# SPACE OPERA

# Volume 1

## INTRODUCTION

It actually seems impossible to finally be writing the introduction for **Space Opera** as this project was first conceived three years ago when **Chivalry & Sorcery** was first released and has been in the works since 1978. Over two years in the works and involving a design team that stretched from the Eastern U.S. to Western Canada and finally to the heart of the outback of Australia, this is a truly international design group on a truly interstellar scale.

The original concept was to create a game that would not need the usually innumerable supplements to its rules but that would be a complete science fiction role playing game. Thus, we wanted a game that would allow players to role play all of the most popular roles for characters in the entire genre of science fiction literature. This called for a game to handle the future warrior and mercenary, the free-trader, the asteroid miner, the planetary explorer and first contact man, and the member of the diplomatic corps/spy service. We needed science and the possibility of scientist characters with medicine playing a major role.

As if this were not enough, the decision was made to base the game on the grand tradition of Space Opera , in the vein of E.E. Doc Smith and most recently Star Wars from George Lucas. This meant that we would also have to allow for the psionic powers so prevalent in the Lensman series and in Star Wars with 'the force.'

**Space Opera** is not an easy game. The individual systems are actually fairly simple and quite logical, but the sheer number of systems can be staggering. Players should realise that we have allowed for alien player-characters from races which could exist on planets habitable by the human race as these are the races with whom humans would have to deal. Naturally, players may decide to run their entire campaigns in a universe with only human characters, both player and NPC.

Similarly, players may decide to totally disregard the Psionic Talents section of these rules and concentrate on a more 'scientific' type of universe according to laws as they are currently understood. But the systems are there for those who choose to use them, It may be that a Starmaster decides to allow Psionic talents to only NPCs or he may realise that according to these rules, such talents are quite rare and will add a truly exciting element to the game.

The apparent complexity of some of the rules dealing with such factors as 'fatigue' and 'wind' is deceptive. These systems are included for the 'hard core' role player who demands such detail end accuracy in rules. For the average campaign these systems can be ignored at no detriment to the game as a whole. Thus, these rules are no more complex than the average role playing game, they are merely more complete and, hence, more massive.

We feel that we have achieved the objectives we established those several years ago and can allow players to simulate the adventures from virtually any sub-genre within science fiction literature. We include combat rules and detailed Starship rules (including Starship combat) in the tradition of the Space Opera and cover virtually every type of skill and occupation that could be required or desired in the interstellar setting of the game. Adventures can take place on alien planets, in the asteroids, in space itself, or could involve the inter-relationship between powerful Interstellar Empires. The game is complete as it stands and will not need supplements to add to these rules for player character activity.

This is not to say that further materials for Space Opera will not be forthcoming from FGU. We plan to release (and already are in the process of typesetting) a book called Ground & Air Equipment which will add sections and stats to cover heavy weaponry, ground vehicles, and aircraft for the various military organisations of each race in our universe. These types of equipment will not come into play in the usual role play situation but will be of interest to those interested in pursuing military careers in Government or Contracted (mercenary) service. They will also prove useful for full miniatures campaigns of possible Interstellar Wars of this era.

Additionally, there will be a series of scenario packs to help Starmasters begin their own campaigns as we have had numerous requests for these types of products over the last several years and they can only help the harried Starmaster who also works or studies full time. Such scenarios are not additional rules as all the rules needed to create such situations are included already in Space Opera , but they are seen as play aids.

Finally, we have been most fortunate in procuring copies of several of the Interstellar Survey Service's Sector Star Atlases which are standard issue to all spacecraft entering given sectors of the galaxy. Though the information contained in the atlases exists in computer memory banks on Starships, launches and other escape craft which lack such computer facilities are required to be equipped with such information in book or video chips for the minicomp. These atlases are not required for the play of Space Opera as a complete system is included for the generation of star systems and planets, including even the governmental, societal, and technological status of any race inhabiting the planet. Nonetheless, such atlases will prove most helpful to Starmasters in the preparation of adventures and in the running of ongoing campaigns.

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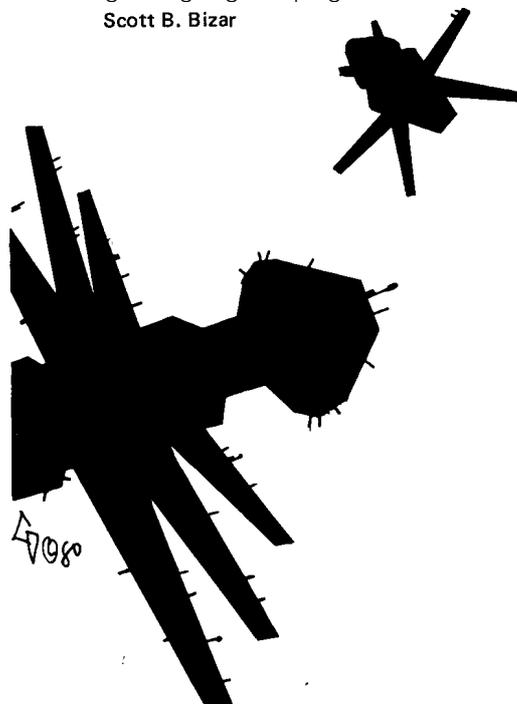


## 1.0 SPACE OPERA

Space Opera is a science fiction role —playing game that accepts the possibility that mankind and other races will develop the technology enabling them to reach the stars and to colonise worlds far distant from their home planets. The very title of the game suggests the type of adventures that should await the players— rip-roaring, excitement-filled journeys across the void in the great tradition of Doc Smith's Lensman series and the many other popular Space Opera ' stories of SF.

Space Opera is a game which places some emphasis on science. That is, science serves as a general guide to many aspects of the game mechanics and should do so in game play as well. Science has the virtue of remaining Consistent in all situations. We felt as designers that any phenomenon, being, or device should be capable of explanation in terms of what we do know about science. Thus players and referees will be able to apply their own knowledge to solve- the many problems and situations that will inevitably arise which no set of rules could cover due to space limitations. As long as scientific reasoning can be applied, a problem can be reasoned through with a minimum of arbitrary and whimsical decision making on the part of the referee.

However, while modern science is definitely a guide, one must

also postulate future science. Indeed, in science fiction this is a necessary activity. The main restriction on such kinds of speculation is that the 'scientific' explanations be reasonable and consistent in terms of what we know now. Future science occupies a position in a science fiction game not dissimilar from that of magic in a fantasy role-playing game. By our standards and from our perspective, future science is magical But it is a magic governed by consistent laws. FTL drive systems, contragravity, force field battlescreens, portable energy weapons with the firepower of a platoon of heavy tanks, medical procedures that can result in the preservation of a slain man so that he has the possibility of being 'rebuilt' and 'revivified', and a host of other such developments are 'magical' from the standpoint of late 20th century science. But that never means that such matters are 'impossible,' merely unexplainable or impossible to do at this moment in time.

For example, Einsteinian physics does not allow for faster-than-light travel. But science fiction gaming requires FTL, so we have postulated the existence of an alternate Tachyon universe or Hyper Space in which everything moves faster than light, relative to our 'normal' or N-Space. The speed of light represents the boundary between the two universes, and a ship that crosses the line will cease to exist as far as the other universe is concerned. Thus we side-step the whole problem of FTL travel in N-Space and follow at the same time a major tradition in science fiction literature.

We felt that the pokey sub-light speeds which Newtonian physics seem to impose on travel in N-Space would prove restricting to players. The same is true of Newtonian laws of motion which require vector analysis of course changes, and limit accelerations to a few Terran G at best. Thus we postulated as a spin off of the FTL drive a sub-light N-Space Manoeuvre Drive which generates an anomaly field around a vessel and places it out of 'phase' with the N-Space continuum. The result is a spacecraft capable of accelerations measured in tens of thousands of G, a ship capable of starting, stopping or turning on the proverbial 'dime.' Whether or not such a drive system will ever be developed in fact is not the issue. What is important is that the drive system is explained in 'pseudo-scientific' terms and that the effects are consistently applied throughout the rules.

Future science must be consistent. If the effect can be produced anywhere, it can be produced everywhere in which the same conditions prevail.

Space Opera is therefore a blend of hard science, scientific speculation, and plain fantasising about 'WHAT IF?'

The main thrust of the game is to generate adventures which will carry the player characters to the stars. Starships are capable of great speeds and great ranges, so the Universe is as large as the referee or Starmaster desires, with dozens or hundreds of worlds awaiting discovery and exploration. The main thrust of the game is toward
refereed play under the guidance of the Starmaster, who organises and runs individual scenarios or comprehensive gaming campaigns.

## 1.1 REQUIRED MATERIALS & EQUIPMENT

The complete Space Opera game must include more than the rules. While a large number of items will prove useful or will add colour to the game, the following list gives the basic materials and equipment.

Necessary Materials & Equipment

Space Opera rules.

Character Profile Records: A master copy of the basic Profile is provided with Space Opera . Players and Starmasters are given the right of 'fair use' and my photo-duplicate the Profile so long as it is not offered for sale.

Starship Records: A master copy of the Starship Record sheet is provided with Space Opera . Players and Starmasters are given the right of fair use and my photo-duplicate the Record so long as it is not offered for sale.

Planetary Records: A master copy of the Planetary Record sheet is provided with Space Opera . Players and Starmasters are given the right of fair use and may photo-duplicate the Record so long as it is not offered for sale.

Dice: Players will need a number of six sided dice, with multiple colours being useful. A set of 20-sided dice for percentage, 1-20, and 1-10 rolls is required as well. These can be obtained from any hobby store or mail order house selling role-playing games and war games.

Paper: Players will need graph paper, note paper, and notebooks (preferably loose-leaf) for record-keeping, maps and computations.

Writing Instruments: Players will need pencils, pens, erasers, coloured markers, etc.

Rulers and Tapes: When conducting combat actions using miniatures or counters, 100 cm rulers and longer metric tapes will be most useful. Players can substitute 12-inch rulers and English unit tapes if they prefer as conversions to both systems are provided.

## Optional Materials and Equipment

Hex Paper: Players will find hexagonal grid paper useful for mapping planetary surfaces, It is not essential, however, as wide-ruled graph paper or even blank paper and a ruler can be used just as easily (and at far less expense.) Hex paper is available from many simulation publishers and also from some hobby stores and mail order houses.

Miniature Figures: A great deal of 'colour' and the feeling of realism is provided by the use of well-painted miniature persons, beasts, aliens, and Starships. A vast number of figures are now on the market for SF play, and these can be augmented by some fantasy figures as well for certain alien types. We recommend the Space Marines figures from MacCrae Miniatures, available from Fantasy Games Unlimited, as the figures designed to suit the types of characters met in Space Opera and in Space Marines, the battle game companion to Space Opera . Write to FGU for a catalogue and price listing sheet.

Electronic Calculator: While not 'essential', an electronic calculator will greatly reduce the time and effort required to make computations, and use of such devices is strongly recommended.

## 1.2 UNITS OF MEASUREMENT

All units of measurement are in SI or the metric system. The following conversions are provided to ease the lot of those players unfamiliar with SI.

### Length & Distance

| | |
|---|---|
| 1 kilometre (km) | 0.621 miles |
| 1 meter (m) | 1.094 yards |
| 1 meter (m) | 3.281 feet |
| 1 centimetre (cm) | 0.394 inches |
| 1 millimetre (mm) | 0.0394 inches |
| | |
| 1 mile | 1.610 km |
| 1 yard | 0.915 in |
| 1 foot | 0.305 in |
| 1 inch | 2.54 cm |
| 1 inch | 25.4 mm |
| | |
| 1 light year. | $9.46 \times 10^{12}$ km (9,460,000,000,000 km) |
| 1 light year | $5.88 \times 10^{12}$ mi (5,880,000,000,000 mi) |
| 1 light second | 300,000 km (186,000 mi) |

### Area

| | |
|---|---|
| 1 square kilometre (km$^2$) | 0.3861 square miles |
| 1 square meter (in$^2$) | 1.1960 square yards |
| 1 square meter (in$^2$) | 10.7639 square feet |
| 1 square centimetre (cm$^2$) | 0.1550 square inches |
| 1 square kilometre . | 247.1 acres |
| 1 hectare (ha = 100 in$^2$) | 2.471 acres |

There are 100 hectares in 1 square kilometre;

| | |
|---|---|
| 640 acres in 1 square mile | |
| 1 square mile | 2.590 km² |
| 1 square yard | 0.8361 in² |
| 1 square foot | 0.092gm² |
| 1 square inch | 6.4516 cm² |
| 1 acre | 0.0040 km² |
| 1 acre | 0.4047 ha |

## Volume

| | |
|---|---|
| 1 cubic kilometre (km³) | 0.2395 cubic miles |
| 1 cubic meter (m³) | 1.3080 cubic yards |
| 1 cubic | meter (in³)35.315 cubic feet |
| 1 litre (L) | 1000 (cc)0.2642 gallons (U.S.) |
| 1 litre (L) | 1.0566 quarts (U.S.) |
| 1 litre (L) | 2.1133 pints (U.S.) |
| 1 cubic centimetre (cc) | 0.0338 fluid ounces |
| 1 millilitre (ml) | 0.0338 fluid ounces |
| 1 cubic mile | |
| 1 cubic yard | 0.7646 m³ |
| 1 cubic foot | 0.0283 m³ |
| 1 gallon (U.S.) | 3.785 L |
| 1 quart(U.S.) | 0.9464 L |
| 1 pint (U.S.) | 0.4732 L |
| 1 ounce (U.S.) | 29.573 cc |
| 1 ounce(U.S.) | 29.573 ml |

## Mass & Weight

| | |
|---|---|
| 1 tonne(t—l000 kg) | 2200 pounds/1.1 tons |
| 1 kilogram (kg) | 2.2 pounds |
| 1 gram (g) | 0.035 ounces |
| 1 ton | 0.9090 t (909 kg) |
| 1 pound | 0.4536 kg |
| 1 pound | 454g |

## Velocity & Speed

| | |
|---|---|
| 1 kilometre/hour (km/h) | 0.62 miles/hour |
| 1 meter/second (m/s) | 3.6 km/h |
| 1 meter/second (m/s) . | 2.2356 mph |
| 1 mile/hour | 1.610 km/h |
| 1 foot/second | 0.305 rn/s |
| 1 foot/second | 0.6818 mph |
| 1 foot/second | 1.0977 km/s |

1 G (Earth Gravity) = 32 feet/sec/sec acceleration or 9.76 meters/sec/sec
1 PSOO    (percentage speed of light) =3000 km/sec or 1860 m/s
1 LS (light second) =         300000 km/800 sec or 3000 km/sec.

