. In addition, the ship's computers will invariably lie, regardless of what question they are asked. The only cure for this state of affairs is to pass back into the cloud; on re-emergence from the cloud, all will be back to normal.

Note: the SM should keep rolling dice randomly for cloud detection--even if there is no cloud present--or the players will learn to associate die rolling with the presence of a cloud.

B. RADIATION STORMS: Like clouds, radiation storms can be detected from 1 hex away by a roll of 1,2,3 (1,2,3,4 with navigator). If a ship passes through a

*Note: Crystal clouds are very dangerous, and often result in ship-wide mutiny. The SM should use them with discretion, or limit their size to one or two hexes.

storm, every character on the ship runs a chance of radiation sickness or death, depending on his constitution and the status of ship screens. Each character rolls a 20-sided die as follows:

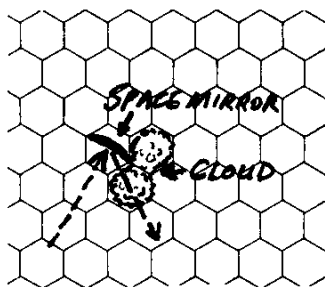
<u>Constitution</u>	<u>No Screens</u>		<u>Half Screens</u>		<u>Full Screens</u>
	Sickness/Death		Sickness/Death		Sickness
0-5	8	13	10	15	15
6-9	9	14	11	16	16
10-13	10	15	12	17	17
14-17	11	16	13	18	18
18 up	12	17	14	19	19

No character risks death if full screens are up.

If a player's die roll is less than or equal to the number listed for sickness, he is unaffected. If greater than the number for sickness, but less than or equal to the number for death, he has radiation sickness. Roll 1 die for the number of days the character must spend out of action, in sick bay, for recovery. If greater than the number for death, he dies.

Example: A character with a constitution of 11 is on a ship with half-screens up. If he rolls a 12 or less, he is free; 13 to 17, rad. sickness; 18 up, dies.

C. SPACE MIRROR: Unlike clouds, the players get no warning until they run into the space mirror. The Mirror is aligned parallel to one of the hexsides, at a sixty-degree angle. When a ship runs into the mirror, it is immediately displaced to a position 60 degrees away; it is placed at a distance in hexes equal to its warp speed from the mirror. Any clouds, storms, or other obstacles passed through by this reflection take effect on the ship and its crew, without any warning and without the ship being able to correct or try to avoid these hazards. (This is because, at warp speeds, the ship is instantaneously reflected through the obstacles, and suffers the damage before even being aware of the reflection!) For this reason, the SM may or may not wish to locate mirrors in the proximity of other hazards.



Example: Ship strikes mirror at warp 2, is reflected 2 hexes at 60 degrees. Ship immediately suffers effects of obstacle (whatever its nature).

D. SPACE WARP: A space warp is an area where space is "folded" upon itself. A ship entering a space warp experiences the sensation of entering a "black hole" momentarily, and then emerging from the other side in a totally new area of the galaxy (which may be unknown to the players). The players will be totally disoriented, and will have to give directions for ship movement as though in a gas cloud, until they contact a hex previously known or explored. Unlike clouds, no warning.

E TIME WARP: Similar to a space warp, a time warp is an area where time is "folded" upon itself. The players have the same sensation of entering a black hole, but emerge at the same spot (apparently), and will not know of the time change until they find a new planet. The amount of time passed depends on the SM's wishes. Considerations of Time Travel are more explicitly outlined further in Section 4.6.

F. SPACE AMOEBA: This is a gigantic, spacefaring creature that looks like an enormous blob of jelly. It is a 1-celled creature, and is not intelligent. It exists only to consume, and then to divide in two.

The creature is capable of tremendous speed, at hyperdrive level. It will not do anything until its curiosity is aroused, such as when a ship enters its hex. From then on, it will do everything it can to devour the intruder (including following it at hyperdrive speed).

The amoeba's cell membrane is a semipermeable one; it will take ships and other objects in, but will not let them out while alive. The membrane is so strong that a hole cannot be blasted in it by lasers or ion torpedoes. The only way out, once swallowed, is to kill the creature. The amoeba has 500 EUs of damage if fired on from the outside.

When the characters contact an amoeba, the SM should lay out the amoeba on a blank hex grid, 6 hexes wide in all directions. The central hex is the nucleus and can absorb 50 EUs of damage from ship weapons before being destroyed (killing the creature).

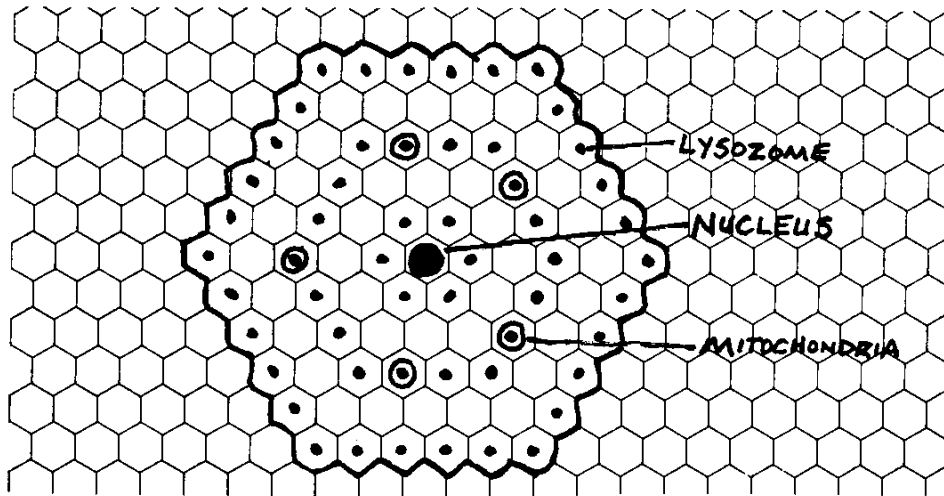
Each hex is considered to be 10,000 km. The outermost ring of hexes is filled with lysosomes. These are little "bags" of digestive enzymes that will attack the ship in an attempt to digest it. The lysosomes are confined to their ring, but will move towards any intruder at the rate of 1 hex per round (of 1 minute). Each lysosome that hits a ship inflicts 5 EUs of damage (regardless of screens).

The next ring of hexes is empty. A ship can find safety from the lysosomes in this ring, as lysosomes are confined to one ring of hexes. The middle ring of hexes contains lysosomes, as well as mitochondria. Mitochondria appear as flashing bodies and they are the cell's "power plant". Each mitochondria can absorb 10 EUs of damage, but supplies 100 towards the total. The lysosomes in this ring behave in the same manner as the outer ring.

After the mitochondrial ring, there is another empty ring. The central ring consists of 6 more lysosomes surrounding the nucleus.

A ship has only two ways of killing an amoeba from the inside. One is to destroy its energy supply by killing all its mitochondria, the other is to destroy the nucleus.

Below is the grid pattern of an amoeba.



G. SPACE BUOY: This device helps to test the humanity and morality of the players. It will place them in a difficult moral situation where their impulses will contradict their humanitarian motives.

When the players first contact the space buoy, it appears to be a small, whirling metallic buoy. Unprovoked, the buoy will begin to issue unreasonable demands and challenges upon a ship. Should the ship fail to respond in even the slightest detail, the buoy will fire one round of laser fire.

Following this, whether the players do anything in retaliation or not, the buoy will fall silent and then begin to issue a distress call. (Andromedan empathy will confirm this as a real distress signal.)

Should the players respond humanely (by sending the ship's doctor or other medical help), they will pass the test. Should they continue firing at the ship, or not respond humanely, the SM will unleash the real power of the buoy. This may be:

- a. Master of Molecular Control--able to change the nature of matter through thought control. Such a psionic is capable of destroying an individual or indeed the entire ship.
- b. Tele-energetic--able to change the nature of energy through thought control. He can drain the entire ship's PPB of energy, or drain an individual.
- c. Space puppeteer--A mad old man, he desires human puppets (or any other race). He will try to lure characters aboard the buoy, only to place them in a mind-exchanger (see Artifacts, section 5.8). He will then exchange minds between a wax mannequin and the real body, so that the person's mind is trapped in the doll (and vulnerable to being melted at any time) while the real body is mindless and controllable.

The SM may use his discretion as to how much power to use against the wayward players. This is the ultimate SM power-trip--he can kill any player he chooses to, or wipe out a whole ship of fools. Naturally, this power should be used sparingly.

If the players succeed, and pass the test, the occupant of the space buoy will provide them with some help. For example, a tele-energetic may choose to show

his gratitude by restoring a ship's PPB to full capacity. The space puppeteer, however, will not show any gratitude (because he's just a crazy old man).

H. GRAVITY WELL: A gravity well is a "black hole" in space that exerts a tremendous gravitational force, such that it can pull a ship, even moving at maximum warp speed, into it. As such, gravity wells are favorite devices of SM's to force certain predictable encounters, as they are impossible to escape. A gravity well will have a range of between 1 and 6 hexes (light years) on the galactic map, and once a ship enters its range it will be pulled into the center of the well. The SM may choose to put just about anything at the center of a gravity well. Sometimes the center will be a time or space warp, while, at other times, the well will be a man-made phenomenon that can be overcome (such as a black hole machine). Because wells are interstellar traps, they will commonly contain a variety of creatures and/or starships: a "Davy Jones' Locker" of the galaxy.

The only other way out of a black hole is to attempt to achieve a cometoid orbit, which will catapult the ship out of the well's gravitational range. Achieving this requires a roll against the navigator's contact skill and a roll against the engineer's technical skill. Both rolls must be successful (i.e., less than the scores of those characters), or the ship is instantly destroyed.

4.4 Galactic Random Encounters

It is suggested that the SM plan out his galaxy with the main features plotted before play. To add an element of randomness, the following system may be employed.

Before the player's ship enters each hex on the galactic map, the SM rolls the die. If he rolls a 1 (on a 6-sided die), there is an encounter; if 2 to 6, none. The SM then rolls on the Encounter Type Matrix. When he determines what type of encounter will occur, he then rolls one more time, to see specifically what that encounter will be on the appropriate table.

ENCOUNTER TYPE MATRIX

- 1 - Star system
- 2 - Star system
- 3 - Cloud
- 4 - Cloud
- 5 - Starship
- 6 - Miscellaneous Hazard

STAR SYSTEM MATRIX

- 1 - 1 planet
- 2 - 1 planet
- 3 - 1 planet
- 4 - multiple planets (reroll 1-6 for #)
- 5 - multiple planets " "
- 6 - no planets

CLOUD MATRIX

- 1 - Gas
- 2 - Gas
- 3 - Dust
- 4 - Dust
- 5 - Crystal (Psionic)
- 6 - Foamy (Antiloetic)

STARSHIP MATRIX

- 1 - Friendly freighter
- 2 - Friendly starship: 1,2--DD, 3,4--CS, 5--BC, 6--DN
- 3 - Enemy freighter
- 4 - Enemy starship--Zangid: 1,2,3--DD, 4,5--CS, 6--BC
- 5 - Enemy starship--Zangid: 1,2--DD, 3,4--CS, 5,6--BC
- 6 - Enemy starship--Videni: 1,2,3,4--DD, 5,6--CS.

MISCELLANEOUS HAZARDS MATRIX

- 1 - Radiation Storm
- 2 - Space Mirror
- 3 - Time Warp
- 4 - Space Warp
- 5 - Gravity Well
- 6 - Space Buoy or Space Amoeba.

4.5 Setting Up a Star System

Once the players have successfully negotiated their passage through space, they will arrive at their target destination. A star system consists of a star (which may not be landed or explored due to extreme heat, unless it is dead) and 1 or more planets. Theoretically, there is no limit to the number of planets in a system, but about 6 is a practical upper limit. In addition, a system may have such features as an asteroid belt or moons.

The SM must design his system of planets, deciding how many planets are in the system, how far apart they are, what type of environment exists on them, and, in accordance with the environment, what type of life might exist thereon.

Distance between planets is expressed in terms of nuclear travel time. Nuclear drive achieves speeds just short of the speed of light (approx. 100 million kms/hr); hyperdrive is necessary for travel in the light-year range. Using our own solar system as an example, the following figures, which are only rough estimates, are given as a guide for distance between planets. Using Earth as a starting point:

Mercury	- 120 million kms	(1 hour)
Venus	- 70 million kms	(1 hour)
Mars	- 100 million kms	(1 hour)
Jupiter	- 900 million kms	(9 hours)
Saturn	-1700 million kms	(17 hours)
Uranus	-3500 million kms	(35 hours)
Neptune	-3500 million kms	(55 hours)
Pluto	-7500 million kms	(75 hours)

Once the players have traveled to a given planet, their ship must enter orbit. Spaceships never land on planets; their size is too great, and too much energy would be expended for take-off. In order to reconnoiter a planet, the players must form a landing party and send them down to the planet's surface by means of one of the two modes of planetary transport the ship has: the teleporter and/or the shuttle ships. Details of these are given in section 3, Starships.

The SM should keep track of which players are down on a planet's surface and which remain in the ship. These concerns come into play if the ship is attacked while orbiting, as well as which players remain to be sent down as "reserves"

if needed. Both the SM and the players will have to keep track of energy expenditure per day, keeping in mind the altered time sequence.

When determining the environment of a planet, the SM must consider the following 4 factors: Gravity, Temperature, Radiation, and Atmosphere.

A. Gravity: This depends solely on the size of a planet. A large planet like Jupiter has high gravity, a small one like Mercury, low gravity. Moons have either minimal or no gravity; asteroids, no gravity. Gravity is generally considered in 3 categories: high, medium, or low.

B. Temperature: This depends solely on the distance from the star. Planets close to a sun, like Mercury, are hot, while ones far away, like Pluto, are cold. The SM may choose to have planets which, like Mercury, have one side always facing the sun (hot side) while one side faces away (cold side) with an intermediate "twilight zone" between them.