## Temperature

| | |
|---|---|
| Degrees Celsius (⁰C) = | (F -32) x 5/9 |
| Degrees Fahrenheit (⁰F) = | (1.8 ⁰C) + 32 |
| Degrees Kelvin (⁰K) = | Celsius Temp. + 273.15 |

## 1.3 DICE ROLLS CONVENTIONS

Routinely in the course of playing Space Opera , a die or a set of dice must be thrown to make some random determination of the outcome of a course of action. Dice rolls may be made by the players for their characters, or by the referee or Starmaster for non-player characters or NPCs and for the various effects of nature, etc. The Starmaster may keep some rolls secret from the players in situations in which the players' characters would be unaware of the facts surrounding the position in which they find themselves. To reveal the result of the dice roll could give the players vital information they should not have. Other rolls would be made openly, and again depending on the situation, the players would either be told what the roll was for or might be left guessing for a time. All combat rolls and rolls directly affecting the current status of any players or NPCs should be made openly to avoid disputes.

### CR.

There will be a great many 'characteristics rolls' or CRs called for. These depend upon some basic characteristic possessed by a player character or else a level of expertise in some skill area. The CR will have a level or number which the player must roll equal to or lower than in order to be 'enabled' to perform certain tasks. Typically CRs are rolled on 1d20 or dice which yield a result from I to 20. Many rolls are 'saves' or determinations of whether or not a character has reacted so that he is spared some unpleasant consequence.

### DMs

A DM is a 'dice modifier' or a positive or negative number which is to be added either to the result rolled on the dice or to

the CR level of a CR determination roll. A DM will always be designated by 'DM' following the number: for example, +3 DM, -2 DM, etc.

## DICE NOTATION

In order to save space, the kind of dice to be rolled in a given situation will often be given in a standard shorthand. The notations are:

D6: Roll six-sided die. If the D6 is preceded by a number, roll the number of D6 indicated. For example, 3d6 means roll 3xD6. However, if the number is separated from the dice type by a period, it means roll one die of that type and multiply by the initial number. For example, 3.d6 means roll 1 D6 and multiply the result by 3.

D10: Roll a 10-sided die, counting the numbers as running from 1 to 10. with 0 on the die counting as a 10. If the D10 is preceded by a number, roll the number of Dl0 indicated. For example, 2d10 means roll 2 x D10. However, if the number is separated from the dice type by a period, it means roll one die of that type and multiply it by the initial number. For example, 4.d10 means roll 1 D10 and multiply the result by 4.

D20: Roll a 20-sided die. The die should have ten of the numbers from 1 to 0 painted or in some other way coloured so that they stand out from the second set of numbers from 1 to 0 also on the die. The un-painted set will stand for 1 to 10 (0 = 10), while the second painted set stands for (1) 1 or 11 to (2) 0 or 20, giving the full range of I to 20. If the D20 is preceded by a number, roll the number of D20 indicated. For example, 2d20 means roll 2 x D20. However, if the number is separated from the dice type by a period, it means roll one die of that type and multiply it by the initial number. For example, 5.D20 means roll I D20 and multiply the result by 5.

D100: Roll 2 x 10-sided dice. One die should be different in colour from the other. One die represents numbers from 1 to 10; the other represents multiples of 10. For example, a 6 on the unit die and a 7 on the tens die means 76. If 0 and 0 turns up, the result is 100. This gives a range of 1 to 100. If the D100 is preceded by a number, roll the number of D100 indicated. For example, 3D100 means roll 3 x D100. If the number is separated from the D100 by a period, it means roll one die of that type and multiply the result by the initial number. For example, 5.D100 means roll 1 D100 and multiply the result by 5.

The D10 die is sometimes called a decimal die because it yields a range from 1 to 10.

The D100 dice are sometimes called percentage or percentile dice because they yield a range from I to 100.

In some instances, a notation like 2d6 + 2 will appear. This means add +2 to the result of the 2d6 roll. In effect, this is a DM added to the dice roll off the top. Negative DMs, like 2d6 -3 may also appear.

## 1.4 GOING 'CRAZY' ROLLING DICE

All too often, inexperienced players and Starmasters acquire the belief that everything must be subjected to dice rolls. The result can be a game in which the dice are flying so thick and fast that everyone spends more time looking up the results of this or that random determination than they do actually playing the game.

Space Opera  provides many opportunities to roll dice. But while many situations can be the occasion for a random determination, they do not have to be made into such occasions. The Starmaster should exercise some discretion and make rulings that a dice roll is or is not required to enable characters to do certain things. Generally, enabling CRs should be limited to 'hairy' moments in which a character will have a good chance of being injured, killed, losing some valuable piece of equipment, or failing to rectify some malfunction which could cause a serious expense or subsequent danger.

A lot of role-playing is necessarily played 'by ear,' with everyone depending upon the verbal action to set the course of the moment. Dice enter into the action when an element of uncertainty about the outcome is desirable. For example, an Alien Environments All-Terrain Vehicle has broken down. The

Starmaster rules that it is a class/2 Breakdown and, since the Tech aboard has skill sufficient to make repairs in 30 minutes, the repairs will be successful in that time. This will eliminate several dice rolls to determine the repair outcome, and also eliminates some computation operations. The idea is to stall that ATV for 30 minutes. Perhaps the Starmaster has planned an encounter to occur at this spot, and he wants to make sure that it happens. If the player characters could simply drive away, the full range of possibilities in that encounter simply might not emerge.

The goal is to keep the action moving. Dice rolls which serve only to take the Starmaster or the players 'off the hook' by replacing good role-play with a mechanical toss of the 'idiot dice' will tend to slow down the tempo. For suspense, roll the dice and build up the tension by a lot of talk while doing so. When the very fate of a player is at stake, dice rolls are again useful to give a 'fair' probability that the character will survive or be successful. (In the latter case, an arbitrary ruling or even a perfectly correct ruling of the Starmaster which brings a character to disaster, can often breed bad feelings.) The dice can act as an insulator and keeps things a bit impersonal.

But never go 'dice crazy' and roll for every little happenstance that comes along. In time, everyone will become bored. Just rest assured that many situations will have a random determination sequence available—if it is needed

## 1.5 THE STARMASTERS

Crucial to any role-playing campaign or SCENARIO is the ever hard-working referee or Starmaster. The Starmaster is charged, first of all, with the task of learning the rules well enough that he can provide fair and informed decisions on how the rules are going to be applied in most of the situations that arise. Now, we realise that Space Opera is a set of rules of rather substantial proportions, and that a Starmaster will take some time before he really comprehends it all. But he should also realise that the players are capable of comprehending rules, too. By encouraging the players to learn the rules as well, the Starmaster can rely on someone else to remember the particular procedure even if he is a bit fuzzy on it himself or if he hasn't remembered it at the moment the issue comes up.

The Starmaster must create a universe in which the action is going to occur. This can be as big and as exhaustive a job as he wishes to make it. Many referees make the mistake of trying to do the total design right from the beginning. This particularly true of beginners and of less experienced referees. Many hours of painstaking work can be lavished on the development of dozens of star systems and scores of planets. But without a clear notion of exactly what he is going to do with that 'Universe' or a solid foundation in the rules that are being applied, the result can sometimes be disappointing. Only an experienced player/ referee can afford to invest a lot of preparation time into large-scale Universe designing. He has been this way before, and he knows precisely what he is doing and why. Beginners and inexperienced Starmasters, then, should set modest goals at first, allowing their Universe to grow with the campaign, and with their ever increasing expertise and knowledge of the rules and the fine art of role-playing. If matters really become fouled up, the original design can be easily modified or even scrapped and replaced. But if too much work has gone into it, the temptation to waste more hours trying to make an ill-conceived Universe 'work' can itself become a time-wasting obsession.

Included in Space Opera is a 'future history' which can be used as a model for the type of background that can be painted for a role-playing or Empire-level campaign. Starmasters are cautioned not to accept this 'future history' as the only way that Space Opera can be played. Any version of 'future history' is equally acceptable. The point is that such a general background will serve as a general guide to the design of a Universe. It will also assist the players in developing their characters' personalities so that they become 'real' people in a 'real' universe, not a set of game constructs and numbers that roll dice at each other and the paper 'monsters' that are introduced in the action.

The Starmaster must develop various quests and adventures for the player characters. These can arise from the very experience and situation the characters find themselves in. For example, a group of characters might be serving in a Starship of the future

space navy or Star-Force. The Starmaster, in the role of StarFleet Command, hands a dispatch to the player who happens to have the Captain of the vessel as his character. The ship has been ordered to patrol the spacelanes off Tharon VI, a planet orbiting the star Pollux, as mysterious disappearances of a number of commercial vessels have been reported. The adventure is on. The characters have no choice in this instance, for they are members of The Patrol, and they are under orders. Black Region and his force of Space Pirates are waiting off Tharon VI. What happens next will depend on the players

The possibilities for game scenarios are endless. Tremendous wealth of examples and ideas can be readily found in the mass of science fiction literature itself.

But however important the contribution of the players may be, it is the Starmaster who will either make or destroy a science fiction campaign. His imagination, preparation, and mastery of the rules and the possibilities contained therein will be essential to the success of the whole activity.

The Starmaster must draft the master maps and charts of his universe. Space Opera provides some data and assistance in this regard, giving the co-ordinates of the Spica system. Techniques of designing a region of the universe are also outlined. Players should also see the Star Sector Atlases which are forthcoming for additional sectors.

The Starmaster must also decide on the types of planets, their surface Conditions, life-forms, intelligent races, cultures, technologies, etc. Again, a substantial amount of information and guidelines are provided in Space Opera to assist in this task.

The Starmaster must conceive the adventure scenarios, operate the many NPC or non-player characters that populate the Universe and come into contact with the player characters, provide neutral opposition to the characters as they pursue their goals, and settle all disputes over the rules. He must be fair, interpreting the spirit rather than just the letter of the rules. He must avoid personal involvement himself-a sometimes difficult thing to do because his role as the neutral opposition to the characters can occasionally bring Out his own competitive spirit. But he must suppress this because, as referee, he holds all of the cards and can subconsciously 'rig' events to suit himself if he is not careful. Such neutrality is essential, for one of the tasks of the Starmaster is to act as a neutral go-between when characters secretly or individually act behind the backs of their comrades or set themselves up in opposition to the very Authorities in power NPCs whom the Starmaster controls'

This is a very big responsibility, and the Starmaster will find that having a 'split' personality that ignores what he knows in total is very useful. That is, what he himself knows as Starmaster must he kept separate in his mind from what his NPCs know. The NPCs are merely 'men,' and do not have the StarMaster's almost 'godlike' command of all the facts of a situation. At time, the NPCs must be allowed to make mistakes, even though the Starmaster knows better, for that is only fair and believable. Nothing is more unfair to players then meeting up with NPCs who always have all the answers and who are always one step ahead of the players. The Starmaster must be a go-between for his NPCs as well as between the various characters.

There is much, much more to good StarMastering. Unfortunately, much has to be learned through experience. The secret is not to try to do everything, and not to do it all at once. The players themselves can be a great assistance in developing a concept of what the Universe should be like. Their advice and outright help should be encouraged, although the final say must remain with the Starmaster. This concept will be developed further in the next section.

## 1.6 PLAYERS & PLAYER CHARACTERS

To create a character for Space Opera will involve making a number of dice rolls to determine the basic traits a player character or PC will possess. Other determinations will be required to establish the PC's personal background and career experience before he actually enters the role play.

It will seem that a lot of dice rolling will be called for in the beginning, but these rolls are made automatically, after which

the relevant sections can be consulted for the details which fill in the features of a PC's personal characteristics and aptitudes.

A system for acquiring expertise in a vast range of fields and skills is also provided. The unique feature of this expertise system is that the players will have great freedom in deciding on what skills their PCs will have before they enter the game. Further development of PC skill can continue once they are in the role play. However, the Whole concept of experience points as such has been discarded. Advancement is a function of time spent studying and training to acquire expertise, and also a function of attaining those career goals which the player sets for his character. He does not have to kill 300 slimy Xchityl of the Planet Slooggg in order to obtain enough experience points to advance a 'level' or rob widows, orphans, and banks to obtain the money to become proficient at some task. He can do these things, but they are not essential to his improvement as a competent character.