C. Atmosphere: The atmosphere may be either breathable or poisonous. The amount of oxygen in the air relates to its breathability; Taurans and Rigel can tolerate low-oxygen conditions better than Terrans. If the air contains poisonous gases, the SM must decide if the gas is poisonous to all 3 types of metabolism (iron, copper, and cobalt), or only 1 or 2. For example, cyanide is poisonous only to iron-based races (Terran, Rigel, Zangid), while harmless to others. Methane, on the other hand, would be poisonous for all 3 types. Poisons specific to other races also exist. Vitamin B-12, for example, is necessary for Terran metabolism but, since it binds to cobalt, poison to Andromedans.

D. Radiation: Radiation may either be natural, from a planet with a lot of radioactive ore, or man-made, as the aftermath of a nuclear holocaust or power plant disaster.

Note: The ship's computer will always inform the players of these 4 environmental conditions for any planet.

These 4 environmental factors will affect the character's abilities on the planet as well as the indigenous life forms.

GRAVITY: Taurans are high-gravity, Andromedans low-gravity, all other races medium. On low-gravity planets, only Taurans are affected. Due to clumsiness, they must subtract 2 from marksmanship and technical skill. On medium gravity planets, all races function normally. On high-gravity planets, only Taurans function normally. All other races must employ jetpacks or suffer exhaustion. (Roll a 20-sided die for every hour, if score is greater than constitution, player is exhausted and must rest 1 hour). Andromedans may not land on high-gravity planets due to extreme exhaustion.

TEMPERATURE: Radiation suits are necessary for all races for protection from extremes of heat and cold. There are 6 ranges of temperature: extremely hot (over 100 C), hot desert (35 to 100 C), tropical swamp (25 to 35 C), temperate (10 to 25 C), cold arctic (-35 to 10 C), and extremely cold (less than -35 C). Suits are necessary only for extremely hot or cold.

ATMOSPHERE: Oxygen tanks must be employed by any race for whom the air is not breathable. These tanks are self-charging, and can last indefinitely.

RADIATION: All characters must employ radiation suits to survive on a radiation-contaminated planet. If a player does not have a suit, he must make a die roll to see if he comes down with radiation sickness, as outlined under the mechanism for Radiation Storms. This die roll employs the "no screens" column. Players using suits must roll once per game day to see if they get radiation sickness as well, but the "full screens" column is used, so there is no chance of dying from radiation.

These are some suggestions for the choice of indigenous life forms as based on the 4 environmental factors.

GRAVITY: Low-gravity planets will have a lot of flying-types, as less muscle mass is needed to overcome gravitational force. High-gravity planets will have very strong creatures, as strength is needed to function in such an environment.

TEMPERATURE: Extremely hot: misc. weird fire creatures; no known life; Hot desert: camels, rats, scorpions, sand dragons, poison cacti; Tropical swamp: alligators, dinosaurs, ferns, palms, flowers; Temperate: men, conventional mammals, trees, grasses; Cold arctic: polar bears, woolly mammoths, seals, penguins; Extremely cold: misc. weird ice creatures; no known life.

ATMOSPHERE: Limitations based on the presence of poisonous gases must be considered for the indigenous species.

RADIATION: Weird mutants and other radiation-resistant species.

4.6 Time Travel

The SM may find it interesting at times to send his players on missions that involve travel through time, as well as space. Most of the time, the period picked should be some past era in Earth's history, although travel is allowed both forward and backward through time. On occasion, the SM may find it diverting to use the past or future of a planet other than Earth for a time travel adventure as well.

Travel through time may be accomplished by the use of several devices. Among these are some of the Alien Artifacts listed in section 5.8 and the Time Warp listed under Hazards of Space in section 4.3. Time travel may either be accidental (as through a time warp) or purposeful. Purposeful time travel may involve SM-designed characters such as Time Guardians who control the portals of time, and may send the players on certain time missions.

The foremost consideration in all time-travel adventures is that history can not be changed, or the world as the players know it will cease to exist (and them along with it!). Even minor alterations of history can have major ramifications when applied over long periods of time. (Ray Bradbury once wrote a story called "The Sound of Thunder" about a time-travelling hunter who altered history by accidentally killing a single butterfly in prehistoric time.)

The SM should set up a historical puzzle for the players to solve during a time adventure. Such a puzzle will require either active or passive interference with history (as it appears to be occurring) to correctly achieve the "historical" outcome. It is for this reason that time travel adventures to Earth's past are the most interesting. Time travel adventures to the future

are more limiting; the players, in all probability, will spend most of their energy trying to find out how their own efforts turned out (and the SM will be forced to lead the game in certain inevitable directions if they do, so he should take all precautions to insure that they cannot).

One example of an historical puzzle is this situation which occurred in the original playtest group. The players went back to Elizabethan England and (after mugging Shakespeare at the Globe Theatre) discovered that Elizabeth was pregnant with Sir Walter Raleigh's offspring. If the "Virgin Queen" had an heir, the Stuarts would not have ascended to the throne, and perhaps the English would not have colonized North America. The player's mission was to uncover this information and then employ the ship's doctor to prevent the birth of Elizabeth's child.

The SM may set up historical puzzles so that the players must engage a force in combat to correct history. For example, having the crew of the starship fight Marshal Grouchy to delay his arrival at Waterloo, or having them hold off Rommel from Suez in North Africa. The SM may consider many of history's "inexplicable delays" and missed opportunities as combat historical puzzles.

4.7 Diseases

Like atmospheric and other poisons, diseases may be specific to one type of metabolism (iron, copper, or cobalt), or may affect 2 or all 3 types. Commonly, a disease will affect the different races in different manners. For example, the same disease may cause only the flu in Taurans while being deadly to Terrans.

It is the responsibility of the ship's medical officer to characterize and cure disease, and medical officers gain their greatest amount of experience points in this manner. The SM should note that doctors, because they have been exposed to most bacteria and viruses through patient contact, have managed to build a degree of immunity to most diseases so they are able to carry on their research. The research for cause and cure is done utilizing the procedure for Computer questions.

Below are a few suggestions for diseases. These are meant as a starting point, to give the SM some ideas, and not an extensive list.

A. Aging Disease: Caused by a virus, this disease causes each character exposed to age 10 years every day. Beyond age 60, they start developing multiple cancers (which can be cured by anticancer vaccine). Characters die after reaching age 120. This disease is not contagious, only the characters exposed to the source get it. For every decade beyond age 40, 1 pt is deducted from all scores; this loss is cumulative, so for an 80 year old, 4 would be deducted from all scores. This disease affects all races equally except Taurans. Due to their long life span (240 years), they suffer no ill effects until they pass age 200, and then start to decline in abilities until death at age 240. Of course, the average Tauran on a spaceship is much older than the other characters to begin with. Most Terrans and others are between 20 and 30, while Taurans are between 40 and 60 (they are considered too "immature" before then for such duty).

B. Reverse Aging Disease: Also caused by a virus, this disease causes each

character to subtract 5 years every day after exposure. Like aging disease, not contagious. Below age 20, subtract 3 from all scores for every 5 years. For example, a 10 year old would subtract 6 from all scores. Since Taurans are older, they have a longer "way to go" before becoming infants. When age drops below 0, the character is gone forever.

C. Psionic Fever: A disease caused by a bacteria that affects only characters with a psionic potential of ten or greater. The disease is contagious, and non-psionics act as "carriers". If exposed, they suffer no ill effects, but they can pass the disease on to others. This disease causes bizarre hallucinations whenever a psionic power is used. For Andromedans, this is almost all the time, as their empathic power is almost constantly in use. After a period of time, the hallucinations cause irreversible insanity. Characters can be protected from their hallucinations by sedation or by being placed in suspended animation.

D. Space Malaria: Caused by an amoebic parasite, Plasmodium asteroidales, it is transmitted by inhaling invisible spores. These spores are present only in swamps. The disease is not contagious if there is no exposure to spores. The disease causes a mild, flu-like illness in all races other than Taurans, and Andromedans. The "flu" causes each character to subtract 1 from all his abilities for a period from 1 to 6 days (roll 1 die, subtract 1 for every 5 pts of constitution or fraction of 5). Die roll is never reduced below 1 day. Space malaria has no effect on Andromedans, who are naturally immune. The effect on Taurans is as follows:

For the 1st 7 days after exposure, there is no effect. The Taurans do not get the flu, and appear to be immune. After this 7-day incubation period, the Tauran comes down with high fever and shaking chills, which incapacitate him for 3 days. Following this 3-day period, there is a period of apparant remission for 3 days, regardless of any treatment. If not cured, however, after the 3-day remission the Tauran relapses, and dies after 1 further day of fever.

E. Lover's Lunacy: A form of space VD, transmitted by contact with thought-benders. These are extremely ugly creatures which have the ability to make themselves appear like beautiful members of the opposite sex who are irresistably attractive to Terrans and Rigel. They have no effect on Taurans, who are not at all interested in mating except during the rutting period and so are not attracted. Once touched by a thought-bender, the character's mind is invaded by a parasite. The parasite makes the character concerned with only one thing: providing food (i.e., other characters) for the thought-bender's consumption.

CURES: It is at the SM's discretion what will be a cure for a given disease. The "universal antidote" in the medikit may be effective against some of the bacteria and viruses. Other devices that can be considered cures include:

1. Being placed in suspended animation.
2. Bombardment with sound waves.
3. Being placed within an energy screen or force field.
4. An electrostun hit.
5. A rare element, which exists only in certain places.

Parasites are usually harder to kill than bacteria or viruses, and require more exotic treatments.

The method for determining the nature and cure of a disease is by the use of computer questions. During the course of an epidemic, the doctor is automatically able to get "on-line" with the computer, and is always allowed the maximum of 6 questions at each session. See section 3.1, i, Computer, for details.

4.8 Starbases

Starbases are the player's home turf. They are the origin point and concluding point for all missions.

The following actions can occur at a starbase:

1. Promotions: Any field promotions are made official.
2. Equipment: Equipment may be replenished and/or exchanged. Additional equipment allowances based on new ranks may be taken on. Note that a player may totally exchange his equipment at a starbase to obtain different or more valuable items, and is not obligated to keep any of the equipment he used previously.
3. Personal Damage: Any personal damage from combat or disease can be corrected by the advanced sick bay facilities.
4. Refueling of Spaceship: The ship's PPB is recharged up to the maximum PPB of that class of ship.
5. New Spaceships: If the ship's commander has advanced in rank so that he is eligible for command of a more powerful vessel, he may request one. (Whether the request is granted is based on the wishes of the SM, who must take into account the general situation in the galaxy at that time and whether or not such a ship would be available).
6. Artifacts: Any artifacts picked up by the players may be requisitioned by Star Fleet HQ (i.e., the SM) for further study. The SM should use this provision at his discretion to prevent the players from accumulating excessively powerful devices.
7. Shore Leave: Rest and Relaxation. One of the devices for R&R is to have a "Fair of the Planets", a kind of World's Fair. This is basically a means of improving scores (in both acquired and inborn abilities), but there is a trap. There are 6 "exhibits" in the Fair, each one a test of one of the 6 attributes. Each player may visit 3 exhibits. One or more of the exhibits can be actually a trap, where the player loses rather than gains, at the SM's option. Here are the exhibits in our Fair:
 - (a) Hall of Marksmanship: Player has to hit a target 3 times out of 5. Must roll less than marksmanship score on each trial to hit. If he succeeds, he adds 1 to his marksmanship.
 - (b) Hall of Learning: This is a test of probability knowledge. The player must attempt to predict which number will be rolled on 1 roll of a 6-sided die. He is allowed to predict one number for each 4 pts of intelligence (or fraction). For example, a character with an intelligence of 13 could pick 4 out of 6 numbers. If he predicts correctly, he adds 1 to his intelligence.
 - (c) Hall of Machines: A player must rely on his technical ability to better an automated machine. The player must beat, in turn, the roll of 3, 4, and 5 6-sided dice by his technical score plus the roll of 1 die. If he fails to beat 3 dice, he loses 1 pt from his technical skill. If he beats the 4 dice but not the 5 dice score, he adds 1 pt to his technical skill; if he beats the 5 dice, adds 2 pts.
 - (d) Hall of Contact: Same test as for intelligence, but using contact skill.

- (e) Hall of Strength: Same test as Hall of Machines, but using strength plus 1 die to beat 3,4, and 5 dice.
- (f) Hall of Loving: This was the "trap" in our Fair. Anyone visiting this Hall came down with Lover's Lunacy (a form of Space VD, covered under diseases).

V. ALIEN ENCOUNTERS

5.1 General Comments

This section is meant to serve as introduction to the types of alien life forms that the characters may encounter on the planets they explore. It is not meant to be an exhaustive or all-inclusive list, and SM's are encouraged to experiment by borrowing creatures from other fantasy-type games or from favorite stories, novels, or movies.

When the players contact an alien life form, they will probably try one of two general courses. Either they will attempt to communicate or they will engage in combat. Communication usually involves use of a universal translator. The operator must roll less than his contact skill on a 20-sided die in order to engage in meaningful communication. Communication can also be attempted through psionic means. The SM will play the role of the creatures if communication is achieved. In doing so, he must keep in mind their motivations and societal traits. Are they xenophobic? Are they highly aggressive and chauvinistic, or more open to reason? Are they under some great fear or superstition? All these and more influence the nature of any communication. The SM must note that communication can only be achieved, with any degree of success, with creatures of at least moderate intelligence. Very stupid creatures aren't interested in much more than satisfying their appetite.

If communication fails, a combat situation will usually ensue. There are two forms of combat. One is ranged weapons fire. This involves any type of force that can be applied over a distance; the success of ranged fire is determined by a die roll on a 20-sided die compared to marksmanship. The other type is close combat, involving physical contact between adversaries. Close combat involves comparison of close combat strength. In most combat situations, morale factors play some role; most types of creatures will not fight on to the bitter end, but will instead flee when self-preservation instincts takeover. There are exceptions: fanatic types will fight on regardless.

When a combat situation arises, the SM must determine the pertinent characteristics for every alien involved. These are marksmanship (if ranged weapons are involved), close attack strength, and amount of damage the creature can take. Note that for some creatures, unlike the characters, the close attack strength and the number of hits must be determined separately. (For characters, both of these strengths are the same, and this number is also considered the character's constitution).

The following types of aliens are described: Humanoids (including Zangids and Videni); Animals; Plants; Machines (including Robots, Androids, and Cyborgs);

Psionics; and Miscellaneous Aliens. Each alien is described by the following parameters:

- (a) appearance and general description
- (b) natural habitat
- (c) close combat attack strength
- (d) maximum number of hits
- (e) special abilities and weaponry

PLANETARY RANDOM ENCOUNTER MATRIX

ENCOUNTER TYPE MATRIX (Use 20-sided die)

Humanoids - 1,2,3,4,5
 Animals - 6,7,8,9,10
 Plants - 11,12,13
 Machines - 14,15,16
 Psionics - 17,18
 Miscellaneous - 19,20

HUMANOID MATRIX

1 - Zangids
 2 - Videni
 3 - Cavemen
 4 - Ancients
 5 - Early Modern
 6 - Late Modern

ANIMALS

1,2 - Mammals
 3 - Flyers
 4 - Underwater
 5 - Insects
 6 - Reptiles

PLANT MATRIX

1 - Projectile Cactus
 2 - Tentacle Ferns
 3 - Mirage Palms
 4 - Armored Puffballs
 5 - Perfume Flowers
 6 - Growing Coral

MACHINE MATRIX

1,2,3 - Robots
 4,5 - Androids
 6 - Bionic Cyborgs

PSIONIC MATRIX

1 - Empath
 2 - Mind-reader (ESP)
 3 - Telepath
 4 - Tele-empath
 5 - Telekinetic
 6 - Tele-illusionist or Hypnotist

MAMMAL MATRIX

1 - Wild Camels
 2 - Steeds of Speed
 3 - Wild Dogs
 4 - River Rats
 5 - Water Hogs
 6 - Diamond-backed Tiger
 7 - Power puma
 8 - Bears
 9 - Dog-bears
 10 - Porcupines
 11 - Elephants
 12 - Wild Boars
 13 - Mandrills
 14 - Space Skunks
 15 - Tapirs (wild boars)
 16 - Polar Bears
 17 - Wooly Mammoths (elephants)
 18 - Power Puma
 19 - Dog-bears
 20 - Diamond-backed Tiger

FLYER MATRIX

1 - Bats
 2 - Flying Dogs
 3 - Eagles
 4 - Psionic Parrots
 5 - Vultures
 6 - Psionic Pheasants
 7 - Prognositcating Owls
 8 - Hunting Hawks
 9 - Eagles
 10 - Hunting Hawks

WATER CREATURE MATRIX

- 1 - Sharks
- 2 - Whales
- 3 - Pirhana
- 4 - Giant Octopi
- 5 - Leeches
- 6 - Electric Eels
- 7 - Giant clams
- 8 - Catfish
- 9 - Lobsters
- 10 - Sharks

INSECT MATRIX

- 1 - Giant Bees
- 2 - Fire Ants
- 3 - Giant Spider
- 4 - Giant Scorpion
- 5 - Mosquitos
- 6 - Space moths
- 7 - Psionic Butterflies
- 8 - Praying Manis
- 9 - Giant Spider
- 10 - Giant Scorpion

REPTILE MATRIX

- 1 - Turtles
- 2 - Giant Alligators
- 3 - Sand Dragons
- 4 - Cobras
- 5 - Rattlesnakes
- 6 - Boa Constrictors
- 7 - Chameleons
- 8 - Dinosaurs - Herbivores
- 9 - Dinosaurs - Carnivore
- 10 - Giant Crabs

5.2 Humanoids

Many of the aliens the players will encounter will be humanoids. The SM must consider the type of civilization the humanoids have: their environment, their technology, their personality traits. In any interaction, the SM must determine what the motivations of these humanoid societies are.

Humanoid societies can span technology levels from the Stone Age through Civilizations more advanced than that of the player's time period, the 23rd century. The players may encounter humanoids on other planets, or, through the device of time-travel, encounter humans on Earth from other time periods. Wargamers may find encounters behind a handful of spacemen and Napoleon's Old Guard or a German Panzer Division to be of interest. In all time-travel encounters, the SM and the players must keep in mind the consideration that they cannot change history or their own world will no longer exist (see Time Travel, 4.7).

Humanoid societies are generally confined to temperate planets. Exceptions do occur. On desert planets, societies of nomadic tribesmen may exist; on arctic

planets, eskimo societies. One interesting variation is an all-water world.

A. Zangids: The arch-rivals of the Terrans, they can usually be found implicated in subversive attempts to destroy or control Terran colonies. They have an iron-based metabolism, like humans. Each Zangid has a marksmanship of 3 dice plus 2, a close attack strength of 3 dice minus 2, and damage of 3 dice minus 2. Weaponry includes laser pistols and rifles, nerve disrupters, and ABC sprayers. They also have such equipment as force field generators, energy screens, and field armor. A well-armed Zangid is quite a match for the characters. A party should generally encounter a number of Zangids proportional to the number in the party. Zangids and Terrans will usually engage in combat on the spot, without too much in the way of conversation.

B. Videni: The religious fanatics of the galaxy, on a holy war to convert the galaxy. Superficially, their appearance resembles that of the Taurans, and like them, they have a copper-based metabolism. Like the characters, they have a marksmanship of 3 dice, and a close attack strength and damage of 3 dice. Weaponry includes lasers, nerve disrupters, and atomic sprayers (like ABC sprayers but only with A mode). Because personal salvation can be achieved through death for the cause, they are generally unconcerned with personal survival and tend to lack such defensive devices as screens and armor. Because of their fanaticism, they fight on without any morale considerations until the last man is killed and are unaffected by morale or the hopelessness of the situation.

C. Aquamen or Atlanteans: Water-breathing humanoids found on all-water planets. Such planets can be deduced from orbit by the surrounding cloud cover. This cover makes further orbital reconnaissance difficult, however. Aquamen either have ancient-medieval technology or modern-future. Ancient-type weaponry would include spearguns (100 m range, 1-3 pts of damage per hit) and tridents (which give them a close attack strength of 4 dice). Future weaponry would include lasers (which function perfectly well underwater), nerve disrupters, and sonic generators. Atlanteans have a marksmanship of 3 dice, a close attack strength of 3 dice unless armed with tridents, and a damage of 3 dice.

Psionic Atlanteans are known to exist, and commonly have the power to telepathically command underwater creatures (see Psionics).

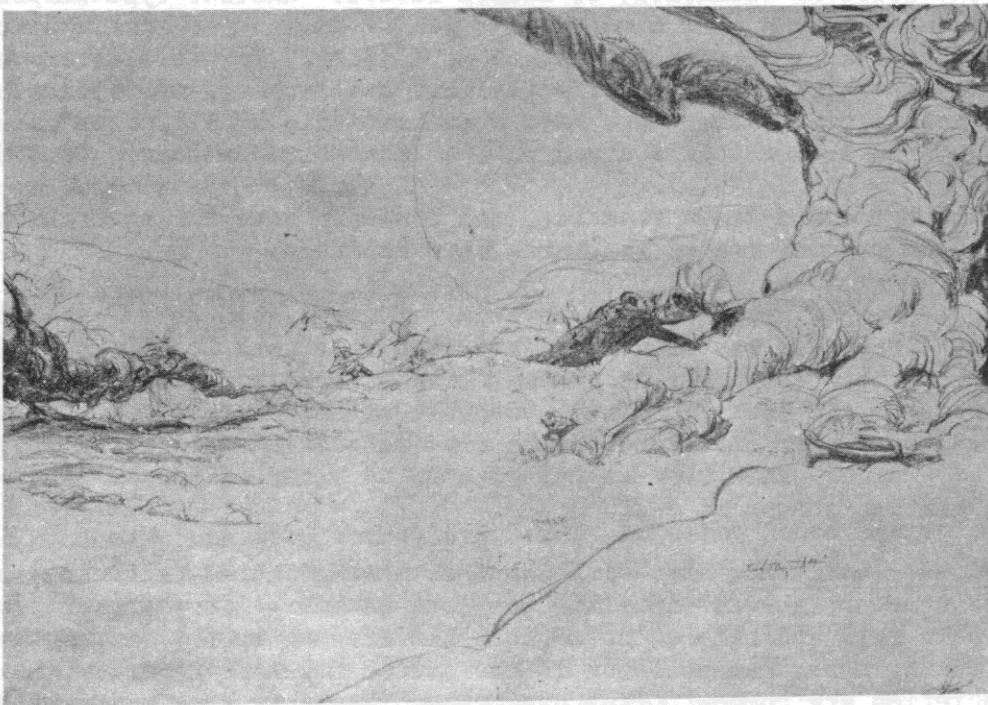
D. Cavemen: Men of usually great physical strength, but only rudimentary intelligence. They have mastered fire, but tend to regard it as a god (along with anyone who has the power to create fire). Found on temperate planets, mostly, or on arctic ones (Ice Age). Capable of close combat only, they lack ranged weapons. Their clubs and spears are counted in their close range attack strength of 4 dice. Each cavemen can take up to 3 dice of hits. They usually appear in hunting groups of 2-12.

E. Ancient-Medieval Men: Men with somewhat more advanced technology and weaponry, and somewhat greater intelligence than cavemen. They are extremely superstitious as a rule and believe in magic. Confined to mostly temperate climates, although Viking types can be found in the arctic and Arab types in the desert. Feudal Societies are common. They have ranged weapons, consisting of bows and arrows. These weapons have a range of 100 m. Men armed with bows have a marksmanship rating of 3 dice, like characters. They must roll less than this score on a 20-sided die to hit. An arrow does 1-3 pts of damage. Close weapons of the period include swords, axes, maces, etc. Their close attack strength equals

4 dice. Men of this period may be armored. Unfortunately, this armor does not provide much protection from energy type weapons. However, an armored man can be considered to take 4 dice of hits, an unarmored one only 3 dice. Armored knights fight from horseback.

F. Early Modern Men: Men of the gunpowder era, armed with muskets. These men have some understanding of science, although this is marked by anachronistic notions. Confined to mostly temperate planets, although again Arab types can be found on desert planets. Ranged weapons consist of muskets, with a range of 100 m. Men armed with muskets, have a marksmanship score of 3 dice minus 2, and must roll less than this on a 20-sided die to hit. A musket ball does 1-6 pts of damage. There are also riflemen, who have a marksmanship of 3 dice plus 2. A rifle does 1-6 pts of damage per hit, but can be fired only once per 2 rounds of combat, due its slower loading. Close weapons include bayonets and pikes. Close attack strength is 3 dice, except for cavalry, who attack with sabres from horseback, and have a 4 dice close attack strength (but no ranged weapons). Men of this period have 3 dice of hits to take in damage. Cannons: Range of 1000 m, 3 - 18 pts of damage, fire once every 3 rounds.

G. Late Modern Men: Men of the age of science, armed with rifles. Confined mostly to temperate planets. Ranged weapons include rifles, with a range of 1000 m. Men with rifles have a marksmanship score of 3 dice. Rifles do 1-6 pts of damage per hit, and may be fired every round. There are also grenades, which can be thrown from 50 m, and do 2-12 pts of damage if they hit. Close weapons are bayonets. Close attack strength of 3 dice. 3 hit dice. Heavy weapons include machine guns (1-6 pts of damage, all targets within range are rolled for), and tanks (mobile cannon platforms, armored, with 8 dice of hits damage).



H. Future Men: Armed in the same manner as the characters. Have the same characteristics of marksmanship, strength, and hits as Terrans. The most advanced future men are personally non-violent, preferring to use their advanced psionic powers instead. Future societies of men may have order maintained by

Anroid or robot police.

5.3 Animals

Animals are among the most common forms of alien life the characters may encounter. They can be found in a wide range of environments--from hot desert to arctic; from high gravity to low; even in radiation contaminated areas.

All animals are assumed to have a rudimentary degree of intelligence. They are capable of planned, thoughtful acts, although they are incapable of using tools. Animals are usually motivated by instinct--the strongest of these are the desire for food and the desire to protect the young. The SM may, at his discretion, postulate intelligent (or even armed) animal races.

Animals are usually found in small groups, although some types prefer to hunt alone while others (like wild dogs) roam in packs. Although some animals have special attributes that can be applied over a range, most of them rely on close attacks to achieve a kill. Most of the time, therefore, animals will attempt to close as quickly as possible to minimum range for close combat.

Animals will be divided into several subgroups for this section's descriptions: Mammals; Flyers (including Birds); Fish; Insects; Reptiles.

A. MAMMALS

Mammals can be found on planets with any temperature from hot desert to arctic.

1. Wild Camels - found on desert planets. These animals can become useful modes of transportation (as they can travel long distances without water). In addition, their humps are water reservoirs, and can be tapped by characters for water. Usually found in small groups. Camels have a close attack strength, and a maximum hit damage, of 20 plus 2 dice.
2. Steeds of Speed - found on desert and temperate planets. These wild horses can also be domesticated to serve as transportation. They have the special ability of being able to move at speeds approaching the speed of light for short periods of time. While moving this fast, they are invisible (although they do raise a dust cloud); they can thus appear, by surprise, in the midst of a party of characters and attack them without warning. The steeds have a close attack strength, and maximum damage, of 14 plus 2 dice.
3. River Rats - found in swamps. These creatures do not attack directly, but rather work their harm from a distance. They will follow a party through the swamps, attempting to drive the characters mad by emitting a high-pitched squeaking sound continually. They stay out of sight, unless able to gang up on one character. They roam in large packs. Each rat has a close attack strength of 3 dice, but a maximum damage of only 1 die. Taurans are immune to the effects of the rats.
4. Water Hogs - found in swamps. These creatures appear to be a cross between a hippopotamus and a water buffalo. Their favorite tactic is to lie in wait in mud banks, looking like logs, and then attacking characters in boats. Each hog has a close attack strength, and maximum damage of 30 plus 2 dice. Found in small groups.
5. Diamond-backed tiger - Found on temperate planets, especially in mountains.

Usually solitary hunters, they combine the worst features of a tiger and a poisonous snake. They have a close attack strength and maximum damage of 25 hits plus 2 dice. They usually attack by surprise, leaping upon a party from a ledge above them. Their claws and fangs are poisonous, against iron-blooded races only. The poison has no apparent effects for 19 hours; then, paralysis sets in for 1 hour, followed by death. The poison can be cured by administration of antidote even up to the time of paralysis.