Player skill consists, in part, of being aware of the range of skills open to a PC and then choosing those skills which may prove to be of the greatest use to the type of character he wishes to portray. A series of bad initial choices can be a real setback while a well rounded set of expertise areas .can be decisive. At the same time a high degree of specialisation is possible. By heavily weighting some areas of expertise, a player can develop a crack Scientist, Astronaut, Armsman, or Tech whose proficiency is suited admirably to the career he has chosen to follow. But he is never limited to one area. An Armsman can also develop considerable scientific expertise, and a Scientist can be a formidable fighter.

Players should realise from the start that a 'character' is not themselves by another name. A PC is his 'own man.' He should be given a personality that is uniquely his, with the player assuming a 'role' in much the same manner as an actor does. The skilled role-player understands this and will work to give his characters a 'life' separate from his own. The idea of role play is, after all, to leave our own humdrum lives to explore lives of adventure. Taking along all of our own attitudes, hang-ups, and prejudices is hardly the way to do that. Role play is the creation of a 'real' person. One can adopt characters from favourite science fiction novels, movies, or T.V. shows, or he can invent his own unique personalities. But always the thrust of the role-play is to step outside ourselves, to become someone else, to have rousing adventures not possible to us in the here-and-now. Science fiction role play is a game of 'Let's Pretend' on a cosmic scale. Anything is possible. Why settle for less in a character?

There are also a great number of possible racial types for players in their role-play. The range of choice permitted will depend upon the StarMaster's preferences. Remember, it is the Starmaster who carries the heavy burden of preparing the campaign in broad and fine detail. The Starmaster prepares the adventure scenarios and calls the action. He must be satisfied in his own mind that he can handle a given racial type as a player-character without overstraining his own conception of the campaign or without making hasty preparations to fit a racial type in at the last minute. If he has not thought out the place of such a race in the universe he has prepared to date, it is sure that he will have a 'fly by the seat of his pants' if PCs of such a race are introduced to the game. That invites confusion and unnecessary problems, for he has enough to do to maintain the consistency and the imaginative believability of his universe.

For his part, the Starmaster should be prepared to define the terms under which PCs are to be operated in the campaign. If he has decided to allow players to portray Felines, there should be a Feline inhabited planet somewhere in the game universe which those PCs can call 'home.' That home planet and the racial culture should be familiar to the players with such PCs. There is nothing more frustrating (and unjustifiable) to role-players than their being kept in the dark about matters which their PCs would know in depth. A 'native' of a country or a StarCulture will certainly know about his people's history, way of life, customs, general attitudes, manners, laws, politics, etc. A number of racial/cultural profiles are included in Space Opera as working examples of the basic background information players will find useful and even essential if they are going to do a good job of role-playing their PCs. If the Starmaster is too

secretive and refuses to tell players what they would reasonably know, he is failing in his duty to his players.

It may happen that the Starmaster is too hard-pressed to do some of the essential background work described above. In such cases, he might incorporate the Space Opera racial/Cultural profiles into his campaign to ease the task. That is not to discourage his own designs of races and cultures, which often is highly satisfying, but rather a suggestion to make the problem of maintaining the momentum of a campaign less difficult to resolve.

Players should be encouraged to join in the creation of additional background material for their PC's home planets and cultures. This may prove unwelcome to some Starmasters, who prefer to make such decisions themselves. However, many Starmasters will welcome the assistance of players. It certainly reduces the work-load of the hard-pressed Starmaster, so that he can concentrate more on developing interesting gaming scenarios and 'unknown' planets and StarCultures to be encountered by the PCs as the role-play unfolds. Above all, shared creativity gives players a powerful sense of participation in a campaign they have helped to create. The most experienced role-gainers will find it possible to design their own home planets in detail, following the StarMaster's general instructions about essential details, but adding a lot of 'local colour.' In such instances, the player can assume the role of assistant to the Starmaster whenever his PC's crew touches down on his home planet. Because his PC is a 'native' he can act as a knowledgeable guide to the other PCs. Meanwhile, the Starmaster is freed to concentrate on the 'excitement' to be provided during the visit. Such an approach may seem very sophisticated to some role-players; it is really quite workable.

The participation process trains beginners and experienced role-players alike to become better role-players. That means richer background upon which to project well-conceived 'characters' with a life and purpose of their own. The environment of a science-fiction role-game is every bit as important as the skill of the players and the Starmaster. A well-drawn environment will enable players to 'clue in' to the personalities of their characters, and also to interact with the NPCs run by the Starmaster.

It should also be noted that many very satisfying role gaming campaigns encourage players to feel that they are true 'partners' in the game. They ire participants in an activity, not mere 'consumers' who must settle for the StarMaster's ideas and no more. Their opinions are heard, respected, and often used by the Starmaster-if those opinions are good, that is. In the end, it is the Starmaster who must make the final decisions because he is the storyteller and referee. But to the degree that he encourages player creativity and involvement, he will find his own successes enhanced.

Role-play is a group activity; a matter of teamwork essential to making an adventure enjoyable, exciting, and worth repeating in a later meeting. Players who demand that the Starmaster do all of the work, while they 'play,' are risking a less than superb experience. Starmasters who do not tolerate any 'interference's' with their personal universes are forgetting that the players, in their roles as characters in that universe, have no less of a stake in it than he does. Participation in role-play is nothing more nor less than involvement with all of the other players, with the characters, and with the 'worlds' and 'Universes' in which the action occurs. The game is everybody's game. Players need the Starmaster to call the action. Starmasters need the players if there is going to be any action at all!

## 1.7 HOW MANY CHARACTERS?

A point of contention in may role playing games is whether or not a player should be allowed more than one character at a time. In Space Opera , it is strongly suggested that each player be allowed several characters. There are several important reasons behind such an approach.

First, to develop a total character takes a bit of time. If a number are developed at once, the basic bookkeeping tasks can be dispensed with in a single meeting.

Second, PCs will not all be involved in heavy action all of the time. There will be moments when a PC is desirous of acquiring

additional expertise and needs to 'retire' from the adventuring side of the game to go back to school, etc. If several PCs are available to a player, he can easily have a character disappear from the role play scene for a time, and can continue on with another character.

Third, players will have different 'fantasies' to act Out. If several characters are allowed, players can have PCs in the StarForce, the Merchant Service, and perhaps in a Mercenary Company or the civilian Independent Explorers. The idea is to develop teams of PCs who adventure together so that everyone in the playing group will be involved, wherever the action leads. Because there are several 'teams' involved, each player has a better chance of having his preferences satisfied.

Fourth, proceeding on the 'team' of PCs concept, the Starmaster can vary the types of scenarios that the various characters are in. This provides a welcome change-of-pace all around, and the players and the Starmaster have the benefit of a wider range of experiences than might be possible if only one character were permitted each player. StarForce characters would have 'Galactic Patrol' type adventures. A group of 'Meteor Miners' could enjoy the rough-and-tumble of a frontier scenario, complete with claim-jumpers, the Big Mining Company, vigilante committees, and the Great Strike. The list is endless, but it is sometimes better to have a group of PCs bent on attaining some common goal. How, for instance, could a Lieutenant of the StarForce associate with a known Space Pirate with the death penalty waiting for him in 17 star systems? Having two characters tends to cut down the improbability. One can have his StarForce Lieutenant and a Space Pirate. What happens if they ever meet is another question, and the resulting fight should prove interesting.

Fifth, players tend to develop preferences for specific character types. Since a good team has to be well-balanced, having a Tech or a Scientist along can prove very useful at times. But if every player is limited to just one character, essential personnel gets lost in the stampede to have an Astronaut or Armsman. Imagine a Starship with six or seven Astronauts and no Engineer to perform the serious maintenance and repairs. See 12.0 Spaceship Maintenance and the subsequent sections to get a rough idea of what happens to a beautiful Starship without an adequate technical crew. It is no fun being a dashing Astronaut when your ship is dead in space, the drive unit burned out, the power pile shut down, the air leaking from a damaged lox tank, communications out, and the temperature control out of whack. And that's just for starters!

For these and other reasons, we therefore recommend that up to 5 characters be permitted each player. A greater number might prove too hard to manage from the bookkeeping and the playing point of view, but very talented or hard-working players in fact done so.

## 1.8 MANAGING TIME IN THE GAME

Time is a very flexible thing. Game time does not have to correspond to real time at all. In a year of real gaming time, for example, ten years of game time could pass. In a single evening or afternoon of role-playing, a week or two weeks could be ruled to pass.

This ability to expand or to compress time as required is essential to a good role game. Space Opera , in fact, depends upon a reasonable amount of time passing between adventures, so that characters can obtain expertise in various skill areas. The standard rhythm should be an adventure involving a team of characters, then a period in which nothing much happens to them and routine events occur. Meanwhile, another team of characters could be having an adventure.

The overriding requirement is to keep close track of the time by using a time line or some similar procedure. The Starmaster should decide on the rate that time is passing, and tell the players WHEN it is. This permits backdating non-playing experiences like learning skills. It also permits players to keep events in a coherent order in their minds.

Properly handled, time can allow the players to see a character pass through a better part of a lifetime, giving them the feeling that they have had a chance to see a career through to the end. It may even be that they have sons and daughters who themselves embark on lives of adventure, carrying the action into another generation.

Time is thus an 'enabling' device, not a hindrance. It should provide opportunities for PC advancement and adventure, not hold them back from it.

## 1.9 WINNING IN SPACE OPERA

How does one 'win' in a role game. The answer is that one does, and one doesn't. In other words, there are never any victory conditions set in a role game any more than there are any clear victory conditions set in real life. When does a man win? Whenever he attains his life's desire or, at least, has a good, exciting, fulfilling run for his money. When does a man lose? Whenever he fails to use his talents and brains to take advantage of opportunity.

Each player will have his own idea of what it means for his PC to 'win' or to 'lose.' The player must decide for himself. If he aims at making Admiral in the StarForce, that is the chief priority in his PC's life, and the PC will conduct himself accordingly. If it is to have his own Starship and to set Out on the life of a Free Trader, well and fine. But there will be no 'easy' measures of superficial 'success' like experience points and experience levels. Success is something that satisfies a person at the moment. There are always new horizons, new worlds to see and win, new adversaries to best in combat or hard trading, new adventures to excite one and make life worth living. He will likely get there, too, if he is competent.

We suggest that players try to get rid of the hyper-competitive spirit that marks some kinds of role gaming. The measure of a character is whether or not the player gets him to the goal that the player/character sets for himself. Then, having attained that goal, the way is opened to 'retire' from the game and start a new character as replacement or to seek still greater goals.

One wins in role-play in the manner that one 'wins' in life you get to where you were going. And that can include a lot of living and a lot of countryside

## 2.0 CHARACTER CLASSES

In Space Opera , players must choose the type of personality they wish to portray as player characters (abbreviated hereafter as PC). Depending on that initial choice, the PC's personal characteristics, skills, and career options will be optimised to suit appropriate fields of endeavour for his character class. In other words, if a player desires to operate a fighting man or Armsman, certain of his personal characteristics will tend to be weighted toward those abilities and skills he will need to be a success in his field. Of course, there will always be a slight trade-off, and the PC may have less of an advantage in other fields and skills not associated with his class.

### ARMSMAN

An Armsman is an archetypal warrior, the Universal Soldier. But he is more than mere 'cannon fodder' to be fed into the jaws of death as were soldiers of less advanced eras. The Armsman is a superbly professional soldier, thoroughly trained and disciplined, a person physically and temperamentally suited to meeting the stresses and challenges of warfare and close combat in a manner rarely witnessed in the present day. Examples of Armsmen characters can be seen in such SF works as Dickson's Dorsai series, in Heinlein's Starship Trooper or Haldeman's Forever War. His vocation is more than just straight out fighting; it includes mastery of the many technical aspects of advanced warfare as well. His skill with a vast range of weapons systems, military equipment, and combat tactics will appear almost 'heroic' in scope once he is a veteran of long service. He will also be able to acquire skill in areas outside his speciality, as would any reasonably competent person in a culture with efficient educational techniques and learning aides (computerised and others,) but it is ever at the art and science of war that he shines.

### TECH

A 'Tech' is a highly skilled Technician whose personal characteristics and temperament are oriented toward operating, maintaining, repairing, and even constructing various types of equipment and devices. He is far more than your run of the mill mechanic or electrician, as he possesses technical training equivalent to the best technical institutes and

engineering colleges of today can provide, and more. In a sense, a Tech is a combination of the theoretical and the practical 'mechanic.' He is not an 'Engineer,' however. He can repair and modify most 'simple' devices; but complex units will sometimes be beyond his considerable skills, requiring detailed instructions from manuals and Engineers for involved modification or serious repairs. He cannot create new and advanced designs, or even do more than copy construction plans drafted by others with more knowledge, but he can build whatever he is competent to work with if he has the requisite direction and materials. The advantage enjoyed by Techs lies in their specific skills and their high general, mechanical, and electrical aptitudes, making them indispensable personnel in virtually any future business, industry, or government service.

## SCIENTIST: RESEARCH

A Research Scientist is a professional inquirer after knowledge. In the context. of Space Opera , 'science' includes a number of fields formally classed as the 'arts,' such as history, for these fields have been reorganised on a scientific basis and have a precision and accuracy of approach which is unknown today. Scientists have considerable technical expertise, for they must work with equipment of a highly specialised and complex type in many instances, but their 'Tech' knowledge is more theoretical than practical. Their strength is in their ability to perform research and analysis, to discover required information and to solve problems faced by him in both the pursuit of knowledge and the ongoing action of role-play. Scientists of superior calibre will become knowledgeable in a wide range of scientific fields and can be counted on to deliver the 'answer' if anyone can. The Science Officer aboard a Starship, for instance, is the person who conducts detailed planetary surveys and analyses, assesses the cultural patterns of a new race, 'cracks' hitherto unknown alien languages, or solves the problem of escaping from a spatial anomaly of a type previously unencounterd.