6. Power Pumas - Found on habitats like the diamond-backed tiger. Also a solitary hunter, this cat has the ability to shoot electric bolts (which always hit and have the same effect as a hit from an electrostun gun) from a ridge along its spine. It has a close attack strength, and maximum damage, of 20 plus 2 dice. If a character touches the cat's electric spine, he is instantly electrocuted, and takes 3 dice in damage immediately.
7. Bears - Found on temperate or arctic planets (polar bears), they are also usually solitary hunters. They are primarily vegetarians, so they will not attack unless annoyed. They are very strong, possessing a close attack strength and maximum damage of 40 plus 2 dice. As everyone knows, bears love honey, so they can commonly be found near bees.
8. Dog-bears - A variety of bears, they appear as normal bears until a psionic power is used in their vicinity. They become subservient to the commands of the psionic who has first exhibited this power.
9. Psionic porcupines - Found in woodlands on temperate planets, these creatures are vegetarians. The use of psionic powers in their vicinity, however, enrages them, causing to loose their quills. The quills inflict 3-18 pts of damage on all within 25 m, 2-12 on all within 50 m, and 1-6 on all within 100 m. The quills are also poisonous, against copper-blooded races only.
10. Elephants - Found in tropical jungles, or in arctic (wooly mammoths). Among the most powerful of all animals, they have a close attack strength and maximum damage of 50 plus 2 hit dice.
11. Wild Boars - Found in woodlands, and also in tropical swamps (tapirs). These animals attack in packs and are quite aggressive. They will attack with no provocation. Each boar has a close attack strength and damage of 15 plus 1 die. Their tusks deliver a poison, which is effective only against cobalt-blooded races.
12. Mandrills - Another extremely aggressive and hostile animal, found in tropical swamps and temperate grasslands. These animals also attack in packs. A mandrill has a close attack strength, and damage, of 10 plus 2 dice. They are enraged by the use of psionic powers and will gang up on anyone who uses such a power in their vicinity.
13. Space skunks - Found in woodlands, these harmless vegetarians will remain passive unless frightened by loud noises or physical threats. They will then emit a noxious gas, which acts as a hallucinogen for all iron and cobalt-blooded races. Each character rolls a 6-sided die to determine how many hours they will be under the effects of this gas.

B. FLYERS

Flyers are usually found on low gravity planets, where less strength is necessary

to overcome gravity. Birds have a maximum altitude ceiling of 500 m, other flying types 100 m. When firing a ranged weapon at any flyer, the attacker must subtract 5 from his marksmanship.

1. Bats - Flying mammals, usually found in caves. These small animals (which rely on sonar, not sight, to attack) usually congregate in large groups. Each bat has only 1 hit die, and does no damage from close attack, but a bite from a bat has a chance of causing rabies. The bitten character must roll a 20-sided die and compare this to his constitution; if less than his score, he is unaffected, but if greater than or equal to it, he gets rabies. Rabies causes madness, and kills if not cured within 10 days. (Rabies is a virus.)
2. Flying Dogs - These animals attack in packs. Each dog has a close attack strength of 3 dice, and a maximum damage of 2 dice. Dogs rely primarily on smell for cues. They have very sensitive hearing, and are chased off by an ultrasonic generator.
3. Eagles - Large predatory birds, these hunters are usually found alone, except for a family protecting a nest. Each eagle has a close attack strength of 4 dice, and a maximum damage of 3 dice.
4. Psionic Parrots - Usually found on tropical planets, these usually solitary birds do not use physical attacks but instead use psionic powers to achieve their ends. Their squawking voices act as telepathy or hypnosis. They try to attain a servant to feed them and cater to their needs. Each parrot has only 1 die of damage.
5. Vultures - Scavengers, these birds are commonly found in deserts. Their presence commonly signifies the presence of corpses. They will attack if threatened, but in most cases they will hover above a battle, swooping down on already wounded characters. Each vulture has a close attack strength of 4 dice, and a maximum damage of 2 dice.
6. Psionic Pheasants - Usually found in woodlands, these harmless birds do nothing unless provoked by the use of psionic powers in their vicinity. Then, they spread their glorious tail feathers (like peacocks), reflecting the psionic power back at the user, who suffers the effects of it. They have a close attack strength, and maximum damage, of 2 dice.
7. Prognosticating Owls - Also found in woodlands, these wise old birds have the power to predict the future in a limited manner. If treated well by characters (given food, etc.), they will predict the future for them. The characters must offer the owl a limited possible choice of future action, at which point the owl will predict the outcome of the action. (It is suggested that the SM make this outcome dire, for if the outcome is beneficial, the characters will take that path and the SM will be forced to have that outcome occur.) An owl has a close attack strength, and maximum damage, of 2 dice.
8. Hunting Hawks - Predatory birds smaller than eagles, these birds hunt for entertainment as well as hunger. They have a special attraction for cobalt-blooded Andromedans, and will follow one waiting for an opportunity to strike. A hawk has a close attack strength, and maximum damage, of 3 dice plus 2.

C. FISH & WATER CREATURES

Found in lakes, rivers, or seas, especially on water planets.

1. Sharks - The most threatening predators of the sea, they usually hunt alone. They are maddened by the scent of blood, and will attack anything (including themselves or other sharks) that give off blood. They are more attracted to iron-blood than other types. Sharks have a close attack strength, and maximum damage, of 20 plus 2 dice.
2. Whales - These giant creatures (actually mammals, but included here) do not have teeth, but eat by straining their food through baleen plates in their mouths. Commonly, they will swallow characters whole and alive. They have a close attack strength, and maximum damage of 75 plus 1 die.
3. Pirhana - Found in tropical lakes or rivers, these packs of fish will attack anything that falls in and, in 1 minute, strip the carcass to the bones. There is no way to be saved from pirhana as their attack is instantaneous and they have surprise, with one exception; a sonic generator used within that 1 minute will chase the pirhana away, victim still takes 3-18 pts of damage.
4. Giant Octopi - Again not exactly fish, these creatures are included here. Each octopus has 8 tentacles, each of which can attack with a close attack strength of 4 dice. The entire creature has a damage of 30 plus 2 dice. Octopi also have the ability to emit an inky black fluid, temporarily blinding all characters within 10 m (and obscuring the octopus in its cloud), making it impossible to accurately fire at it.
5. Leeches - These non-fish invertebrates live in brackish water, especially swamps. They attach themselves to players walking through swamps, and are invisible (but can be detected by other means, like an autoanalyzer). Leeches cause 1-6 hits per 5 minute period to each character. They can be burned off by 1 hit from a laser on heat, but otherwise can take up to 4 dice in damage.
6. Electric Eels - These creatures have the ability to throw electric bolts up to 100 m, which automatically hit and have the effects of a hit from an electrostun gun. They have a close attack strength, and maximum damage, of 3 dice.
7. Giant Clams - These shellfish contain psionic pearls, which give a character holding one of them a psionic power (which power depends on the color of the pearl; pink - empathy, red - ESP, black - telepathy, white - hypnosis, green - tele-empathy, blue - tele-illusion). However, a character attempting to retrieve a pearl will be clamped into the clam by its shell. The shell is impervious to laser fire, electrostun, and spring rifles, and the characters must find a way to open the shell before the swallowed character is digested (he takes 1 pt of damage/minute)
8. Catfish - These fish live in brackish swamps. Their bite causes no damage, but delivers a stinging poison that is fatal to copper-blooded races. Causes a temporary paralysis of the bitten area only for other races, which lasts 1-6 hours. Each catfish has a close attack strength and maximum hit damage of 2 dice.

9. Lobsters - These shellfish usually hide in crevices in reefs, waiting for an unsuspecting character to move by. Their powerful claws each attack with a strength of 5 hit dice, their antennae ward off any psionic powers, and their shells reflect damage from ranged weapons like a suit of armor. A lobster has a maximum damage of 20 plus 2 dice.

D. INSECTS

Giant insects are common mutants, found on planets contaminated by radiation.

1. Giant Bees - These flying insects are attracted to the bright coloring of the Andromedans and Taurans. They have a close attack strength of 4 dice and a maximum damage of 2 dice. Like other flying creatures, characters firing at them with ranged weapons must subtract 5 from their marksmanship. Bees can also fire a stinger up to 25 m. This stinger causes 1-6 pts of damage, and acts as a stun except in those individuals allergic to bee stings. (To determine allergy, have the character roll a 20-sided die and compare it to his constitution; if greater than or equal to his score, he is allergic.) Allergic individuals start wheezing, and die of asphyxia in 1 hour unless cured for bee-sting allergy in 1 hour. The bees will lead the characters to their cache of psionic honey. This honey provides protection from all psionic attacks for 1 day for any character who eats it, but also prevents that character from using any psionic power.
2. Fire Ants - These insects live in large anthills, which resemble sand dunes in the desert. The ants won't attack unless their hills are disturbed. The ants are mansized, and attack with a close attack strength of 4 dice with their jaws. One out of every 6 ants has a fire breath weapon, which acts like an atomic flamer. Each ant has only 2 dice in damage. They usually attack in large swarms from their anthills.
3. Giant Spider - These usually solitary insects are found in woodlands, and also in cities (especially radiated ones). They have a close attack strength, and maximum damage, of 25 plus 2 dice. They will not attack outright, however, but instead will cast their web first and then attack their victim. The web has a range of 50 m, and is so sticky and entangling that any character caught in a web is immobilized.
4. Giant Scorpion - Commonly found in the desert, these insects can spray a venom from their tails up to 25 m. The venom is poisonous against copper-blooded races, acts as a stun against others. Scorpions commonly burrow under the sand, and wait until their victim is quite close before revealing themselves. Scorpions have a close attack strength, and maximum damage, of 30 plus 1 die.
5. Mosquitos - Found in swamps, these biting insects are a minor nuisance, causing no damage, but can deliver space malaria. (See diseases, 4.7)
6. Space Moths - These giant moths are attracted by clothing and armor suits. They will attack a party, not to damage the characters, but to eat their radiation suits and armor. Each moth has a strength, and maximum damage, of 15 plus 1 die.
7. Psionic Butterflies - These gentle insects remain harmless unless disturbed by the use of psionic powers in their vicinity. They then spread their wings which reflect the psionic power used back at all the members of the party

except the one using the power. Butterflies have a close attack strength and maximum damage of 2 dice.

8. Praying Mantis - Also gentle, these protected insects are a rare species. Killing one will cause immediate demotion of 1 rank. If well-treated, they have the same power as prognosticating owls to foretell the future to a limited extent.

E. REPTILES

1. Turtles - Giant, lead-shielded turtles prefer to live in swamps. Their shields absorb hits from all energy weapons like an energy screen. The turtle has a close attack strength, and maximum damage, of 30 plus 2 dice. Usually solitary.
2. Giant Alligators - These creatures prefer swamps and riverbeds. Appearing in small family groups, they lie in wait appearing like logs until their victims are within striking range. They have a close attack strength, and maximum damage, of 25 plus 2 dice.
3. Sand Dragons - Found on desert planets, these worm-like creatures burrow underground, coming to the surface only when the noise of human activity is apparent. They can be seen as "ripples" undulating under the desert sand. The dragons have a close attack strength, and maximum damage, of 75 plus 1 die. They attack by burrowing straight to the surface to their victims. The venom of a sand dragon is not poisonous, but will give the ability to predict the future in a limited manner to any psionic who imbibes it. Water is poisonous to sand dragons.
4. Cobras - These poisonous snakes can be found in jungles. They conceal themselves in the foliage until they can strike. They have a close attack strength, and hit dice, of 3 dice. Their poison affects only iron-blooded races.
5. Rattlesnakes - Found on desert planets, these snakes telegraph a warning by rattling before striking. They are aroused to action by the use of psionic powers in their vicinity. They are poisonous only to iron and copper-blooded races. Close attack strength and damage of 3 dice.
6. Boas - Found also in jungles, these snakes are not poisonous, but act by encircling their victim and squeezing them to death. There is no escape from a boa's grip unless the boa is killed by other characters. The boa inflicts 1-6 pts of damage for every 1 minute it squeezes a character. A boa has a maximum damage of 20 plus 2 dice.
7. Chameleons - These animals, usually found in jungles or woodlands, blend perfectly into their surroundings, and thus always attack in secret. They will sample every member in the party with 1 attack (inflicting 1-6 pts of damage on each) before picking their victim and then concentrating on that one. They have a close attack strength and damage of 15 plus 2 dice.
8. Dinosaurs - Large reptiles found on tropical swamps, they have only rudimentary intelligence. The herbivores are harmless, while the carnivores are quite aggressive. The herbivores only fight if their eggs are threatened. Dinosaurs have very high strength, in the range of 100, and damage

in the same range. Some dinosaurs are armored; this armor may work either as a force field generator (cutting down damage from physical weapons like a spring rifle) or as an energy screen (like lead-shielded turtles, cutting down damage from energy weapons like lasers).

9. Giant Crabs - Not exactly reptiles, these creatures fit here better than elsewhere. Found in swampy or sandy environments, the crabs conceal themselves until the moment of attack. They have a hard shell which acts as a force field generator, absorbing hits from all physical weapons. They have a close attack strength, and maximum damage, of 25 plus 2 dice. Irradiated crabs have the ability to emit a blinding red light up to 100 m away, acting as a stun. Like lobsters, they have 2 claws (enabling 2 attacks), usually solitary.

5.4 Plants

The SM may use quite a bit of leeway in introducing unusual aliens for the players to encounter. An interesting challenge is the use of plants. Such plants may be either sentient and intelligent, or more primitive and interested only in obtaining food. It is quite an imaginative speculation to conjure up an entire society of intelligent plants.

Below, a few suggestions for plant powers are offered. The SM may employ these and any others, at his discretion. As with the sections on humanoids and the animals, this is not intended to be an exhaustive list, but merely a source of suggestions to encourage creative thought. Note: Plants are confined to temperate, tropical swamp, and desert planets.

- (a) Projectile cactus - Found on desert planets, these plants appear like ordinary cactus, but are actually capable of firing spines at characters. Each spine can be considered to do 1-3 pts of damage, or can be considered to deliver a venom which may be poison (for 1 or more types of races) or may affect all races with an effect such as temporary paralyzation.
- (b) Mirage palms - Found on desert planets near oases and in tropical swamps, these plants act with nearly psionic powers. They are capable of projecting an illusion into the character's mind that water or other desirable substances are present where they are actually not. The palms do this in hoping to exhaust the characters, so they die and thus "release their water" to the palms. The palms are intelligent, and can be communicated to and reasoned with. To the uninitiated, their voices appear to sound like the swaying of the wind.
- (c) Tentacle ferns - Found in tropical swamps, these semi-intelligent plants have the ability to reach out with their tentacles and grab characters from up to 100 m away to bring them to the stoma, or mouth-opening, for digestion. Each tentacle has a close attack strength of 4 dice, but can take only 2 dice in damage. A plant will typically have from 2 to 12 tentacles. They have a preference for Taurans over all other races for food, and will seek out the Tauran in a party.
- (d) Armored puffballs - These are actually plant spores. They have no intelligence. They are approximately 1 m in diameter, and appear extremely threatening, bristling with armored spikes. They will sail on overhead

without doing any damage, however, unless fired upon. If fired upon, they will immediately burst, releasing all their spikes. Any character within 100 m must immediately receive between 1 and 3 dice in damage, from spikes (under 25 m, 3 dice; 25 to 50 m, 2 dice; over 50 m, 1 die).

- (e) Perfume flowers - Found on temperate planets, in gardens, these flowers release a sweet-smelling perfume, which may be considered to have different effects: they may induce sleep among certain races, may cause hallucinations among others, and may alter emotional states among still other races. The SM may combine these effects in any manner, for example: iron-based races (Terrans and Rigel) fall asleep, while cobalt-based races (Andromedans) hallucinate and copper-based races (Taurans) are enraged.
- (f) Growing Coral - Found underwater, these plant formations lure characters deeper and deeper within themselves by means of their great beauty and by flashing lights. Once a character enters a formation, it is very difficult to get out, for the coral rapidly grows around him, sealing his way out. The coral blocks a teleporter (rendering it "blind" teleportation), and is impervious to laser fire. A communicator can function through coral, and the coral can be shattered by a sonic generator.

5.5 Machines

Semi-intelligent machines include robots, androids, and cyborgs. Robots and androids are always controlled by another force: either a humanoid or a computer. Destroying this controlling force will stop the robots and androids, who have no will of their own. Obviously, communication between the characters and machines will be quite limited. (Although the SM may postulate pleasure robots and androids, designed to cater to the wishes of men, as in the movie Westworld.)

Cyborgs are somewhat different. A cyborg is a cross between a man and a machine. Cyborgs are capable of independent action and intelligent thought, but also have some of the abilities of machines. (A contemporary example would be The Six-Million Dollar Man or the Bionic Woman.)

- (a) Robots - Robots appear like machines, although they are capable of locomotion and other actions. Robots come in two varieties: worker robots and warrior robots. Worker robots lack weapons, and are capable only of close combat (at a strength of 4 hit dice). Warrior robots have the same close combat ability, but in addition can be armed, usually with electro-stun guns but on occasion with lasers or other weapons. They have a marksmanship of 3 dice plus 1. Robots are usually found on isolated planets with unbearable environmental conditions, like extreme heat or cold, lack of atmosphere, or radiation, performing mindless jobs like automated agriculture or mining. Robots generally are controlled by a master computer, which is programmed to prevent interruptions of smooth operations by intruders. Robots have only 2 dice of damage; their complex circuitry is easily shorted by hits from lasers.
- (b) Androids - Androids look human, although somewhat cold and emotionless. The SM should roll in secret for every technical officer in a party contacting androids, to see if the officer recognizes them as androids. If he rolls less than their technical score on a 20-sided die, they recognize the apparent humans as androids. Androids have the same combat characteristics as robots: marksmanship of 3 dice plus 1, close combat

strength of 4 dice, and damage of 2 dice. Androids are commonly armed with laser pistols. Androids are used in humanoid societies where there would be a need to conceal their mechanical nature. Androids can also be detected by medikit scanning.

- (c) Cyborgs - Bionic cyborgs may have various parts replaced by machine parts. The effects of such replacements are as follows:
- Bionic arms: gives a close attack strength of 4 dice.
 - Bionic legs: allows movement at such speed that obtaining a hit with a ranged weapon is difficult; subtract 5 from marksmanship of any character firing at such a cyborg
 - Bionic ears: allows eavesdropping of any conversation at distances of 10km sensitive to effects of ultrasound
 - Bionic eyes: acts as a hand phaser, with marksmanship of 3 dice plus 2 gives telescopic vision to 100 km
- Cyborgs with bionic legs also are able to move unimpeded by gravity, and jump 100 m at a time. Cyborgs have 4 dice of damage, regardless of their close attack strength. The SM may constitute a cyborg with any or all of the above abilities, at his discretion. Unlike robots and androids, cyborgs are independant and intelligent, and not under the control of another.

5.6 Psionics

Quite properly, psionics is not a class of aliens but rather a set of unique abilities that both aliens and player-characters may possess. Psionic abilities are of the general nature of the powers of the mind, over either physical elements or the minds of others.

This section on psionic powers will be divided into two parts. The first part, immediately following, is a list of psionic powers (in order of difficulty). The second part is to provide the SM with a few suggestions for the implementation of psionic powers.

PSIONIC POWERS (from easiest to most difficult)

- (a) Empathy - the ability to determine a character's basic emotional state. This is limited to very basic emotions like love, hate, fear, anger, etc. It is quite like the Andromedan power, with the exception that in most other character types, the power is not limited in its detection of evil impulses.
- (b) ESP - The ability to determine the content of a character's thoughts. For obvious reasons, no surprise attacks or other such maneuvers can succeed against a psionic with ESP, as he can detect the thought and thus act to prevent the action.
- (c) Telepathy - the ability to project ideas into another character's mind. These ideas do not carry the commanding force of a hypnotic impulse, nor do they present an illusion, nor can they be used to create a certain emotional state. Telepathic ideas are limited to such areas as fostering doubts about loyalty, enticing certain actions, etc.
- (d) Tele-empathy - the ability to project an emotional state into another character's mind. This is the Andromedan ability. Such emotions may be

positive (such as friendliness) or negative (fear, rage). The character will act in accordance with the emotional state projected. Direct commands, such as in hypnosis, cannot be given.

- (e) Telekinesis - the ability to move physical objects through limited distance (100 m) by the means of mental powers. Limited to a maximum weight of 50 kg. Telekinetic force can be applied against a part of an object, such as at an attacker's arm to deflect his aim or knock him off his feet.
- (f) Tele-illusion - the ability to transmit vivid illusions into another character's mind. The character will act as though he believes the illusion to be actually present, until it is disproven. Any damage the character sustains from an illusion is taken as real.
- (g) Hypnosis - the ability to project commands into another character's mind. These commands carry a considerable degree of authority, and the character will almost always act in accordance with the commands. It is impossible, however, to command something which the character would not normally commit. For this reason, it is impossible to order suicide through a hypnotic command. (Although it would be possible to order a character to fight against impossible odds.)
- (h) Molecular control - the ability to alter the molecular nature of a substance by thought. By altering the speed of the molecules, it is possible to make a substance hot or cold. By altering the atomic nature of the molecules, it is possible to transmute the composition of an object (from, say, valueless rock to atomic fuel; or, conversely, from a weapon to sand or water.)
- (i) Tele-energesis - the ability to alter energetic states by thought. The tele-energetic can remove or impart energy from any object, from an individual, through a starship's engines. It is possible to kill (or resurrect) a character and totally drain (or re-energize) a ship with this power.

PSIONIC ALIENS

Broadly, there are two major classes that may possess psionic abilities. The first of these are humanoids. The "witches" of tradition probably were psionics in this respect. Psionics are usually great leaders; the charismatic Mahdi, leader of a band of desert tribesmen, would typically be one. Aquamen are also commonly psionics.

The SM may, at his discretion, assign any or all of the psionic powers to a character the players may encounter. It should be recognized, however, that the final two powers (molecular control and tele-energesis) are extremely potent and should be employed sparingly, as hazards of space (4.3). Commonly a psionic will have one or two of the more minor powers (like ESP and telepathy) and one or two of the major powers (like telekinesis and hypnosis). Another possible idea is to have a "Council of Psionics", 7 to 9 characters, each with a single power.

The other major class of psionics are the ethereals. These are creatures of pure thought energy, who inhabit a region of nether-space known as the "psionic plane". They lack a material body, although they may temporarily inhabit one through possession (as in The Exorcist). While in the psionic plane, they cannot be harmed by physical means, although psionic powers (of Taurans and Andromedans) can be projected against them. Characters may physically enter the

psionic plane to physically destroy such ethereals. Any physical damage will usually destroy them when administered by a character in the psionic plane. The psionic plane can be entered only via an artifact or via the teleporter. Transporation to the psionic plane by teleporter would be considered "blind" teleportation, and thus requires a roll of a 20-sided die to be less than the contact skill of the operator to be successfully achieved.

An additional suggestion for the use of psionic powers is the use of psionic "twins". These are two ethereal personalities, usually one good and one evil, which alternately share the same material body, alternating their possession after a certain time interval (say, every day).

USE OF PSIONIC ABILITIES

A player character may use his psionic abilities as often as desired. Use of a psionic power is considered to be that player's action during any given round of combat. A character may only use 1 psionic power at a time. A character may make only 1 psionic attempt on any given adversary during a single encounter. For example, a character cannot try to hypnotize an adversary and, failing that, try to cast an emotion by tele-empathy on that same adversary during the same encounter. The use of any psionic power except empathy requires the player character to roll a 20-sided die to see if he succeeds. If his roll is more than or equal to his score, he fails. Empathy always succeeds.

The use of psionic power against a humanoid creature is resolved as a form of combat. If the attacking character succeeds in using the power, as outlined above, the psionic combat routine must be resolved to see if the attack succeeds (which mind was stronger). The attacker rolls a 6-sided die and adds this to his psionic potential, the defender does the same. If the attacker's total is greater, the psionic attack succeeds; if a tie, or the defender's is greater, the attack fails. Not only does the attack fail, but it produces the opposite effect desired. For example, if an attacker tele-empathizes friendship and fails, the defender will be extremely hostile (and will probably immediately attack). With regard to such powers as telepathy, ESP, hypnosis, and tele-illusion, the attacker is affected, rather than the defender (for example, the attacker is hypnotized and under the defender's command). As above, empathy is not considered a psionic attack and always succeeds.

Psionic effects are of short-lived duration. Telekinesis lasts for only 1 round (and must be re-determined each round, if the caster wishes to continue affecting the desired object). All other mental effects, such as hypnosis, tele-empathy, tele-illusion, last for 1 to 20 rounds, determined by 1 roll of a 20-sided die. Psionic powers have a maximum range as follows: Telekinesis, 100 m; telepathy/ESP, unlimited; all other 1000 m. Range has no affect on the chance for success.

5.7 Miscellaneous

Miscellaneous creatures are those with extremely unusual form and metabolism, unlike other known forms of life. They are usually found on planets where living conditions of temperature, radiation, or atmosphere are too extreme for more normal forms of life. They are commonly found on extremely hot or cold planets, arctic or desert planets, planets contaminated by radiation, and planets with no or poisonous atmospheres. They may or may not be intelligent, at the SM's discretion.

- (a) Flame creatures - Found on extremely hot planets, these creatures appear to be living, moving flames. They have a close attack strength of 4 dice, and a maximum damage of 1 die. However, because of their unusual nature, they are impervious to damage from lasers as well as most other weaponry (electrostun, spring rifle, nuclear grenade, etc.) and are also immune from sonic generators. They will be destroyed by 1 hit with any type of liquid, even water, delivered from an ABC sprayer.
- (b) Ice creatures - Found on extremely cold planets, they appear to be living crystals of ice. They can assume humanoid or other form at will. Like flame creatures, they have a close attack strength of 4 dice and a maximum damage of 1 die. Like fire creatures, they are impervious to damage from most types of weaponry. However, they can be destroyed by 1 hit from a laser on "heat", and they can be shattered by the effects of a sonic generator.
- (c) Crystal creatures - Can be found on any type of planet. They are exactly like ice creatures, except they are affected only by a sonic generator and not by the "heat" setting on a laser. One out of 6 will have the ability to turn into a mirror, and thus reflect laser fire back at an attacker.
- (d) Stone creatures - Also found on any type of planet, they appear to be living stones, but can assume humanoid or other forms. They have a close attack strength of 4 dice, and also 4 dice in damage. They are affected by lasers (on kill only), but are unaffected by other weaponry (like electrostun, spring rifle) and sonic generators.
- (e) Dust devils - Found on desert planets, they appear to be living dust storms. They are intelligent, and are attracted by metal, which they digest by erosion. They have a close attack strength of 3 dice, and can take 1 die in damage. They are unaffected by most weaponry (lasers, electrostun, spring rifle), but are dispersed by the effects of a sonic generator. Dust devils can extend themselves upwards to a height of 100 m.
- (f) Water spirits - Found on tropical swamp or other planets with surplus water, they appear to be living waterfalls. Like dust devils, they are attracted to metal, which they digest through rusting. They have a close attack strength of 3 dice, and can take 1 die of damage. They are impervious to most types of weaponry, but, like ice creatures, can be dispersed by 1 hit by a laser on "heat" or by a sonic generator. Like dust devils, spouts can be extended up to 100 m.

5.8 Alien Artifacts

Unlike other fantasy games, there is no monetary reward for successful actions by the characters. Success may be rewarded, at the SM's discretion, by the discovery of useful items of equipment, which fall under the general category of alien artifacts.

Such artifacts may be either units of equipment similar to those the characters are able to obtain, or new items. Useful equipment should be chosen from the Equipment List, at a level one or two units higher than the character's ranks would allow them to employ. For example, if most of the characters are ensigns and lieutenants (1st and 2nd level ranks), a few items from the 3 and 4 unit lists are valuable prizes. Especially useful are heavy weapons (laser rifles), field armor, and technical devices.