## SCIENTIST: MEDICAL

A Medical Scientist or Physician is a highly specialised PC whose knowledge are skills centre on healing the injured and the sick. However, he will be able to exercise that knowledge and skill with patients of alien races as well as of his own race. He will also be able to do significant scientific research, analysing and finding the cures for the most virulent Xeno-diseases or developing bionic prosthetics for maimed personnel. Indeed, so potent are his talents that he will literally be able to 'raise the dead,' for advanced medicine has produced chemical capsules embedded within most personnel which resist tissue deterioration after clinical 'death' occurs, permitting a skilled Physician to 'repair' a damaged organism in much the same way that a Tech will repair a damaged piece of equipment. Tissue and organ implantation, limb grafts, quick tissue regeneration (rapid healing) and a host of other skills are available to him. Only if a 'dead' patient has been too long in the throes of death or has suffered major brain injury will a Physician be powerless.

## SCIENTIST: ENGINEERING

An Engineer is a practical Scientist who stands between the hard research and the practical application of technology. Such a PC is the one who rebuilds a fused Stardrive, shuts down a runaway anti-matter power system, or figures out the way to operate an alien device. He can supervise the work of Techs, advising them on the procedures to follow in making major repairs of equipment and even joining them in the work. His theoretical knowledge will not be as comprehensive as that of a Research Scientist, but he can build it if the Scientist can explain how it works.

## ASTRONAUT

An Astronaut is a professional pilot in the 20th century sense as well as a professional spaceman skilled in intellectual and practical matters regarding the operation of spacecraft. He is also a remarkably fit individual physically because of the demands placed upon him by his vocation. An Astronaut is therefore prone to acquiring scientific skills as well as astronautic skills. He will also evidence consideration technical skill with equipment relating to his role as a pilot and navigator of spacecraft. In that he is a Command Officer who will, sooner or later, in his career, succeed to the actual command of a spacecraft, the Astronaut is a reasonably skilled 'Armsman' as well; for many hostile races, pirates, and individuals will threaten the security of his ship and all in her. In that any character may be regarded as strong in all fields, it is the Astronaut.

## CHOOSING A PC CLASS

Players are free to choose the class of character they wish to portray. However, considering that players will be operating their PCs as a 'team,' they should make their choices with some eye of balance. While everyone might wish to be an Astronaut, for example, it is a sad crew indeed who find themselves woefully short of Techs when equipment breaks down. They might know their exact position and be able to plot a course to any destination with an accuracy of 0.00 001 light-seconds over a distance of 1000 light years, but all that expertise does no good without a Tech who knows that you have to reconnect that loose Frumagiget to the Whamistanz if you want to get the Stardrive to kick over Similarly, when your ship is being boarded by a horde of wild-eyed Ranan pirates, a few tough Armsmen who really know how to fire a Blaster will be a comfort to a competent but less able Astronaut worried about how he is going to keep his ship!

Players should also make PC class choices on the basis of their own backgrounds. A Research Scientist is a knowledgeable fellow; and while a rank novice in scientific areas can play one of these futuristic 'Magicians' with some skill, a player with a sound scientific background will extract the maximum potential of his PC because he understands his role and knows enough to apply his scientific understanding to the game. Action-oriented will likely prefer Armsmen, and will discover that they have enough to occupy their interests. And so it goes.

## 2.1 PERSONAL CHARACTERISTICS

Personal characteristics are those basic physical and mental traits which affect the degree of success with which a player character interacts with his 'environment' through the operation of the various game system.

All PCs will tend to possess 'superior' personal characteristics, compared to those of typical members of their race. This is in keeping with the philosophy of the designers of Space Opera . A PC should not be considered as being in the same class as the 'common man. The 'common men' stay home They find nice, steady jobs, get married, raise families, and settle down to mundane and safe existence marred by few 'surprises' and, hopefully, even less danger. The 'common man' is no hero, no adventurer. To inflict the usual 'averaged' characteristics upon PCs and the players running them is a failure to recognise that PCs are 'heroic' in not only their drive to reach goals that lesser men cannot hope to attain, but also their capacity to actually win through to those goals. The PCs are cast in the larger than-life tradition of the rip-roaring' Space Opera s of science fiction. Only rarely will they be truly deficient in any of their personal characteristics.
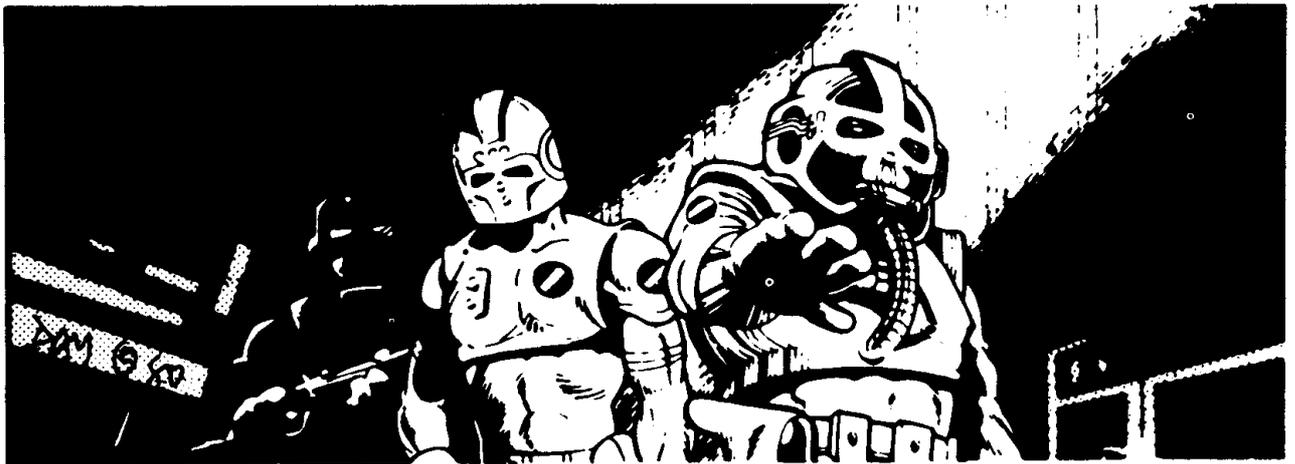
The following table, used to determine the basic personal characteristics scores of PCs, is therefore 'loaded' toward the higher end of the scale. Most NPCs or non-player characters run by the Starmaster will fall into a lower range than the PCs. Only a scant few NPCs will be in the same class as the most superior PCs. The personal characteristics generation table given here is therefore used to develop PCs only. Roll 1d100 percentile dice for each of the personal characteristics, find the appropriate column in the table, read dawn until the percentile score rolled for the characteristics is reached, then read left across the table to find the PC score to be entered in the Character Profile form for that personal characteristics. All personal characteristics will range between I (very rare) and 19 (rare, with higher scores indicating superior ratings.

| | Personal Characteristic/1d100 Result | | | | | |
|---|---|---|---|---|---|---|
| | **Physique** | | | | | **GTA** |
| **PC** | **Strength** | **Agility** | **Empathy** | **Psionics** | **Bravery** | **MechA** |
| **Score** | **Constitution** | **Dexterity** | **Intelligence** | **Intuition** | **Leadership** | **ElecA** |
| **01** | 01 | 01 | 01 | 01-02 | 01 | 01 |
| **02** | 02-03 | 02-03 | 02-03 | 06-10 | 02-03 | 02-03 |
| **03** | 04-05 | 04-05 | 04-05 | 11-15 | 04-06 | 04-06 |
| **04** | 06-07 | 06-07 | 06-09 | 16-20 | 07-08 | 07-09 |
| **05** | 08-09 | 08-09 | 10-11 | 21-25 | 09-10 | 10-11 |
| **06** | 10-11 | 10-11 | 12-15 | 26-30 | 11-12 | 12-15 |
| **07** | 12-13 | 12-13 | 16-19 | 31-35 | 13-15 | 16-20 |
| **08** | 14-15 | 14-15 | 20-25 | 36-40 | 16-18 | 21-25 |
| **09** | 16-20 | 96-20 | 26-30 | 41-50 | 19-21 | 26-35 |
| **10** | 21-25 | 21-27 | 31-35 | 51-60 | 22-24 | 36-40 |
| **II** | 26-35 | 28-40 | 36-50 | 61-75 | 25-30 | 41-50 |
| **12** | 36-45 | 41-54 | 51-65 | 76-80 | 31-40 | 51-60 |
| **13** | 46-60 | 55-65 | 66-75 | 81-85 | 41-55 | 61-70 |
| **14** | 61-75 | 66-80 | 76-80 | 86-90 | 55-70 | 71-75 |
| **15** | 76-85 | 81-90 | 81-85 | 91-95 | 71-80 | 76-80 |
| **16** | 86-90 | 91-96 | 86-90 | 96-104 | 81-85 | 81-85 |
| **17** | 91-95 | 96-98 | 91-95 | 105-109 | 86-90 | 86-90 |
| **18** | 96-104 | 99-104 | 96-104 | 110-114 | 91-95 | 91-95 |
| **19** | 105 | 105 | 105 | 115 | 96-100 | 96-100 |

The following DM (dice modifiers) may be applied as desired to raise 1d100 results in the areas indicated. The DM is a percentage, in other words, representing the advantage obtained by a PC in a given class.

| | |
|---|---|
| Armsman: . | +40 to Physique. Strength, Constitution, Agility, Bravery, Leadership |
| Tech: | +35 to Dexterity, GTA, MechA, ElecA |
| Research Scientists: | +35 to Intelligence, Intuition, GTA |
| Medical Scientist: | +35 to Dexterity, Intelligence, Intuition |
| Engineer Scientist: | +35 to Dexterity, Intelligence, GTA, MechA, ElecA |
| Astronaut: | +40 to Constitution, Dexterity, Agility, Intelligence, Intuition, Bravery, Leadership, GTA |

The DM is not applied as a lump sum to each of the characteristics indicated for a given class of character. Rather, it represents the total DM available, which can be divided up as desired to raise individual 1d100 scores of the indicated characteristics.

For example, an Astronaut rolls 42 for Agility, yielding Agility/12. However, the player desires a higher Agility score for his PC, so he allocates +24 to the 42 result to raise it to 66, enough to yield Agility/14,

Players should wait until all personal characteristics rolls are made before deciding which of the favoured characteristics should be raised. Simply enter the percentages rolled on the Profile sheet in pencil, then compare the results to the Personal Characteristics Table. When the desired 'boosts' are determined, the percentages can be erased and the PC scores

can be entered. It should be noted that some PC/I9 scores do not indicate a range. Strength/19, for example, requires 105, meaning that if a player had rolled 00 1100), he would have to expend +5 DM to obtain l05 and a Strength/I9 rating.

Optionally, those players who wish to use Psionics prominently in their campaigns should use the following modification. On any Psionics roll of
96-(1)00, humans, feline avatars, and transhumans may add up to 15 points as DMs to the 1d100 results and all other races may add up to 10 points.
These points are deducted from the DMs available by profession at the rate of 1/2 profession DM per 1 point added to the Psionics roll.

When this procedure has been completed, proceed to 2.2 Planet of Birth.

## 2.2 PLANET OF BIRTH

The planet of birth will have an effect on several of the personal characteristics. In some cases, a PC will find that a result has influenced his options on a later table. Some of the results will give a PC certain advantages or disadvantages when faced with conditions similar to or radically different from those of his home planet. Roll dice as indicated for each of the following tables, in consecutive orders:

### PLANETARY GRAVITY FIELD

The PC's native gravity field will affect characteristics involving basic body structure, etc.; and while a PC may adapt to gravity conditions considerably different from those of his planet of birth, he may labour under disadvantages at times.

1d20 Roll Effect of Native Planetary Gravity on Player Character

1   PC is a native of a planetoid, orbital city, or IRSOL star city and has adapted to low and null gravity conditions. The gravity field is under 0.2 G. The PC's Physique is +3, with a minimum 12 in size, but body mass will be only 90% of the normal value for his unmodified height. Low gravity favours development of a tall but slight frame. Gravity fields in the 1.0 G range or higher will prove to be quite uncomfortable, however much the PC has adapted to them. The PC will also have an automatic No. 1 or No. 2 result on the Planetary Atmosphere Table, as planets with 0.4 G or less will not retain atmosphere of breathable proportions. The likelihood is that the PC is expert in the use of auxiliary breathing apparatus and vacuum suits

2-3   PC is a native of a planet with a gravity field of 0.25 G to 0.4 G and has adapted to low gravity conditions. The PC's Physique is +3, with a minimum 11 in size, but body mass will be only 90% of the normal value for his height. Gravity fields in the 1.0 G range or higher will be rather uncomfortable. The PC will have an automatic No.1 or No. 2 result on the Planetary Atmosphere Table, as planets with 0.4 G or less will not retain atmosphere of breathable proportions. The likelihood is that the PC is expert in the use of auxiliary breathing apparatus and vacuum suits.

4-9   PC is a native of a planet with a gravity field of 0.5 G to 0.8 G and is somewhat adapted to low gravity conditions. The PC's Physique is +2, with a minimum 10 in size, but body mass will be only 95% of the normal value far his height.

10-16   PC is a native of a planet with a standard 'Terran' gravity field of 0.9 G to 1.1 G. He has a 50% chance of increasing either his Strength or his Constitution (player choice) by +1 to reflect the increased chance of development of physical power or endurance in a normal gravity field. If such an increase occurs, body mass will increase by 5-10% (roll 1d6) to represent heavier frame and musculature.