Below, a list of some suggested alien artifacts is given. The SM should take care that the characters do not know too much about how these artifacts work when they discover them, and should force the players to employ trial and error methods. The SM should only give the general description of the item, along with the description of its controls. Many items should be "booby-trapped" against blind use; i.e., requiring operation of buttons in a certain order or the device will explode. At his option, the SM may allow a technical officer to examine a piece of equipment to attempt to determine its general nature. The technical officer rolls a 20-sided die, and if the roll is less than his technical skill, the SM may give him some hints as to the nature and operation of the artifact.

- (a) Size-changer - A white plastic cabinet of man size, with 2 plastic buttons, one blue and one red, plus a dial labelled 1-10. The blue button increases size, the red button decreases size. The dial controls the magnitude of the size change. Setting 1 causes no change; 2 doubles the size (if blue) or halves it (if red) and so on up to 10. Strength increases by 2 for each increment upward in size, decreases by 4 for each increment down. Technical skill decreases by 4 for each increment up, increases by 2 for each increment down. All equipment a character carries with him into the size-changer also changes size.
- (b) Sex-changer - Another white plastic cabinet, with a green button. This changes the player's sex. Terrans change from male to female or vice versa, and abilities are adjusted accordingly. Andromedans may change to any of the other 2 sexes, which entails a change of dominant power. Taurans and Rigel also change, but this does not affect their abilities.
- (c) Mammal control transmitter - This appears to be a small speaker, with a jack that connects it to a sonic generator. The device allows commands to be given to mammals of any type. Each time a command is given to a particular type of animal, a 6-sided die is rolled. If a 6 is rolled, the animals go mad and attack the users of the device. After the device has backfired, it cannot be used with the same species again, but functions normally with other species. The mammalian device is red.
- (d) Fish control transmitter - Works exactly as the mammal one, except for fish. The speaker is blue.
- (e) Insect control transmitter - Works exactly as the mammal one, but for insects. Speaker is yellow.
- (f) Reptile control transmitter - Works exactly as the mammal one, but for reptiles (including dinosaurs). Speaker is white.
- (g) Time Casette Player - A time travel device that was developed by an advanced species for recreational purpose. The device comes with cassettes, that are pre-set to times and places of historical interest in the past. The user steps into a black plastic cabinet, inserts the desired cassette, and is taken back to the pre-set site. The time travelers are invisible, and can move freely, but are encased by a force field which prevents their action, to prevent them from changing history. Each cassette self-destructs after one use.
- (h) Time Recorder - This device appears to be a videotape recorder, which is

steadily advancing tape forward. By reversing the tape, time can be reversed to a point up to 1 month in the past. A character may travel to that point in the past by stepping into the black plastic cabinet and depressing the red "record" button on the controls. Characters travelling into the past in this manner may act freely, and are thus able to change what has happened in the progression of the game to a limited extent.

- (i) Personal Time Expander - This device is an amulet that appears like a stopwatch. When depressed, the stopwatch slows down time for the wearer, so that he can move faster and do more relative to others in the same time period. Useful in combat, this allows the wearer to perform three actions during any 1 melee round (i.e., fire a weapon 3 times). In addition, since the character is moving so fast relative to others, anyone firing at him must subtract 5 from their marksmanship. The use of this device, however, plays havoc with metabolic balance. Each 1-minute use requires the character to rest for 1 hour within the next 20 hour period. Use for more than 20 minutes in one day results in metabolic exhaustion and death. Use also cancels the bonus some animals and cyborgs have for great speed (-5 from marksmanship).
- (j) Psionic Projector - This device looks like a floodlight, with a white switch, a black switch, and a grey switch. This device allows the character to move to and from the psionic plane without entailing a die roll for "blind" teleportation. The white switch sends the character the device is pointed at into the psionic plane safely. The black switch brings back the character most recently sent into the psionic plane back. (Note that if the characters find the device and press the black switch before the white one, they will summon back the last creature exiled to the psionic plane--usually an evil psionic of great power). The grey switch will send the character into the psionic plane permanently, i.e., he cannot be recalled by the black switch. At the SM's option, the characters may try to recall a character exiled to the psionic plane through "blind" teleportation.
- (k) Illusion generator - This device also looks like a floodlight, but has red, yellow, and green switches as well as a dial from 1 to 10. The device reaches into the mind of the target and conjures up a frightful image. The intensity of the fright is controlled by the dial, with a setting of 8 or higher requiring a roll of a 20-sided die to be compared to the character's constitution; if the roll is greater than that score, the character dies of fright. The red button affects only the creatures the device is pointed at, the green button affects only the operator, while the yellow button affects both the operator and the target.
- (l) Mind-exchanger - This device consists of 2 plastic cabinets, one white and one black. When any two living creatures enter these booths, and the operating lever is depressed, the minds of the two creatures will exchange bodies.
- (m) Psionic devices - These are devices which confer psionic powers upon the user. Each device confers a different power. The devices may be used as often as desired, but a 6-sided die must be rolled for each use. If a 6 is rolled, the user becomes insane and the device is ruined. This insanity may, at the SM's discretion, be either permanent, temporary, or reversible (by any means the SM desires, to be determined by the doctor via com-

puter questions as in the cure of diseases, section 4.7). Die rolls are made separately for each attempted use of such a device.

Empathy: blue hearing aid, fits right ear

ESP: red hearing aid, fits left ear

Telepathy: black-rimmed goggles

Tele-empathy: white-rimmed goggles

Tele-illusion: silver goggles

Hypnosis: gold goggles

- (n) Plant Control Transmitter - Works exactly like mammal control transmitter, except only on plants. Has a green speaker.
- (o) Robot/Android Control Transmitter - Works exactly like a mammal control transmitter, except only on robots and androids (but not cyborgs). Has a black speaker.
- (p) Artificial Body Parts - These parts convey various abilities on the user.
 - Arms: As bionic arms, close attack strength of 4 dice.
 - Legs: As bionic legs, minus 5 from marksmanship for all firing at user
 - Eyes: As bionic eyes, telescopic vision (to 100 kms)
 - Ears: As bionic ears, telescopic hearing (to 10 kms)
 - Wings: Allow flight, like a jetpack, but without penalties
 - Gills: Allows underwater breathing
 - Fins: Allow rapid underwater movement, as though by jetpack, without penalty.
- (q) Image splitter - This device is an amulet containing a mirror. Upon opening the device and gazing into the mirror, the user's body is split into 1-6 additional images, which appear exactly the same and mimic the actions of the user. Each mirror image is destroyed by 1 hit from any weapon.
- (r) Self splitter - This device resembles the image splitter, except that 1-6 clones of the original self is created, each capable of independent thought and action. Each clone has 2 dice of damage maximum. The clones are indistinguishable from the original, except if the original is killed, all the clones die.
- (s) Chameleon Cape - This cape causes the user's image to blend in with whatever surroundings he is near, providing absolute protection from all attacks relying on visual clues and allowing action as though invisible.
- (t) Psionic Shield - Another amulet, this device confers absolute protection from all psionic attacks (telepathy, tele-empathy, tele-illusion, and hypnosis). In addition, if placed upon a psionically-transformed character (made so by a crystal cloud), it will revert him back to normal. Once used to convert a psionically transformed individual back to normal, the device is useless. The device will rob any naturally psionic character (Tauran or Andromedan) of their natural psionic powers.
- (u) Auto-sextant - This device allows the characters to remain aware of their position in space at all times, thus cancelling the effects of a gas cloud on the ship's instruments. It also allows the players to re-orient themselves immediately after passing through a space or time warp.
- (v) Personal teleporter - Another amulet, this device allows immediate recall

to the character's ship, thus avoiding blind teleportation. Can be used for recall from the psionic plane in this manner as well. It has a limited number of uses (1-6), and works only for the character wearing it.

- (w) Vaccines - These are ampules to be used with an air hypodermic. They convey absolute immunity from various diseases. Each player may be vaccinated only once; multiple vaccinations simply cancel each other out. A player being vaccinated runs a 1 in 6 chance of coming down with a mild flu (subtract 1 from all abilities for 1-6 days) and a 1 in 20 chance of coming down with the actual disease the vaccine is supposed to prevent. The SM may allow vaccines for any of the diseases in the game.
- (x) Computer Access Key - This key, which is limited to 1-6 uses, allows immediate access to the ship's computer with an allotment of the maximum, 6 questions.
- (y) Loyalty Charm - This amulet aids in commanding non-player characters. In any situation where loyalty and obedience are involved, the user commands the character as though he had a charisma of 20, and were of the same race as the character he is commanding (i.e., he subtracts 10 from the die roll compared to the non-player character's loyalty score, 1 for every 2 points of charisma).
- (z) Race-changer - Another black plastic cabinet, this device will change the player's race depending on which button is pushed. Each player is allowed only one change attempt; further attempts have no effect. If a player happens to choose the button for his own race, no change occurs.
 Red: Terran
 Yellow: Rigel
 Green: Tauran
 Blue: Andromedan
 White: Zangid
 Black: Videni

5.9 Combat

When communication has failed between the characters and a party of aliens, a combat situation will probably ensue. During combat the SM dictates the actions of the aliens, while each player determines the actions his own character will perform.

Combat is divided into "rounds" of 1 minute each. During each round, each character is capable of performing only one action. All combat is assumed to be simultaneous, unless there is an element of surprise (as determined by the SM). In each round, all actions by all the members of both sides are considered to be happening at the same time. All damage scored in one round is simultaneous; regardless of how much damage a character sustains, he is allowed his normal action in that round. In a surprise situation, the surprising force gets one round "free", i.e., each character is allowed one action before the enemy can respond.

Contact between the characters and aliens will usually begin at a range between 500 and 100 m, although this may be closer in certain situations (within a city, for example). There are, in general, three types of combat: Ranged weapon fire, close combat, and psionic combat. Aliens with a high

close combat strength (4 dice or more) will attempt to close to minimum range to engage in hand-to-hand combat. Such aliens include primitive humanoids (cavemen, ancient & medieval men) as well as many animals, plants, and robots. Aliens with ranged weapons and close attack strengths of 3 dice or less will usually close to within 50 to 100 m and then engage in a firefight. Psionics can engage at any range up to 1 km.

During each round of combat, participants can attempt to close range by moving up to 50 m closer. Such movement is in addition to any other action the character may take. Characters may not attempt to leave the field of combat by moving away from an attacker. As with spaceships, this is considered cowardice in the face of the enemy, and any character doing such is subject to immediate demotion.

Morale: A party will engage in combat freely until it suffers 50% casualties. At this point, and for each subsequent round, it must check its morale. Morale is determined by rolling a 20-sided die and comparing this to the highest charisma score in the party (the leader). If the roll is less than that score, the party will continue to fight; if greater than or equal to it, the party will rout. In the case of player characters, such a rout will usually entail recall to the orbiting spaceship. Certain types of aliens never have to check morale. Among these are the fanatic Videni, who will always fight to the last man; machines, like robots and androids; plants; and many animals (if their family group is threatened).

A. RANGED WEAPONS FIRE

Resolution of ranged weapons fire depends on two aspects: the firing character's marksmanship, and the range characteristics of the weapon. The marksmanship score is modified by any characteristics or range and encumbrance (such as radiation suit, jetpack, field armor, gravity), and the character must then roll less than this modified score on a 20-sided die to hit his target. Regardless of bonuses, marksmanship may never be more than 20.

Range Consideration Table:

<u>Die Roll Change</u>	<u>Weapon Type:</u>		
	<u>Hand Laser</u>	<u>Laser Pistol</u>	<u>Laser Rifle</u>
plus 2	<u>Electrostun</u>	<u>ABC Sprayer</u>	<u>Spring Rifle</u>
plus 1	under 5m	under 25m	under 50m
normal	under 10m	under 50m	under 100m
minus 1	10-25m	50-70m	100-300m
minus 2	over 25m	over 70m	over 300m
MAXIMUM	over 50m	over 80m	over 500m
	100m	100m	1000m (1 km)

Damage Scored per hit:

Hand laser or Laser Pistol: 2-12 pts

Electrostun gun: Special, roll die plus stun

1,2: stun only, no damage

3,4,5: stun plus 1-6 pts of damage

6: stun plus 2-12 pts of damage

Stun: Length of time stunned depends on constitution (hits) of target.

If 1-7: stunned for three 5-minute periods

If 8-13: stunned for two 5-minute periods

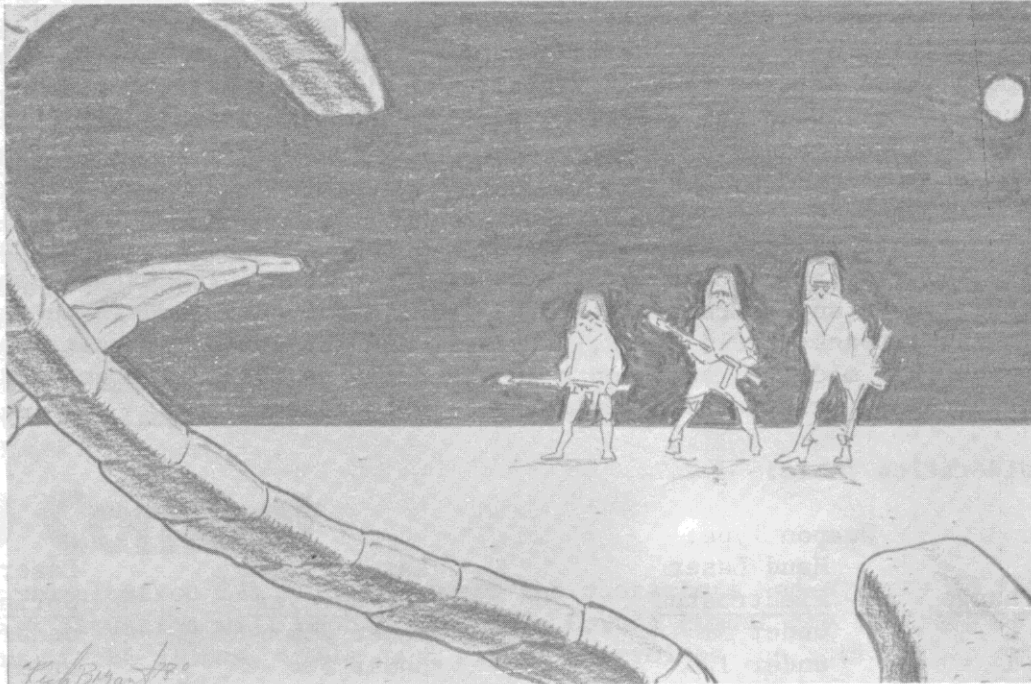
If over 14: stunned for one 5-minute period

Laser Rifle, ABC Sprayer (Atomic Flame): 3-18 pts
 Spring Rifle: 1-6 pts (but gets 3 shots per round)

Note that the chances of obtaining a hit, and the damage scored by a hit, is constant, and does not (as a rule) depend on the target being fired at. The exceptions to this rule are as follows:

- (a) Certain of the miscellaneous creatures are impervious to different types of weapons.
- (b) Certain animals have armor which protects them from different types of weapons.
- (c) Certain animals, and bionic cyborgs, are capable of moving at such great speed that they are difficult to hit. The firing character must subtract 5 from his marksmanship in all these situations. Among the animals are all the flying types.