17-18   PC is a native of a planet with a gravity field of 1.2 to 1.4 G and is adapted to high gravity conditions. He has o Physique -2 in size, but his body mass will be 110% of the normal value for his height. High gravity encourages heavier bone Structure and muscle development. Strength, Constitution, and Agility will be a minimum ll. There is a 100% chance that one of these three characteristics will be +1 (player choice) or a 50% chance that any two will be 41. Strength and Stamina would naturally be improved under such arduous conditions. Agility would also be a factor for 'natural selection,' in that clumsy types would likely suffer from a fatal accident sooner or later, while co-ordinated persons would be better able to react quickly in a surface acceleration field significantly above the norm.

19   PC is a native of a planet with a gravity field of 1.5 G to 1.8 G and is very adapted to high gravity conditions. He has a Physique -3 ln size, but his body mass will be 115% of the normal value for his height. Very high gravity encourages heavy bone and muscle development, and also shorter height. Strength, Constitution, and Agility will be a minimum 12. There is a 100% chance that one of these three characteristics will be +1 (player choice), and a 50% chance that each of the other two will be +1 as well.

20   PC is a native of a planet with a gravity field of 1.9 G to 2.5 G and is a superbly adapted heavy planet dweller. He has a Physique -4 in size, but his body mass will be 120% of normal values for his unmodified height. The exceedingly high gravity field results in a minimum Strength, Constitution, and Agility 13. There is a 100% chance that two of these three characteristics will be +1 (player choice), and a 50% chance that the third characteristic is +1 as well.

If a personal characteristic is 'boosted' to a minimum value, the +1 bonus rule does not apply. For example, a PC from a No. 20 heavy planet has a Strength 9, which is boosted to 13 because of the high gravity environment. He does not have a chance at a further +1 Strength increase, as his physical development has already been corrected to correspond to environmental influences. If his Strength was 13, however, he could have an increase to 14.

### PLANETARY ATMOSPHERE

The planetary atmosphere will not affect a PC's personal characteristics as such, but he may obtain certain advantages or disadvantages from living in a given atmospheric type during his formative years:

1d20 Roll Effect of Native Atmosphere on Player Characters

1   Managed atmosphere: The PC has lived in a dome city, IRSOL Star city, etc., because the external atmosphere is un-breathable (too thin, excessively contaminated with dust or toxic compounds, or even vacuum). Conditions within the protective environment are carefully controlled and monitored to maximise favourable factors. There is a fairly good chance that dome cities, space cities, and similar installations in vacuum or near vacuum conditions are maintained at pressures significantly below 760mm Terran standard pressure. This minimises the effects of sudden decompression from sudden blowouts 'bends,' excessive loss of breathable atmosphere, and so forth. In such conditions a PC would have a 35% chance of developing expanded lung capacity and will be able to breathe efficiently in atmospheres with Oxygen pressures as low as 50mm IPP (see 15.8 Breathable Atmospheres). At the same time, atmospheres with high pressure will be quite disagreeable 'soup' to a PC used to low pressures.

2-3   Low pressure atmosphere: The PC is a native of a planet with atmospheric pressure under 500mm. but with oxygen levels at least 75mm. He will have expanded lung capacity and can breathe effectively when oxygen pressure in the lungs is as low as 40mm IPP. Such an atmosphere is equivalent to high altitude conditions on Terra, and the PC will evidence adaptations similar to those of Indians living high in the Andes Mountains. Relative immunity to hyproxia when oxygen pressures are low is exchanged for distinct discomfort in dense atmospheres. When atmospheric pressures exceed 1000mm, excessive fatigue will occur because the PC's metabolism will 'burn' inspired oxygen too efficiently and may exhaust body energy reserves more quickly than normal. Oxygen pressures over 500 IPP in the lungs will be dangerously toxic. (see 15.8 Breathable Atmospheres.)

4-5   Low pressure atmosphere, with contaminants: The PC is a native of a planet similar to that described for No. 2. above, only the atmosphere will be characterised by significant concentrations of dust or toxic gases. The PC will evidence greater tolerances of such contaminants than normal for off planet types of the same or similar races. Alternatively he will be expert in the use of breathing apparatus, protective clothing, and recognition of hostile conditions. In the first instance, the PC will be 'adapted' to his environment (No. 4 result on the roll) and evidence similar adaptations as Outlined in No. 2. above, with the addition of higher tolerance levels to contaminants. In the second instance, the PC normally lives in a 'managed atmosphere' but can tolerate external conditions 35% of the time, as outlined in No. I above, but without special tolerance to contaminants.

6-13   Standard pressure atmosphere: The PC is used to an atmosphere of more or less Terran quality, with pressures from 500mm to 1000mm at 'sea' level. His oxygen

tolerance range is 60mm to 400mm IPP in the lungs. (See 15.8 Breathable Atmosphere).

14-15 Standard pressure atmosphere, with contaminants: The PC lives in an atmosphere more or less as described for standard pressure atmospheres, only excessive contaminants are also present. A No. 14 result means that the PC is somewhat adapted to these contaminants and has a higher than normal tolerance. A No. 15 result means that the PC must use some form of protective measures (filters, gas masks, etc.) when contaminant concentrations are high. In both instances, the PC will be expert at detecting and dealing with adverse conditions when they do occur, which is generally on a sporadic rather than chronic basis. PCs in No. 15 conditions will likely live in sealed or filtered homes and use similar mobile units to minimise risks. (See 15.8 Breathable Atmospheres.)

16-17 Moderately high pressure atmosphere: The PC lives in an atmosphere up to 2000mm pressure. His oxygen tolerance is 75mm to 550mm IPP in the lungs. Low pressure atmospheres are not particularly comfortable, and fatigue may set in quickly in low oxygen environments.

18 Moderately high pressure atmosphere: The PC lives in an atmosphere as described in No. 16, but significant atmospheric contaminants are present. He has a 50% chance of higher tolerance levels. See No. 12-14 for general guidelines on handling contaminant problems.

19 High pressure atmosphere: The PC lives in an atmosphere with pressures in excess of 2000mm pressure. His oxygen tolerance is 90mm to 800mm IPP in the lungs. Low pressure atmospheres are distinctly disagreeable, while standard atmospheres are not comfortable. There is a 75% chance of atmospheric contaminants, with a 50% chance that a PC has higher tolerance levels. See No. 12-14 for general guidelines on handling contaminant problems.

20 Exotic atmosphere: Very unusual concentrations of constituent atmospheric gases occur on the PC's home planet. There is a 50% chance that the PC is adapted to these conditions as outlined in No.14-15. If not adapted, appropriate precautions must be taken. Pressures can be modified as the Starmaster desires.

A fair degree is 'tailoring' of home planet atmospheres will be required. This can be done by the Starmaster, or the player can be entrusted with the task. The entire section 15.8 on Breathable Atmospheres should be consulted when designing the atmosphere. It should be noted that a PC is either a full 'native' whose race evolved on the planet or else a 'native-born' colonial whose people either have adapted to local conditions or are in the process of adapting. Where adaptation is not complete, a PC will not have the capacity of truly native life forms to survive (or at least thrive) in the worst conditions that might exist.

## PLANETARY CLIMATE
The planetary climate may affect a PC's Constitution score. Harsh conditions tend to produce a hardier individual, and PC's are assumed to spring from 'survivor' stock.

Climate assumes an atmosphere of sorts, PCs from 'managed atmosphere' backgrounds likely live on planetoids, planets, or star Cities. External conditions likely are very thin atmosphere to total vacuum. Climate is thus not a factor, and such PCs do not roll.

PCs from planets With low atmospheric pressures will tend to live on planets with limited hydrographic features (water), as free-standing water tends to escape into space when there is a thin envelope of air. Climatic rolls are therefore only general indicators of approximate surface conditions. Extensive 'forestation' is unlikely, while jungles are virtually impossible. A dry or arid planet is most probable.

Other PCs roll on the table and fairly much abide by the conditions described. The section 15.5 General Planetary Conditions presents overall controlling descriptions of the kind of climatological factors that can be encountered. Section 15.7 on Hydrographic Features is also instructive. These sections should be understood as supplementing the planetary climate descriptions presented in the table below.

1d100 Roll     Planetary Climate and Effect on Player Character

01-15 Planetary Type 1: Standard Terran Planet, with conditions approximating those on Terra.

16-25 Planetary Type 1: Terran Steppe Planet, with conditions as described in 15.5, 15.7. With water in shorter supply than on Terra, the PC will be more knowledgeable about survival in semi-arid and arid conditions than will be the typical native of a standard Terran planet. He will hold water in high regard and will be able to go on short rations for fairly long periods of time, longer than natives of planets with abundant water. However, there are still significant bodies of standing water (about 40% of planetary surface) so the PC is not unfamiliar with large lakes, shallow seas, etc., or with boats.

26-34 Planetary Type 1: Terran Arid Planets, with conditions as described in 15.5, 15.7. There is a significant shortage of surface water on an arid planet (about 25% of the surface may contain free standing water), so the PC will be quite familiar with survival in very dry conditions which prevail across much of the planet. He enjoys a +1 advantage when making Constitution CRs to check his physical reactions to dry and hot conditions which test his endurance. There is also a 50% chance of +1 to Constitution.

35-39 Planetary Type 1: Terran Desert Planet, with conditions as described in 15.5, 15.7. The planet has less than 10% free standing water, so severe desert conditions prevail across most of the planetary surface. Atmospheric humidity is low, and the PC will either know how to cope with respiratory water loss or may have adapted somewhat so that very low humidity does not dry his throat and draw excessive amounts of water from his body. PCs will definitely posses advanced desert survival skills and enjoy +1 advantages when making constitution CRs to check physical reactions to dry and hot conditions. There is also a 30% chance of +1 to Constitution.

40-49 Planetary Type 1: Terran Swamp & Jungle Planet, with conditions as described in 15.5, 15.7. A 'greenhouse effect' has raised planetary temperatures somewhat, so that a significant portion of the planet is locked in tropical and equatorial climate and conditions. The vegetation is lush, resembling the jungles of Africa and the Amazon. (A variant could be a Carboniferous or similar early period of planetary evolution, with appropriate dinosaurians or their equivalent roaming the countryside.) The character will posses good jungle survival skills and enjoy +1 advantages when making Constitution CRs to check physical reactions to tropical heat and humidity. There is also a 30% chance of +1 to Constitution. Note: such planets will have a least 70% surface water.

50-59 Planetary type 1: Terran Tundra Planet, with conditions as described in 15.5, 15.7. A significant proportion of the planet is locked in glacial or Ice Age conditions, while middle and upper latitudes resemble the Terran Arctic and Antarctica. Tropical and equatorial latitudes have more moderate climates similar to that of southern Canada and the northern U.S. The character is likely to have experience with 'Arctic' climates and will evidence good survival skills, perhaps approaching those of the Inuit (Eskimo). when in the 'Cold Country.' He will enjoy a +1 advantage when making Constitution CRs in cold weather. There is also a 30% chance of +1 to Constitution.

60-64 Planetary Type1: Terran Ocean Planet, with conditions as described in 15.5, 15.7. As more than 90% of the planetary surface is covered by water, the PC is very much at home on or in a marine environment. His knowledge of sailing, diving swimming. etc., is superb. (If a 'native race, he may even be amphibious or perhaps lcthyoid. complete with functioning gills o, their equivalent.)

65-74 Planetary Type 2: Terran Planet without Seasonality, with

conditions as described in 15.5, 15.7. Assume hydrographic features cover 50% to 75% of the planetary surface. The climate will vary considerably over the entire surface of the planet, but fixed and unchanging belts of climate occur. Inhabitants will tend to pick the most favourable and comfortable zones to be settled, making forays into the hinterland. As water tends toward the 75% of surface area range, the equatorial and tropical regions develop dense jungle belts. As the water tends towards 50% of surface area, the equatorial and tropical regions tend toward desert. Characters do not enjoy any special advantages but will find seasonal climates disconcerting. They may also find widely changing weather conditions perverse and 'unnatural.'

76-77 Planetary Type 3: Terran Planet with Extreme Seasonality, with conditions as described in 15.5, 15.7. The harsh conditions that are produced by extreme axial tilt will produce a +1 increase in a PC's Constitution 75% of the time, with a minimum 11 Constitution. One has to be really 'tough' to survive the worst a Type 3 environment can deliver. Assume moderate to good quantities of surface water in most instances. Limited surface water will produce widespread desert and steppe conditions.

78.84 Planetary Type 4: Terran Planet with Normal Axial Tilt at Outer of Stellar Ecosphere, with conditions as described in 15.5, 15.7. The climate ranges from 'cool' to outright frigid, and the PC is adapted to cold weather survival. He gains +1 on cold weather Constitution CRs and has +1 to Constitution as well. Warm and hot temperatures are not to his liking, but he may not suffer unduly unless very warm temperatures are experienced.

85.88 Planetary Type 5: Terran Planet with Minimal Axial Tilt at Outer Edge of Stellar Ecosphere, with conditions as described in 15.5. The climate is clearly glacial, and a Type 5 can easily be regarded as an Ice Planet. Higher latitudes are locked in eternal winter, while equatorial and tropical latitudes are never truly warm. Conditions are somewhat less onerous than on Type 4 planets because equatorial regions do not experience seasons, but upper latitude conditions are more severe. PCs thus have adaptations as Outlined for Type 4 natives above, but with only a 65% chance of +1 Constitution.