Encumbrances: radiation suit: subtract 2 from marksmanship. Jetpack: subtract 1 from marksmanship (cumulative with above). Field Armor: subtract 3 from marksmanship.



B. CLOSE COMBAT

Resolution of close combat depends on the close combat strength of the participants. Each participant rolls a 6-sided die and adds this to his strength. The difference between strengths is compared, and the result is as follows:

Differential: 0 or 1 - stalemate
 2 or 3 - weaker stunned (length of stun depends on const.)
 4 or 5 - weaker stunned, plus 1-6 pts of damage
 6 or more - weaker stunned, plus 2-12 pts of damage

The length of stun employs the same considerations as above for the electro-stun gun. If a character is being attacked in close combat, he must turn to face his attacker and may engage in no other activity in that round.

NOTE: Players must keep track of how many hits their characters sustain from ranged weapons fire and close combat. If a character sustains more hits than

he can take (compared to his strength/hits), he is considered killed. The SM does this for the aliens involved. Casualties, in terms of morale, refers to characters killed.

Example of Combat:

A party of 5 Zangids armed with laser pistols comes upon a party of characters, as follows: a Terran Command Officer, with a charisma of 15, a marksmanship of 12, and a strength/hits of 14, armed with a laser pistol; an Andromedan science officer armed with an electrostun gun, with a marksmanship of 8 and a strength/hits of 10; a Rigel military officer, with a marksmanship of 17, a spring rifle and a suit of field armor; and a Terran technical officer, with a technical skill of 14 and a marksmanship of 10, armed with a laser pistol and an energy screen. The Andromedan has a Psionic Potential of 14 with the powers (chosen) of telepathy and telekinesis. The Andromedan uses his telekinesis to deflect the fire of one Zangid each round, succeeding on a roll of 13 or less each time.

The combat is joined at 100 m, with no surprise. Each Zangid fires at one character, except 2 fire at the Commander. The characters do the following: the commander fires his laser pistol; this is at maximum range, so he must subtract 2 from his marksmanship. He will obtain a hit with a roll of 9 or less, since his modified score is 10. The Andromedan uses his telekinetic ability to deflect the fire of one Zangid; he will succeed in this on any roll of 13 or less. The Rigel officer fires his spring rifle at 3 of the Zangids. At 100 m, there is no modification for range, but he must subtract 3 from his marksmanship for his field armor, giving him a modified total of 14, so he hits with a 13 or less. The technical officer tries to work the energy screen; he must roll less than his technical score of 14 to do so, so he will succeed on a roll of 13 or less.

The results are as follows: The Commander's laser fire misses; the Andromedan successfully deflects one Zangid's fire; the Rigel hits two out of three Zangids; the technical officer fails to operate the unit. Of the 4 Zangids whose fire was not deflected, two hit, one each on the commander and the Rigel. The commander takes full damage (2-12 pts), but the Rigel may roll the die to see how much damage his suit absorbs.

After several rounds, two Zangids and the technical officer are killed. The Terrans have closed to hand combat. Each combat is resolved based on strength and a die roll. The Andromedan is killed, so the Terrans must check morale--the commander must roll less than his charisma (15), so the party will keep fighting with a roll of 14 or less. They do keep fighting, and in the next round a third Zangid is killed. The Zangids have now also sustained over 50% casualties, and they fail their morale check and rout.

VI. THE STARMASTER

6.1 General

The Star-Master has a multitude of roles and functions in the game. These can

be divided into two broad categories: preparation, done before the game; and refereeing, done during the game.

Under the category of preparation, the SM must set up the sector of the galaxy the players will explore. First, he must dream up a scenario, a *raison d'être* for the character's mission. As mentioned in section 4.1, such a scenario may be either specific or general. The SM should formalize the nature of the situation and the player's objectives in the form of a "briefing". The Appendix includes several sample "briefings".

Once the scenario has been set, the SM must set up the galactic sector the players will traverse. This should be laid out on two blank hex maps. One of these maps will be the SM's reference map, and will include all star systems, hazards of space, and other galactic encounters the SM may have planned for the players. The second will be the player's map. This will contain only the major systems, and only sketchy information (if any) about the hazards of space. The players will map their movement on this map, and record the locations of any hazards as they encounter them.

In laying out hazards, the SM should provide an assortment of different types to provide a challenge for the players. The spatial location of hazards should be across the paths of shortest distance between the player's starting point and their objectives. This is to make the players think about their course, and not just move in a straight line. Hazards can also be used in combination, i.e., have a space mirror set up so that the player's ship will be reflected into a cloud.

In addition to setting up the galactic map and the hazards of space, the SM must set up in advance the major features of the systems the players will explore. The SM must decide how many planets are present in a system, what their characteristics are (temperature, gravity, radiation, atmosphere) and what type of aliens might inhabit the planet, being consistent between the planet's ecology and the life forms there. If humanoids are to be present, the SM must postulate their technology level and the nature of social interactions on the planet. The SM must also decide which, if any, alien artifacts the players may be able to recover on a planet. Here, favorite stories can provide or help in the creation of these worlds.

During the game, the SM functions as a referee. He briefs the players as to their objectives, and then resolves any interactions that may occur between the players and any hazards they may encounter. The SM must interpret the rules, and apply them as he sees fit to a particular situation. The SM should try to keep his players in some mystery about the nature of anything they encounter, letting them discover this by trial and error. In some cases he will have to step in as a deus-ex-machina to prevent ultimate disaster; however, a few crucial clues given to the players should help avoid most of these situations.

The SM has several other roles to play during the course of a game. One of these is as the ship's computer. The computer is a means for the players obtaining information about hazards or aliens they encounter. Depending on the situation, the SM may play the computer either strictly (responding only to yes-or-no questions) or more liberally, providing the necessary explanation the players may have overlooked.

Among his other roles, the SM must play the roles of all the intelligent aliens

the players encounter and wish to communicate with. He must pre-determine their social attitudes and motivations, as this will determine how these characters would react to various approaches by the characters. For example, the SM could postulate a race of tough, militaristic humanoids, to whom a friendly approach would be construed as a sign of weakness!

Finally, the SM must fairly resolve the combat actions of all aliens the players encounter. He must determine when and how the aliens will attack, using what weapons (if any), whether they will close the range, which player characters they will attack, how long they will keep fighting once they begin to take casualties. The SM should use the characteristics listed for each type of alien as a guideline for their actions in combat. In general, aliens will act with some restraint to attempt to insure survival and will attack in a manner that will enable them to utilize their most effective means of attack. The SM must be fairly benign in choosing the targets of alien attack. The targets of each attack should be chosen randomly and the SM should exercise some care in resolving a melee so that the characters have an equitable chance of survival.

In determining the players' encounters the SM should keep in mind that his function during the game is not to "beat" the players, but rather to challenge them. The encounters should neither be so simple and obvious that the players have no difficulty overcoming any obstacles, but not so difficult that their chances of survival are slim unless they find the one method of escape. The SM should try to make the players think, to weigh their alternatives, and to give them at least hints about the possible outcomes of their choices (so they can choose more rationally).

The SM must also keep in mind that this set of rules is not firm, inflexible, or immutable. The SM should try to bring the rules to life, adapting them to fit the situations. If the players obliquely suggest characteristics of an alien the SM may not have thought of, the SM may encompass them into the nature of the aliens if they would logically fit (even though they may not be mentioned in the rules). The SM should not be limited as to what types of aliens the players encounter by the descriptions given in the rules. These descriptions are not fixed characteristics, but rather suggestions. The SM may see an interesting ability listed under one type of alien that he may wish to impart to a totally different type. In all, though, he should try to keep his worlds consistent (although an irrational world, on the boundary of two dimensions, might be consistently inconsistent!)

6.2 Experience Points

The players "reward" for successful action is promotion. Promotion makes the characters more effective (as they add points to their abilities) as well as allowing them to utilize the more interesting equipment. Promotion in this game is based on experience points. The SM should award these experience points for successful actions of all types. The amount of points awarded in any given situation is at the SM's discretion. However, the following general guidelines are offered.

MILITARY BRANCH: Points are awarded for successful combat situations. The SM should award between 50 and 200 points for each adversary overcome. On the lower end of the scale would be the less dangerous adversaries, like worker robots and the weaker animals. On the higher end of the scale would be the most power-

ful animals like dinosaurs. In the middle would be humanoids armed similarly to the characters.

Command subclass: Bonus points should be awarded for successfully completing a mission, between 100 and 500 points, depending on the complexity of the mission and the degree of success of the solution. Points should be subtracted for excess casualties (depending on the situation), between 50 and 200 points for each character lost. (The higher value for higher-ranking and alien officers, the lower for security guards). The SM should allow a reasonable casualty figure without penalty, depending on the nature of the situation (i.e., more casualties are acceptable during a "hot war" than during a limited exploration recon.)

Fire Control subclass: Bonus points should be awarded for each enemy ship defeated in combat, between 50 and 200 points, depending on the difficulty to the situation (50 pts for a weaker ship, 100 pts for an equal ship, 200 pts for a more powerful ship).

SCIENTIFIC BRANCH

Alien Life subclass: These officers get experience points for successfully contacting new races, and not for combat success (as a rule). An alien life officer should get 50 points for every new race encountered, and up to 200 pts for every new race that extended, friendly contact has been established with.

Medical subclass: Bonus of between 200 and 500 points for each outbreak of disease characterized and controlled.

TECHNICAL BRANCH: Like military officers, they receive points for dispatching aliens in combat. They also receive bonus points (between 50 and 200 points for each journey through space completed successfully and within the time limits set by the SM. A penalty for lateness can be established, 50 to 100 points, for each day over the timetable. A bonus can be offered for journeys completed under the time limit of 50-100 pts/day.

ALL PLAYERS: The SM should reward all players for good ideas, and for the imaginative use of their powers and equipment. Along these lines, thoughtful computer questions should also be rewarded. The SM should be flexible in the awarding of points on this method, between 25 and 100 pts at a time.

In addition to experience points, the SM may choose to reward particularly meritorious action by the use of medals, awards, or decorations. One such idea is a "Galactic Legion of Honor", membership in which is awarded for unusual service to a fellow life form. The members of this select fraternity are tied to each other by bonds of loyalty stronger than those of race and will do anything possible to protect a fellow member.

6.3 Inspiration & Sources

In designing a sector of the galaxy, the SM should keep themes of popular science fiction in mind as possible inspirations. The story of this game's conception may serve as an example to future SM's.

This game was first conceived one night after a playing of Dungeons and Dragons, when a friend suggested the concept of doing a game based on the universe of TV's Star Trek in that manner. While such a game could not literally use Star Trek

characters, due to the limitations of copyright, the basic technology level of Starships and Spacemen is derived from that series. Players can certainly recognize such devices as the teleporter, the laser pistol, and the hyperdrive warp as elements from Star Trek. Some of the alien races were inspired by the show as well; the cold, calculating, superlogical Taurans bear quite a resemblance to the Vulcan race of Mr. Spock.

However, should I have been tied to the world of Star Trek only, and not employed ideas from other science fiction media, the game would have been much more limited than it presently is. The game is not Star Trek, and the argument that something could or could not be done on the TV show is not valid in the interpretation of the game rules.

Some of my other sources including Frank Herbert's Dune series (which provided the monster of the sand dragon, with its prescient venom); Gordon Dickson's Dorsai novels (which provided the genetic mercenaries, the Rigel; their spring rifles; and the religious fanatics, the Videni); Robert Heinlein's Starship Troopers (for its infantry in powered, armored suits); and various science fiction movies, such as Westworld (for its pleasure androids), and other television shows (such as The Bionic Man, for its cyborgs). Carrie inspired the use of telekinetic powers, while occult movies such as The Exorcist and The Omen suggested possession by a spirit from the psionic plane. Star Wars inspired the space carriers with detachable individual spacecraft.

One of the truly original elements in the game are the characters of the Andromedans. While they started out resembling the Andorrians of Star Trek, they developed into a race of shy, sensitive, emotional psionics, the "logical" (pardon the word) counterpart to the ultrarational Taurans.

Would-be SM's should turn to popular media as well, altering the details so that the players do not know too exactly the strengths and weaknesses of any beings they encounter. Why not a Planet of the Apes? Or, how about a mission for the characters like checking out a mysterious monolith, as in 2001: A Space Odyssey? The possibilities are limitless.

Well, it's your game now. It's up to you to take from here what you will and turn it into something everyone can enjoy.

Recommended Reading for SM's:

- (1) STAR TREK TECHNICAL MANUAL, by Franz Joseph, Ballantine Books, \$6.95
- (2) STAR TREK CONCORDANCE, by Jfo Trimble, Ballantine Books, \$6.95



Appendix, SAMPLE MISSIONS

The Mission:

For the past six months, there has been a severe crop failure on Beta Sigma III, a Terran-like planet which is one the Federation's major breadbaskets. This has been attributed to a drastic change in the planetary weather patterns, from a temperate-tropic climate to barren-rain forest.