89.90 Planetary Type 6: Terran Planet with Extreme Axial Tilt at Outer Edge of Stellar Ecosphere, with conditions as described in 15.5. A type 6 planet is a truly hostile environment, requiring that an organism be 'tough' to survive it. PCs increase their constitution by +1, with 50% chance of an additional +1. Cold weather Constitution CRs are increased +1, while Constitution minimum's are at 13. PCs will be distinctly uncomfortable in warm climates, and they will fatigue easily in hot climates.

91-92 Planetary Type 7: Terran Planet with Normal Axial Tilt at Inner Edge of Stellar Ecosphere, with conditions as described in 15.5, 15.7. Planets with 91 roll are Hot Jungle Planets steaming swamps and dense rain forests similar to those once thought to exist on Venus. Planets with 92 roll are Hot Desert Planets. Models can be found in Heinlein's Between Planets for Jungle Planets, while Herbert's Dune provides the Desert Planet model. Jungle Planets are ideal for dinosaurian life, and PC's will have +1 Constitution, with minimum 12. They also enjoy fairly high resistance to tropical diseases, fungi infections, etc., and have +2 advantages in Constitution CRs involving survival in severe tropical jungle conditions. Their jungle survival knowledge and skill would be of expert calibre as well. Desert planets also grant +1 Constitution, with a minimum of 13. PCs will have good tolerance of atmospheric dust and low humidity, very high capacity to function on limited amounts of water in sealing heat, and +2 advantages in Constitution CRs involving survival in extreme desert conditions. Their desert skills and knowledge are comparable to that of the natives of Arrakis.

93-95 Planetary Type 3: Terran Planet with Minimal Axial Tilt at Inner Edge of' Stellar Ecosphere, with conditions as described in 15.5, 15.7. Planets with 93-94 roll are Hot Jungle Planets, with rather temperate regions at the poles but extremely sweltering, steam-bath environments in tropical and equatorial latitudes. Planets with 95 roll are Hot Desert Planets, again with fairly temperate polar regions, while the equatorial belt is blistering hot and exceedingly hostile. PCs obtain advantages as outlined for Type 7 planets.

96   Planetary Type 9: Terran Planet with Extreme Axial Tilt at Inner Edge of Stellar Ecosphere, with conditions as described in 15.5. Anyone descended from colonists insane enough to choose to settle on such a planet probably has an 'unusual' psychological and cultural profile. The savage Seasonality produces such harsh conditions that any PC who is adapted to the planet will have +1 Constitution, with 75% chance of an additional +1, and a minimum Constitution score of 14. He will also enjoy a +2 on Constitution CRs involving desert survival, arctic cold, and related factors. Survival skills will be superbly turned to dealing with a variety of climatic conditions, with emergency techniques (taking shelter, finding water, reading the violently changing weather, etc.,) honed to a fine edge; Unlike other Inner Ecosphere dwellers, the PC will be as adapted to frigid conditions as he is to heat, and can literally withstand the entire range of survivable temperature in which his racial type may live without undue hardship.

97   Planetary Type 10, 11, 12: Terran Planet with Eccentric Orbit. with conditions as described in 15.5. Any PC who is so 'lucky' as to come from a planet of this type should be given his choice of 'poison.' He may console himself with the thought that he can deal with just about any climatic situation that can be imagined, and he will do so with a consummate skill. Such a PC has a Constitution +2, with a minimum 14. He will enjoy a +2 on all environmental Constitution CRs. His Strength level is a minimum 13. He also obtains a +1 on Intuition and has 50% chance of +1 on Intelligence as well. Such planets breed 'superior' types. All other breeds die fast.

98-99 Planetary Type 13: Terran Planet 10% Inside Inner Ecosphere Limit: Conditions approximate those of Type 7,8 and 9 planets, but with temperatures somewhat hotter. PCs show similar adaptations to those from Type 7-9 planets. See 15.5 for a description.

99-100 Planetary Type 14: Terran Planet Up to 30% Outside Stellar Ecosphere: Conditions will approximate those of Type 4,5, or 6 planets, only temperatures will rarely move much above freezing at the best of times. Conditions are truly minimal. PCs obtain +1 Constitution, with 50% of an additional +1, with a 13 minimum. Cold climate CRs are always at +2, and PCs have superb survival skills in extreme arctic conditions.

Domed settlements may be found on the following planets, as massive life support systems will be required for hydrocarbon life forms. PCs from 'managed' planetary environments will likely come from one of these planetary types. No random roll is required. A PC simply pick the home planet he desires.

Planetary Type 13 Airless/Low Pressure: No hydrocarbon life forms are 'native' to the planet, but crystalline and silicate life forms may be present. The PC will be used to dealing with high temperature conditions during the day and cold temperatures at night, as surface conditions will be 'lunar' in nature. See 15.5

Planetary Type 14 Airless/Low Pressure: No hydrocarbon life forms can survive, but some methane and other exotic forms may be present in an appropriate atmosphere (Exotic). The PC will be expert with vacuum Suits, etc., and will be skilled in dealing with cold, exotic atmosphere environments. See 15.5.

Planetary Type 15 Airless/Low Pressure: Lying very close to the stellar primary, Type 15 planets of this type closely resemble Mercury. The PC will have plenty of experience with radiation produced by solar flares, ultra-high daytime temperatures, possibly molten metal lakes and streams, severe volcanic and seismic activity because the planet has not cooled beneath the thin crust and is unstable, etc. See 15.5.

Planetary Type 15 High Pressure: Type 15 planets of this type closely resemble Venus, with very high surface temperatures and atmospheric pressures. Such planets are close to 'Hellholes,' and PCs will possess very specialised knowledge on survival in such fiercely hostile environments. See 15.5. Atmospheres will invariably be 'exotic.' Life forms will be silicates or molten-copper based, as might life forms on Type 15 airless or low pressure planets.

Planetary Type 16 - 19: Such planets are significantly removed from the stellar primary and are intensely cold, cold enough for many gaseous constituents to have frozen or turned to liquid. Conditions on such worlds are starkly unimaginable to contemporary Terran minds. However, Haldeman's Forever War gives a moderately good surmise about possible conditions. See 15.5.

## 2.3 CHARACTER RACE

Once the personal characteristics and the planet of birth have been determined for a PC, the player will have to decide on the interstellar race to which his character belongs. The following races are available for role play. They may represent groups integrated into the Terran Federation of Planets, or they may come from independent star cultures.

### HUMANS & HUMANOIDS

Humans are very similar to the standard Terran model and represent races sprung from common stock during the Forerunner Period. With the collapse of the great interstellar empires of the Forerunner's, the various planets containing the human races were isolated, and local variations crept into each planetary sub-species. However, all humans are genetically compatible and may intermarry.

Humanoids are representative of human races who evolved away from the basic racial type during the long isolation of the Interregnum between Forerunner Civilisation and the rise of the current StarCultures. Because of genetic 'drift' and evolutionary adaptations to local environmental conditions, humanoids are no longer genetically compatible with humans and exhibit marked differences in general appearance, physical traits, and mental faculties. Arrangement and even function of internal organs is different from the parent race; but despite these and other factors, humanoids are still clearly related to human. This very fundamental relationship makes both intense association and violent conflict possible.

Stellar Primary: Type G, with adaptability to Types F and K. Humanoid variants tend to evolve on planets With Type K suns, as radiation (and genetic mutation) levels tend to be higher. Humans tend to be found in star systems with suns of Type G and F.

Home Planet: Humans appear to have evolved on Type 1 Terran planets With gravity fields in the 1.0 G range, but they can adapt to conditions on most Type 2, 3, 4, 5, 6, 7, 8, and 9 planets, with gravity ranging from very low values to 2.5 G. Humanoids are a bit more restricted and seem to appear most often on planets with hot desert or jungle environments, particularly those With extreme or minimal axial tilt and located in optimum or inner edge position in the stellar Ecosphere. Humanoid adaptability to low temperature climates is very restricted, and individuals may suffer terribly in truly arctic conditions.

Radiation Tolerance: Humans have a 0.02 - 0.03 rem/week radiation tolerance without having the risk of undue complications. Germ plasma damage may result when background radiation or heavy short-term exposure exceeds 50 - 100 rem over a long term. Radiation sickness may result When short term exposure exceeds 300 rem and is a surety at 500 rem. Humans will likely die from short term exposure to 800 - 1000 rem. Some human races have tolerances +10% to +25% above these limits because of local conditions and racial adaptation. Humanoid races will have +25% to +50% higher tolerance than given for the human norm.

Atmosphere: Humans are oxygen breathers normally requiring 60mm to 400mm i.p.p. of oxygen in the lungs, with lower concentrations bringing a risk of hypoxia (oxygen starvation) and higher concentrations causing oxygen toxicity over a period of days or weeks. Those who have adapted to thin atmospheres can tolerate a range of 40mm to 400mm i.p.p. of oxygen. Those-who have adapted to dense atmospheres can tolerate a range of 90mm to 800mm i.p.p of oxygen. Most humans tend to be rather sensitive to high dust concentrations, especially silicate dust, in the atmosphere; while various contaminants are at the tolerances given in 15.8 Breathable Atmospheres. Humanoids have generally the same tolerances, except that desert planet species have often a high tolerance of dust.

Appearance: All humans and humanoids are manlike bipeds with the standard two arms and legs, with erect stance. Human colour ranges from an almost ivory white through 'flesh' to shades of copper-red, reddish brown, and black, with increasingly darker hues tending to prevail on planets with high illumination and UV levels. Humanoid skin colour is in the copper-red to black range, and skin texture may be significantly different from those of humans. Body hair tends to be minimal in all species, but humans tend to possess a thick mane of white, grey, blond, red, reddish-brown, brown, or black hair on the head while the humanoids tend toward baldness or skimpy hair reminiscent of the 'Iroquois' hair cut. The human will have a characteristically round pupil of blue, hazel, or brown, protected by a single eyelid. Humanoids tend to have oval or even slit-like 'cat's eyes' capable of an extreme dilation to accommodate adjustments between brilliant and dim illumination, although night vision tends to be poorer than in humans. Desert planet humanoids may have a nictitating membrane to protect the eye against wind-blown dust. All races have a superbly developed thumb and forefinger, although humanoids may possess six fingers rather than the standard five, on occasion. Height and weight tends to range from 155-200 cm and 55-110 kg in most males, and 148-185 cm and 38-71 kg in most females. Exceptions will, of course, occur at both the upper and lower ends of these ranges but are aty-pical. Fit specimens can sprint up to 36 km/h (100m in 10 seconds), with somewhat faster speeds being possible.

Vision: All humans and humanoids evidence a fundamental racial dependence on vision. Races on highly illuminated planets have vision suited to brilliantly lit conditions and tend to have poorer night vision than those races from planets with Terran illumination levels. Those races from planets with significantly lower illumination levels than on Terra (the sun is typically a Type K) will have very good night vision but may find brilliant sunlight a bit painful without some form of protection. All races have the usual two eyes, with excellent binocular vision in the visible light spectrum. Acuity over distance is quite sharp, depth perception is superb, and ability to judge distances accurately is very good to excellent.

Hearing: Since the racial dependence is on vision, hearing is moderately acute but cannot be described as exceptional in any human or humanoid race.

Smell: All humans and most humanoids have a very poor olfactory sense, with most oriented toward scents associated with stimulation of appetite and mating. Some humanoids desert races are very sensitive to the scent of water, however, as are some human types.

General Comments: Humans universally posses iron-based metabolisms, with diet being omnivorous. Adaptability to a wide range of plant and animal foods marks all humans. Humanoids generally have iron-based metabolisms as well, with omnivorous diets, but a few races have copper-based metabolisms and enjoy a much more restricted diet of copper-based plants and animals. Both metabolic types permit con-sumption of some foods of the other type, but foods which are capable of providing adequate nutrient value are limited in such cases. Life expectancy in advanced races can easily reach 100-125 Terran years, but 'primitives' will rarely survive above 30 - 50 years unless taken into an advanced StarCulture and given the usual medical support.

All humans and humanoids are capable of extreme emotional ranges, and can be great friends or implacable enemies. All are distinctly warlike in behaviour, with competitive cultural patterns being characteristic of even the most innocent and playful activities. This high level of competitiveness is believed to be the result of a basic racial drive toward survival which may have

been programmed into the genetic heritage of the human race by the Forerunners. It is clear from some Forerunner records that humans were considered the finest of the T'Shaa or 'Warrior Races' and were carefully 'bred' for their fighting instincts and adaptability.

## TRANSHUMANS

Transhumans tend to appear occasionally in human populations and seem to represent individual evolutionary mutations pointing toward a new stage of racial development. It has been the hypothesis of some geneticists that the 'Transhuman' or Transitional Human is evidencing some of the traits of the parent Forerunner Race as Forerunner genetic manipulations of the human stock grow weak with the years and permit the release of the potentials carefully restrained in the interests of breeding 'warriors.' Detection of these unique individuals is rare, and many say inconclusive as well, for there are little external or internal differences to really set Trans-humans apart from the human races from which they arise. However, they are clearly superior specimens, with no characteristics below 10, and with Strength/15+. Constitution/l5+, Agility/14+, Dexterity/ 16+, Intelligence/15+, Bravery/13+, and Leadership/15+. It is also suspected that most have naturally developed Psionic powers of 15+, but such powers tend to be carefully hidden from general knowledge by Transhumans. Any PC with these personal characteristics may elect for Transhuman status.