It is suspected that the Zangid Empire is responsible for this disturbance. The Zangids have been desirous of this system ever since the failure of their own colony on Beta Sigma IV. This planet, also Terran-like, is badly contaminated with radiation, because the colony's failure was due to a malfunction of the nuclear irrigation facilities. Several times in the past, the Zangids have attempted to damage the agricultural economy of Beta Sigma III.

The mission of the destroyer Bunker Hill is to deliver Dr. Marcus Kilcasey, a Tauran agriclimatologist, to Beta Sigma III, and to determine the source of the disturbance and, if possible, to eradicate it.

The commander of the Bunker Hill must bear in mind that the Confederacy is technically at peace with the Zangid Empire. For this reason, unsubstantiated accusations which may provoke hostilities cannot be risked. The use of force should be restrained, therefore, until definite proof of Zangid interference has been established.

Data on Beta Sigma System:

Class Two Orange Giant Star, estimated surface temperature 4000 C.

Five Planets:

- a. Beta Sigma I - a hot giant, about the size of Jupiter.
- b. Beta Sigma II - a medium hot giant, about the size of Neptune.
- c. Beta Sigma III - temperate planet, size of Mars, location of friendly colony.
- d. Beta Sigma IV - subtemperate planet, size of Venue, site of previous Zangid colonial base.
- e. Beta Sigma V - a cold dwarf, size of Mercury, largest and closest in an asteroid belt. Is considered to have one moon, which is really just a large asteroid. The moon is called Beta Minima. The rest of the asteroid belt is just bits of dust and rock.

The Confederacy's prime suspicion is that the origin of the disturbance is from Beta Sigma IV, site of the previous Zangid colonial base.

FROM: Commander, Starbase 11

TO: Officers-in-charge, S.F.S. Bunker Hill

The commander of Starbase 11 wishes to relay the congratulations of S.F.S. Naval Command to the crew of the Bunker Hill for its splendid performance in the Beta Sigma Affair. The continued agricultural output of this important system has been insured, and a major Zangid threat to the system's security has been eradicated.

In light of their performance in the Beta Sigma Affair, the following officers are recommended for promotion from Ensign to Lieutenant, junior grade, immediately upon arrival at Starbase 11.

Jerk, Janis T., Command
Carp, Christopher, Command
Ward, Montgomery, Engineering
Mister Schlock, Alien Life
Cerulean Blue, Alien Life

The following special decorations are also recommended:
Ward, Montgomery: Silver Palm Leaf, for action with Zangids.
Bottle-nek: Purple Star of Gallantry, posthumously

The crew of the Bunker Hill is hereby entitled to two day's shore leave at Starbase 11 prior to departure on next assignment.

The next mission of the Bunker Hill in this quadrant of the galaxy is two-fold. The major portion of the assignment is to investigate the disappearance of three S.F.S. ships during the past 3 years. Three years ago, while transporting a prisoner from Starbase 11 to the penal colony of Devil's Planet, the destroyer Chapultepec mysteriously disappeared without a trace. Six months later, while investigating the Chapultepec's disappearance, the destroyer San Juan Hill also disappeared. One cryptic message was received on the ship's ejected recorder: "Beware the space buoy; it is more than it seems." No further incidents in this area occurred until three months ago, when the destroyer Belleau Wood was lost in the same area, also without a trace.

A subsidiary assignment is to deliver "Bloody Dick" caveat, a disgraced physician euthanasiast and traitor to the Confederacy, to the penal colony at Devil's Planet. Extreme caution must be exercised in regard to the prisoner, as he is highly dangerous and resourceful and is known to have escaped several times in the past.

Crew Replacement: Red-nek, Tauran, Ensign, Navigation.

Rebriefing

FROM: Space Fleet Service Command, Starbase 11

TO: Commander and crew, S.F.S. Edmund Fitzgerald

RE: Sahel

Sahel is a high gravity, desert-type planet in the Starbase 11 sector. It has a dual-class society: the dark-skinned NeoMuslims and the light-skinned desert tribesmen. The Muslims, concentrated in the City of the Blue Mosque, are engaging in a slave trade, sending the light-skinned tribesmen off into space as slaves.

S.F.S. Informers on Sahel have informed S.F.S. Command that the planet is ripe for a rebellion by the desert tribesmen. What has prevented such a revolt until now has been the internecine squabbling of the tribes. It appears that, at present, great leaders are arising among the tribesmen, and these leaders will effect a change in the society of the planet.

It is the mission of the S.F.S. Edmund Fitzgerald to insure that, when the new order takes over on Sahel, Galactic Confederacy interests will be preserved. S.F.S. informers have also revealed that Videni agents have been spotted; it is S.F.S. Command's concern that the Videni will sway the tribesmen to their viewpoint of religious fanaticism, thus presenting another threat to stability in this sector.

As you may recall, the performance of the S.F.S. crew in this matter has not been very helpful to this point in time. In your first encounter with the tribes, an ill-conceived assault almost alienated your would-be allies. The tribal chief has been willing to give you another chance to win the tribe's friendship. Your challenge is this: in the Snow Sand Desert, you are to seek out and kill a great Sand Dragon, and bring its venom back. The commander of the Edmund Fitzgerald, Lieutenant Carp, is being held hostage contingent on your successful completion of this task.

Briefing

FROM: S.F.S. Command, Starbase 12

TO: Commander and crew, S.F.S. Edmund Fitzgerald

RE: Cathedral

A disturbance has occurred recently in the Cathedral system of this sector which you are requested to investigate.

The Cathedral system was, up until recently, a system of 4 planets. These planets were Cirrus, Stratus, Nimbus, and Cumulus. The only one with any value at present to the Galactic Confederacy is Cumulus, otherwise known as Cathedral. On this planet, the Cathedral Corporation, Ltd., has set up a leisure-recreation complex. Outside the controlled environment of the complex, Cumulus is an arctic wasteland.

Of the other planets, not much has been known of Cirrus, because this planet is encircled by clouds. Stratus is maintained as a game preserve by the Ecology Commission for endangered species. Nimbus was barren and uninhabited.

Approximately 1 month ago, Nimbus ceased to exist. Its destruction, which created an intense radiation storm, has been a source of great concern to S.F.S. Command. As you know, until recently, spaceships have lacked the capacity to inflict damage on a planet. The loss of Nimbus has led scientists to speculate that the Zangids may have attained this capability, and that Nimbus was a "testing site".

Since the explosion of Nimbus, disturbances have been reported in Cathedral. The leisure systems have begun to function improperly, and, for fear of danger to their customers, the resort has been closed. Naturally, the S.F.S. Command is anxious to clear up this disturbance, as the Cathedral Corporation has been a prime source of tax revenues.

Your mission is to investigate the disturbance on Cumulus, and then proceed to explore the other planets in an attempt to uncover the nature of the new Zangid weaponry.

THE STARSHIPS

Spaceship Statistics

Type	Command	Crew	PPB	(Banks) Lasers	Ion Torps	Teleporter Capacity	Shuttles	Sick Bay Capacity
Destroyer	Ensign	10	50	1	6	3	1	2
Cruiser	Lieut.	20	100	2	9	4	2	5
Bat. Cruiser	Commander	50	200	3	12	6	3	10
Dreadnought	Commodore	100	500	5	20	10	5	20
Freighter	-	10	100	-	-	1	1	2

Energy Unit Cost Table

- Galactic Movement (Hyperdrive) - 5 EUs/warp factor (maximum, warp 8)
- Nuclear Drive - 5 EUs/1 day (any travel)
- Galactic Movement - 5 EUs/hexside turned at hyperdrive (no cost at nuclear)
- Entering a planet's orbit - 5 EUs
- Leaving a planet's orbit - 5 EUs
- Life Support Systems - 5 EUs/day (mandatory)
- Laser Fire - 5 EUs/bank (each bank consists of 2 lasers)
- Ion Torpedoes - free
- Teleportation - 5 EUs/character each way
- "Priming" Shuttle Ships - 5 EUs (if instantaneous; free for 1 hour delay)
- Tractor/Pressor Beams - depends on distance
1 EU/20,000 kms (regardless of mass of object)
- Screens:

	Half Screens	Full Screens
Destroyer	15 EUs/day	30 EUs/day
Cruiser	30	60
Battle Cruiser	60	120
Dreadnought	120	240

Ship-to-Ship Combat

Minimum hit # = # which must be rolled on a 20-sided die to hit target. Fire Control Officer adds 2 to Minimum hit number at all ranges.

Minimum Hit #	RANGE Lasers	Ion Torpedoes	Fireballs
16 or less	25,000 km	10,000 km	20,000 km
15 " "	50,000	20,000	40,000
14	75,000	30,000	60,000
13	100,000	40,000	80,000
12	125,000	50,000	100,000
11	150,000	60,000	120,000
10	175,000	70,000	140,000
9	200,000	80,000	160,000
8	225,000	90,000	180,000
7	250,000	100,000	200,000
6	275,000	125,000	250,000
5	300,000	150,000	300,000
4	350,000	175,000	350,000
3	400,000	200,000	400,000
2	450,000	225,000	450,000
1	500,000	250,000	500,000

Zangid and Teran ships have lasers. Each laser bank consists of 2 lasers.
Only Terran Ships have Ion torpedoes.
Only Videni Ships have Fireballs.

Damage: Lasers - 5-30 EUs/hit (1 die times 5)
Ion Torpedoes & Fireballs - 10-60 EUs/hit (1 die times 10)

Screens: Half-Screens absorb 10-60% of each hit (1 die times 10%)
Full Screens absorb 15-90% of each hit (1 die times 15%)

Personal Equipment

Allowance: Number of units equal to rank level plus 1
Rigel get a one-unit bonus

Half-unit: Radiation suit & oxygen tank
jetpack
universal translator
communicator

One Unit: Hand laser & pistol mount (military, technical)
electrostun gun (scientific, technical)
spring rifle (military, Rigel; marksmanship over 15)
auto-analyzer (scientific)
medikit (scientific)
planetary radar (technical)

Two Units: laser rifle (military, Rigel)
energy screen (technical)
force field (technical)
sonic generator (technical)
metabolism stabilizer (scientific)

Three Units: ABC sprayer
Electronic Interference Device (technical)
nerve disrupter (Rigel)
Robot Dog (technical)
Telepathic Dog (Andromedans, Taurans)

Four Units: Field Armor (Security, Rigel)
Antimatter Generator (technical)
Skycycle (military)

Five Units: Robot tank (military)

Combat

Ranged weapons: Modify marksmanship by range considerations, encumbrance, and target characteristics (if any). Character must roll less than modified score on a 20-sided die to hit.

Range Consideration Table

Die Roll:	Hand Laser Electrostun	Laser Pistol ABC Sprayer	Laser Rifle Spring Rifle
plus 2	under 5 m	under 25 m	under 50 m
plus 1	under 10 m	under 50 m	under 100 m
normal	10 - 25 m	50 - 70 m	100 - 300 m
minus 1	over 25 m	over 70 m	over 300 m
minus 2	over 50 m	over 80 m	over 500 m
MAXIMUM	100 m	100 m	1000 m (1 km)

DAMAGE: Hand laser, pistol: 2-12 pts/hit
laser rifle: 3-18 pts/hit
Electrostun: Special die roll
1,2 - stun only; 3,4,5 - stun plus 1-6 pts; 6 - stun plus 2-12 pts.

spring rifle: 1-6 pts/hit
Atomic Flame: 3-18 pts/hit

Close Combat

Roll a 6 sided die and add to strength of each involved.

Differential: 0,1 - stalemate; 2,3 - weaker stunned
4,5 - weaker stunned plus 1-6 pts.
over 6 - weaker stunned, plus 2-12 pts

Stun Table

Target's constitution: if 1-7, stunned for three 5-minute periods
if 8-13, stunned for two 5-minute periods
if over 14, stunned for one 5-minute period

THE SPACEMEN

Name: _____

Rank/Level: _____

Race: _____

Branch: _____

Inborn Abilities (can't change)

Subclass: _____

Charisma: _____

Acquired Skills (can change)

Psionic Potential: _____

Marksmanship: _____

Strength/Hits: _____

Intelligence: _____

Loyalty: _____

Technical Skill: _____

Psionic Powers

Contact Skill: _____

Equipment (NUMBER OF UNITS equals rank/level plus one)

Half-Unit	One Unit	Two Unit	Three Unit	Four Unit	Five
1.	1.	1.	1.	1.	1.
2.	2.	2.	2.	2.	2.
3.	3.	3.	3.	3.	3.
4.	4.	4.	4.	4.	4.

Racial Characteristics

Biology:

Gravity:

Special Bonuses:

Special Limitations:

Experience Points

Abilities

Generation: three 6-sided dice except loyalty + Psionic Potential (add one 6-sided die to base)

Inborn: Charisma	Acquired: Marksmanship	MAXIMUM SCORE,
Strength	Intelligence	20, REGARDLESS
Loyalty	Technical Skill	OF BONUSES
Psionic Potential	Contact Skill	MINIMUM SCORE, 0

Branches & Subclasses

Prime requisite - 9 or better (Branch)

Secondary requisite - 12 or better (Subclass)

Branch: Military - Marksmanship

Subclass: Command - Charisma, Intelligence

Subclass: Security - Loyalty, Strength

Subclass: Fire Control - Technical Skill, Contact Skill

Branch: Scientific - Intelligence

Subclass: Alien Life - Intelligence, Contact Skill

Subclass: Medical - Technical Skill, Psionic power of Empathy

Branch: Technical - Technical Skill

Subclass: Communication - Contact Skill, Charisma

Subclass: Navigation - Intelligence, Contact Skill

Subclass: Engineering - Technical Skill, Intelligence

Ranking and Experience Points

<u>Level</u>	<u>Title</u>	<u>Experience Points Required</u>	
1	Ensign	0	
2	Lieutenant, j.g.	500	
3	Lieutenant	1,000	
4	Lieutenant Commander	2,000	
5	Commander	5,000	
6	Captain	10,000	
7	Commodore	20,000	
8	Rear Admiral	40,000	
9	Vice Admiral	50,000	
10	Admiral	60,000	
11	Fleet Admiral	75,000	
12	Admiral-in-Chief	100,000	

Note: On every promotion, add 1 to any one of the acquired abilities (player's choice)