Races of Transhumans are very rare. In fact, only two are known. They evidence some external differences from humans, notably in such factors as shape of facial features (more angular, almost hawk-like) and ears (which tend to a pointed form at the tips). These races still belong to the human race and can intermarry successfully With humans, their offspring having all of the Transhuman's superiority but also the strong human emotionality. Transhuman cultures have tends to be very intellectually oriented, placing reason above emotion and developing powerful mental disciplines to suppress all emotional response in the interests of Logic. This racial drive toward reason is clearly an intellectual revulsion against the violence of their ancestors, but Transhumans are capable of even more terrible violence when their perception logically argues for the application of force. Development of Psionic Talent as a mental science also marks the Transhuman StarCultures. This is quite in keeping with the general thrust toward, intellectual attainments which stands as the ultimate goal of individuals and society.

Stellar Primary, Home Planet, and Atmosphere; all fall within human norms, except that it appears that all Transhumans have a capacity to adjust to oxygen levels ranging from a low 35mm to a high of 1000mm of i.p.p. of oxygen in the lungs. Furthermore, they can hold their breath for 5 to 10 minutes while still performing moderate activities. A 'suspended' state can be attained through trance which lowers the metabolic rate so that a Transhuman can survive for a number of hours without breathing equal to his Constitution score. Tolerance to climatic variations is superb and covers the entire range which humans can survive in, with adaptability to cold or hot, humid or arid conditions so rapid that a full adjustment is made in hours. The same is true of adjustment to gravity variations. Even tolerance of many toxic atmospheric contaminants is superior, with up to 500% higher tolerance than those indicated for humans in 15.8 Breathable Atmospheres.

Radiation Tolerance: Transhumans all evidence the extreme radiation tolerance of highly adapted humanoids, about 50% above human norms.

Appearance: Transhumans are essentially 'human' in appearance, with only minor variations as noted above. One feature noted in the Transhuman races known to date is the presence of nictitating eyelids which protect the being from wind-blown dust and from sudden flashes of brilliant light. Transhumans appearing within human races may or may not evidence this feature. Also, the two Transhuman races have double hearts and arrangements of internal organs which are somewhat different than In humans. Transhumans appearing within human races tend toward seemingly conventional internal make-up, but organs are far more efficient and approach or equal the effectiveness of the Transhuman races presently known.

Vision: Transhuman vision is capable of the ranges noted for humans and humanoids, and is even keener. Whether in brilliant or exceedingly dim conditions, vision is very, very good indeed.

Smell: Transhuman olfactory senses are sharper than in humans and humanoids. A few individuals evidence capacities approaching the sensitivity of the Canines (see below).

General Comments: Transhuman PCs should evidence a characteristic 'coldness' in their manner rarely becoming excited and almost never losing their tempers or showing strong emotion. The Transhuman is devoted to logic and the maintenance of mental discipline. He will not give into 'base' impulses and is high-minded in all of his actions. Even if he fails in a Bravery check, he will instantly use his Intelligence and check again, so 'panic' rarely results. A PC of this type can be considered as near-superhuman in many respects. But he is a superhuman lacking the need to assert his dominance, so he will not seek power for its own sake. Even a warlike Transhuman StarCulture will conduct itself according to the dictates of cold logic, and individuals will seek authority only because they can logically strengthen the security of the state (as they reasonably assess their talents, of course).

A Transhuman can expect to live long, usually 200 - 250 years, with minimum physical decline. Metabolisms may be iron-based or copper-based, with a dietary preference toward vegetarianism. Resistance to disease and toxins (poisons) is remarkably high, while healing capacity is 50% higher than normal because the Transhuman can apply his mental discipline to physiological processes. With such a high resistance to natural death and many decades of life to look forward to, Transhumans have a patience rarely noted in human characters. They can afford to wait.

Finally, if it is true that Transhumans reflect some of the possible traits of the Forerunners, it is possible to conclude that the Forerunners were being with optimum human potential, combining superb physical characteristics with truly awesome intellectual and Psionic talents.

## PITHECINE RACES

The Pithecines are bipedal creatures with roughly humanoid shape. They have evolved from stock related to the lower primates of Terra and bear a characteristic ape-like appearance. Some Pithecine races have achieved considerable intellectual and cultural development, but none have equalled human levels. PCs may become Pithecines if Strength and Constitution are 15+, and Intelligence cannot exceed 17. Technical aptitudes (GTA, MechA, ElecA) will top out at 15. Only PCs born on the Home Planet types indicated below can be Pithecines.

Stellar Primary: Type F and G

Home Planet: Planetary Types I, 2, 7, and 8, with fairly abundant water and a gravity field of 0.6 - 2.5 G. Conditions should be temperate to tropical, with well-watered steppe to jungle environments. Pithecines react badly to cold climates, and they find desert climates unpleasant'.

Radiation Tolerance: Human norms apply.

Atmosphere: Human norms apply, but minimum oxygen I.P.P. in the lungs is 75mm. Also, many Pithecines will develop respiratory ailments quickly if dust concentrations in the atmosphere are high.

Appearance: Pithecines have the usual anthropoid appearance but are somewhat more graceful than the primitive apes and gorillas because the bone structure, hips, and legs have evolved to suit erect stance. Body hair is thick and ranges in colour from buff through reddish-brown to brown and black. The thumb and forefingers development is sufficient to permit fine manipulations, comparing favourably with human hand development.

Vision: Human norms apply, although some races evidence a degree of colour blindness.
Hearing: Pithecine hearing is more acute than the human sense, but is still quite poor.

Smell: Pithecine olfactory senses are very close to human levels. As in the case of humans Pithecines have a racial dependence on vision.

General Comments: Pithecines are remarkably 'human' in their behaviours, although tending to be more emotional and more easily excited. Males are significantly larger than human males, standing 160 cm to 205 cm and massing 70 kg to 135 kg. Females compare in size to human females but are heavier. Overall physical power exceeds human levels, while speed and general agility equals human norms. It is in the intellectual and technical talents that the Pithecines fall below top human standards. Pithecines are quite capable of attaining considerable technological development and expertise, but they are less capable than men.

Metabolic systems are iron-based, while diet tends to be vegetarian with some meat for variety. Pithecines have a life expectancy around 100 years in advanced races, while primitives rarely reach more than 30.

## CANINE RACES

Canine humanoids appear to have descended from stock related to hunting dogs or wolves. They have evolved into a general bipedal shape, but still exhibit many physical traits and behaviours of their ancestors. PCs may become Canines if Strength and Constitution are 10+, Bravery is 13+, and Agility is 12+. Technical aptitudes (GTA, MechA, and ElecA) top out at 14. Only PCs born on the Home Planet types indicated can be Canines.

Stellar Primary: Type G,K

Home Planet: Canines will be found on the same planetary types as humans, except for those planets with very hot jungle or desert conditions. Cool and cold climates are preferred, and Canines will do well even in Ice Planet conditions.

Radiation Tolerance: Human norms apply.

Atmosphere: Canines have normal human tolerance, except that their ability to stand toxic contaminants and very foul odours is somewhat lower than in most human races.

Appearance: Canines have a humanoid bipedal form and stand erect, their four-footed locomotion lost through evolution. Canine paws have developed into reasonably efficient hands, permitting fairly precise manipulations, especially with tools designed for their shape. They compare favourably In size and mass to humans, and develop about the same turn of speed. Full body hair remains, with a wide variety of colours and lengths in evidence. The Canine tail also remains, and it is still used as a means of communicating emotional states.

Vision: Canines have .2 eyes with binocular vision, often in black and white but sometimes in colour. Depth perception is' good, while visual acuity over distance is good to excellent. It is not, however, the equal of human vision. Some nocturnal races and races in conditions of low illumination have good night vision.

Hearing: Canine hearing is very acute and extends into frequencies far higher than those audible to humans. Generally, hearing is comparable to that of the common dog.

Smell: Canine olfactory senses are again comparable to that of the common dog or wolf. Canines can often track by scent and also judge the mood of people by their odour. Smell is no longer depended on as much as vision, but it remains a dominant sense for all Canines. Unfortunately, sensitivity renders Canines somewhat vulnerable to particularly strong and unpleasant odours, and also to some toxic atmospheric contaminants.

General Comments: Canines are 'pack-oriented,' like their ancestors, and value loyalty to one's friends and trusted associates as a major virtue. Disloyalty and treachery will bring extreme contempt and often violent reprisal, if possible. The races show their greatest strength in the skills of woodcraft, as Canines can readily revert to the cunning and wild expertise of their ancestors in a natural setting. Some of the finest Scouts come from the Canine races as a result. While they are capable of dealing with fairly high levels of technology, they do

not love machines and electronic gadgets over much, preferring natural environments and lifestyles in which an individual can exercise his powers and talents.

Canines are carnivores and exist on an exclusively meat diet. Metabolic systems tend to be iron-based, but copper-based metabolisms are also known, Life expectancy of advanced races can reach 100 years, while primitives rarely survive beyond 25.

## FELINE RACES

The Felines are descended from large hunting cat stock, but they have evolved into a bipedal humanoid form. Felines exhibit many of the characteristics of the ancestors, particularly a well-developed fastidiousness and a seemingly 'nervous' temperament that is really a continual readiness to act decisively in an emergency. PCs may be Felines if they have Strength and Constitution 11+, Agility 16+, Dexterity 13+, and Intelligence 11+. PCs with MechA, ElechA, or GTA 13+ come from the MekPurr StarCultures and are very technologically oriented. (The MekPurrs are the acknowledged masters of cybernetic engineering in the known Galaxy.) All other PCs are members of a highly individualistic Feline racial group that eschews many of the trapping of technological 'civilisation' as decadent excepting weapons. These are the Avatars, the Feline races who stand very close to the ancestors in their aloof, sensual manner and in their sheer ferocity when angered.

Stellar Primary: Type P G' K

Home Planet: Being very adaptive creatures, Felines are found on Type 1-14 planets, often thriving in conditions that would daunt most other species. However, those individuals used to extreme heat or extreme cold will not adapt well to the opposite conditions.

Radiation Tolerance: Humanoid norms apply.

Atmosphere: Human norms apply.

Appearance: Felines have a bipedal humanoid shape and are evolved sufficiently to be quite agile in an erect stance. Avatars are also capable of quadrupedal movement and can attain speeds of 150% of normal bipedal 'movement. Forepaws have evolved into hands. MekPurrs have retractable claws and can achieve exceedingly delicate manipulations with ease. Avatars are somewhat more clumsy because they have formidable, fixed claws capable of doing significant damage to their prey, or to their enemies. Felines also retain the terrible killing fangs of their ancestors, although MekPurrs are just 'civilised' enough to find their use distasteful. All of the Felines races have full body hair, the fur ranging from very short to long, with a colour range from desert sand to midnight black. Tails are very much in evidence and still signal the moods of the owner, as in the ancestors. Finally, in overall size and mass the Felines are larger and heavier then humans, males standing between 160 cm and 205 cm, with mass 70 kg to 135 kg. Females are somewhat smaller and correspond fairly closely in height and weight to human females.

Vision: Felines have two eyes with dilating, slit pupils so characteristic of cats. Eye colour ranges from deep copper and yellow to green and blue hues. Feline vision is very keen, with a slight tendency toward colour blindness. Depth perception and judgement of distance are superb. All species also possess excellent night vision.

Hearing: Felines have acute hearing, and stealthy sounds bring them to full alert. Rarely will a Feline be 'surprised' by an enemy stalking him, unless it is another Feline.

Smell: Felines have relatively limited olfactory senses, perhaps somewhat superior to that of a human but still poor when compared to Canine senses.

General Comments: Felines are highly individualistic creatures and respond sullenly to unjust or dictatorial treatment. They rarely forgive and never forget an injury, and a resultant tendency to seek personal vengeance therefore characterises most Felines. All Feline cultures are circumscribed by propriety, with customs and behaviour patterns that establish the bounds of 'correct and proper conduct.' This sense of what is fitting and

proper replaces the human concepts of 'right' and 'wrong.' However, as propriety largely aims at defining the areas of personal freedom so vital to Felines, the overall result of their views is an attitude corresponding closely to many human ideas of justice.

All Felines are unreformed carnivores and not only enjoy eating meat, but also prefer to hunt their prey where possible. Feline metabolisms tend to be iron-based. Life expectancy is 100 - 125 years in advanced races, and about 50 years for 'primitive' races.

## URSOID RACES
The Ursoids are bear-like creatures particularly notable for their great strength and hardiness. PCs must exhibit the following characteristics to be Ursiod characters: Strength/I6+, Constitution/15+, but Intelligence will not be higher than 15. Ursoids do not have high levels of technical aptitude either; GTA, MechA, and ElecA will be under 14. Any PC qualifying for Ursiod status will have a Bravery of 13+, so raise lower values to 13.

Stellar Primary: Type G, K

Home Planet: Type I through 14, with gravity 0.6 - 2.0 G. Desert Planet and Jungle Planet conditions are highly unfavourable to most Ursiod species, so a PC born on such worlds cannot be an Ursiod character. Most Ursiod species prefer heavily forested planets.

Radiation Tolerance: Ursoids are moderately resistant to radiation. Ursoids can tolerate a 0.03 - 0.04 rem exposure per week without complications. Germ-plasma damage may result at long term exposure levels of 100 - 150 rem. Radiation sickness is likely when exposure exceeds 500 rem, with death probably when exposure exceeds 1000 rem over a short term.

Atmosphere; Human norms apply, but dense atmosphere species can tolerate a range of 100mm to 1000mm i.p.p. of oxygen.

Appearance: Ursoids are bipedal, with 2 arms and 2 legs, and erect posture. Forepaws have evolved into hands, but powerful and very dangerous claws are retained. Body hair is full and dense, ranging in colour from 'polar bear' white to buff, brown, and black. Overall appearance is very bear-like, with massive musculature. Ursoids have 'refined' body shapes, compared to primal ancestors, and are well adapted to bipedal locomotion. Males range from 180 cm to 225 cm in height and mass of 00 kg to 220 kg. Females are somewhat smaller, but still are significantly larger and heavier than the males of human species, attaining as much as 125 kg mass and height of 200 cm. Ursoids can attain speeds comparable to those of humans both in sprints and over long distances.

Vision: Ursiod vision is somewhat less sharp than that of humans, but depth perception is good. Cold planet species will have vision as acute as any human's unlike their warm planet cousins, who are adapted to the 'close' conditions of forested habitats. Indeed, some races have vision sufficiently limited to necessitate the use of aids like contact lenses and eyeglasses to attain clear sight over distances of more than a few hundred meters.

Hearing: Ursiod hearing is very acute in forest species, but cold planet races have hearing approaching human norms (their dependence is on eyesight).

Smell: All Ursoids have keen olfactory senses, especially when airborne odours are involved. They cannot follow a scent trail like Canines, however. Ursiod olfactory senses are more of a warning faculty than a tracking faculty.

General Comments: Ursoids are action-oriented beings and tend to prefer the military life. Their great strength permits them to carry heavy loads with ease, and some individuals are able to wear un-powered heavy armour without experiencing undue encumbrance. In close combat, few species can equal Ursoids for sheer destructive capacity. Despite their warlike natures, Ursoids are largely vegetarian, consuming meat on occasion but not as a habit. They have iron-based metabolisms. Life expectancy is about 100 years in advanced races, and about 30 years for 'primitives.'

## AVIAN RACES
The Avians are descended from ground-dwelling birds. (Even in low gravity conditions, flyers do not attain sizes sufficient to make racial dominance on the planet a likely prospect.) A PC will qualify for Avian status upon choice. No characteristics modifiers or requirements need be considered.

Stellar Primary: Types F, G, K

Home Planet: Planetary Types I, 2, 3, 4, 5, 7, 8, and 9, with gravity 0.6 to 1.25 G.

Radiation Tolerance: Human tolerances apply.

Atmosphere: Human norms apply.

Appearance: Avians are bipedal, with wings evolved into 'arms' with grasping appendages that function efficiently as 'hands.' Avian legs are strong and adapted to running at high speed. Feet typically possess talons suited for kicking and striking at enemies. The head has all of the characteristic avian shape of lesser species, often resembling the features of hawks and eagles, with keen eyes and sharp beak. The head and body are covered with feathers of various hues, males tending to be more decorative than females. The feathers themselves tend toward a downy, almost fur-like appearance and texture. Avian musculature is strong, but body weight is relatively lower than for other species of similar size because most Avians retain hollow bones. Speeds are definitely faster than for most races.

Vision: Avians enjoy excellent binocular vision, as do all preceding races, but rarely see in colour. Night vision is somewhat poorer than that of most humans if the Avian race is adapted to brilliant and medium illumination conditions, but species from dim (Type K) star systems will have excellent night vision. Avians are sensitive to movements, like Felines, and their attention is quickly caught by anyone or anything moving stealthily.

Hearing: Avian hearing tends to be quite good, but depending on the species, a range from Terran human norms to exceedingly acute levels may occur.

Smell: Avian olfactory senses are very poor, racial dependence being On vision.

General Comments: Avians are carnivorous and no known sentient species are plant eaters. Metabolisms are invariably iron-based, although copper-based metabolisms are possible. Most Avians of advanced races are long-lived, often attain 150 years of age, while 'primitives' will also reach respectable levels of 75 to 100 years.

Avians are worshippers of the 'Egg,' as perhaps befits their species, and powerful religious as well as patriotic connotations are attached to their native planets, which symbolise the Cosmic Egg of Life. They also have very strange family ties and mate for life. Children, being fixated on their parents by instinctive birth reflexes, are utterly loyal to their elders. Culturally, order of precedence is exceedingly important, and the 'pecking order' of birds is clearly reflected in their according privilege to those who succeed to high rank.

## WARM—BLOODED SAURIAN RACES
Saurians are descended from warm-blooded hunting dinosaurians and exhibit many characteristic of their ancestors. The Saurians are especially notable for their considerable strength and size, which rivals that of Ursoids. PCs must have Strength and Constitution 14+ to qualify as warm-blooded Saurians, with Empathy no higher than 12 and Intelligence no higher than 16.

Stellar Primary: Type F, G

Home Planet: Planetary Type 1, 2, 4, 5, 7, 8, with tropical and sub-tropical .conditions predominating. Steppe, forest, and jungle conditions are preferred, and dry climates (desert, arid steppe) are decidedly unpleasant. Gravity field tolerances range from fairly low to as much as 2.5G.

Radiation: Saurians have radiation tolerances comparable to those of Transhumans, usually +50% over human norms.

Atmosphere: Saurians do not do well in thin atmosphere conditions. Norms for humans born on average to high pressure planets will apply

Appearance: Saurians are 'reptilian' bipeds with 2 arms, 2 legs, and erect stance which is aided by a balancing tail. The general shape is that of a small hunting dinosaurian of approximately man-size. The skin is a fine scale of greenish to brownish hue, although other shades may be encountered, including vivid coloration in iridescent greens, blues, reds, etc. Some species have a form of body hair related to the feathers of birds, and this covering may also be coloured as variously as scales, The heads are remarkably bird-like in appearance, especially in the fur-covered species, and the Saurians therefore have anything except a 'reptilian' look to them. Their tongues flick in and out regularly to smell the environment, as the olfactory sense is typically maintained in the tongue. (Some species have olfactory organs in the nostrils, however.) As in the case of most sentient races, their forepaws have developed into hands with thumbs and, opposing fingers, some species still retaining short claws which and can be used in fighting. The feet are taloned in much the same way as noted for Avians, and these are used as fearsome weapons in close combat, The jaws also contain formidable fangs capable of rending and tearing an enemy with good effect.

Vision: Saurians have two eyes with dilating, slit pupils of characteristic snake-like aspect, Vision is binocular, but depth perception is average because the eyes are set far apart and to the side. This deficiency produces a compensatory effect; vision is almost 360° in some species and rarely is less than 270°. Colour perception tends to be non-existent but a capacity to sense infra-red heat sources through special organs beneath the face scales compensates for this lack. (Saurians cannot 'see' in infra-red; rather, they sense the presence and approximate location of heat sources up to 20 meters distant.) Most species are diurnal, and have relatively poor night vision. Several nocturnal species exist, and these have good night vision. All species have average to good acuity over distance.

Hearing: Saurians have moderately good hearing. However, it is vibration in the ground which they can sense with remarkable keenness. A walking man can be detected, for instance, at a distance of a hundred meters if he is on solid ground. Felines and Canines who are proceeding with stealth cannot be readily detected.

Smell: Saurians have limited olfactory senses, usually with a range of only a few meters.

General Comments: Saurians have iron-based metabolisms and are carnivorous in their diets. Life expectancy is about 100-125 years in advanced species, and about 50 years in 'primitive' races.

Saurians should not be thought of as 'reptiles.' They are warm-blooded and enjoy all of the advantages of any warm-blooded species, including considerably high activity levels even in cold weather. Cool and cold conditions are uncomfortable and hardly favourable to Saurians, but they can survive them if adequately protected by survival clothing and equipment.

By human standards, they are a 'cold-blooded' group, empathetically speaking. This general inability to relate to others on an individual level might be explained, in part, by the racial tendency to rear young outside of a family setting. Loyalty is given to the race and its leaders, who have proven their strength and their wisdom, not to 'loved ones.'

It should not be assumed that other racial types are not possible. This section merely lists and discusses types capable of living on human habitable worlds and capable of truly individual actions. Intelligent ants or wasps could exist in a campaign, but not as adequate PCs, Similarly, extremely alien races which could inhabit Jovian or Mercurial type planets would have no meaningful contact with humans as they could not exist is the same environments or use similar technologies. Such races would never compete with PCs for habitable worlds,

but they might aid stranded PCs in hostile planets if contact can be made and some form of communication achieved.

## 2.4 APPLYING THE PERSONAL CHARACTERISTICS

Now that the personal characteristics have been rolled and modified for the home planet conditions, and a racial type has been selected for the PCs, the characteristics can be applied to 'flesh out' the PC. The following sections present an explanation of the basic meaning of each personal characteristic.

### PERSONAL CHARACTERISTIC: PHYSIQUE

Physique refers to the stature, frame, and mass of a PC. Depending on the race, a fairly wide range of possible body sizes and masses can result. PCs are considered to be 'fit' specimens of the race. Lighter or heavier PCs are possible. If desired, a 1d6 can be rolled, with 1 indicating a PC 5% lighter than indicated of the Physique score, and 6 indicating a PC5% heavier. This variation will account for a lighter or heavier frame and musculature. Physique is more or less 'fixed' and cannot be altered by exercise. The PC is considered to have reached his optimum development through exercise, proper diet, etc. so that his full genetic potential has been realised.

Humans, Humanoids, Transhumans Canines, and Avians Table

| Physique Score | Males Height | Weight | Females Height | Weight |
|---|---|---|---|---|
| 01 | 155cm | 55kg | 148 cm | 38 kg |
| 02 | 157 cm | 57 kg | 150 cm | 40 kg |
| 03 | 160 cm | 60kg | 152 cm | 42 kg |
| 04 | 162 cm | 63 kg | 154 cm | 45 kg |
| 05 | 165 cm | 65kg | 156 cm | 47 kg |
| 06 | 167 cm | 67 kg | 158 cm | 48 kg |
| 07 | 170 cm | 70kg | 160 cm | 50 kg |
| 08 | 172 cm | 73 kg | 162 cm | 51 kg |
| 09 | 175 cm | 75 kg | 164 cm | 53 kg |
| 10 | 177 cm | 77 kg | 166 cm | 54 kg |
| 11 | 180 cm | 80kg | 168 cm | 56 kg |
| 12 | 182 cm | 82kg | 170 cm | 57 kg |
| 13 | 185 cm | 85kg | 172 cm | 59 kg |
| 14 | 187 cm | 87 kg | 174 cm | 61 kg |
| 15 | 190 cm | 90kg | 176 cm | 62 kg |
| 16 | 192 cm | 93 kg | 178 cm | 64 kg |
| 17 | 195 cm | 96kg | 180 cm | 66 kg |
| 18 | 197 cm | 100 kg | 182 cm | 68 kg |
| 19 | 200 cm | 105 kg | 184 cm | 70 kg |
| 19+ | 205 cm | 110 kg | 185 cm | 72 kg |

Reduce Avians by -5% for weight

Felines and Pithecines Table

| Physique Score | Males Height | Weight | Females Height | Weight |
|---|---|---|---|---|
| 01 | 160 cm | 70 kg | 150 cm | 42 kg |
| 02 | 162 cm | 73 kg | 152 cm | 43 kg |
| 03 | 164 cm | 75 kg | 154 cm | 45 kg |
| 04 | 165 cm | 76 kg | 156 cm | 47 kg |
| 05 | 167 cm | 78 kg | 158 cm | 49 kg |
| 06 | 170cm | 80kg | 160 cm | 51 kg |
| 07 | 172 cm | 82 kg | 162 cm | 53 kg |
| 08 | 174cm | 84kg | 164 cm | 55 kg |
| 09 | 176 cm | 86kg | 166 cm | 57 kg |
| 10 | 178 cm | 89kg | 168 cm | 59 kg |
| 11 | 180 cm | 92 kg | 170 cm | 61 kg |
| 12 | 182 cm | 96 kg | 172 cm | 63 kg |
| 13 | 185 cm | 100 kg | 174cm | 66 kg |
| 14 | 187 cm | 105 kg | 176cm | 69 kg |
| 15 | 190 cm | 110 kg | 178 cm | 72 kg |
| 16 | 192 cm | 115 kg | 180 cm | 75 kg |
| 17 | 195 cm | 120 kg | 182 cm | 78 kg |
| 18 | 197 cm | 125 kg | 184 cm | 82 kg |
| 19 | 200 cm | 130 kg | 186 cm | 86 kg |
| 19+ | 205 cm | 135 kg | 188 cm | 90 kg |

Ursoids Table

| Physique Score | Males Height | Weight | Females Height | Weight |
|---|---|---|---|---|
| 01-02 | 180 cm | 100 kg | 160 cm | 70 kg |
| 03-04 | 183 cm | l05 kg | 163 cm | 73 kg |
| 05-06 | 186 cm | 110 kg | 166 cm | 76 kg |
| 07-08 | 189 cm | 115 kg | 169 cm | 79 kg |
| 09-10 | 192 cm | 121 kg | 172 cm | 82 kg |
| 11 | 195 cm | 127 kg | 175 cm | 85 kg |
| 12 | 198 cm | 133 kg | 178 cm | 88 kg |
| 13 | 200 cm | 140 kg | 180 cm | 90 kg |
| 14 | 203 cm | 146 kg | 183 cm | 94 kg |
| 15 | 206 cm | 155 kg | 186 cm | 98 kg |
| 16 | 209 cm | 165 kg | 189 cm | 103 kg |
| 17 | 212 cm | 177 kg | 192 cm | 108 kg |
| 18 | 215 cm | 190 kg | 195 cm | 114 kg |
| 19 | 220 cm | 210 kg | 197 cm | 118 kg |
| 19+ | 225 cm | 220 kg | 200 cm | 125 kg |

Saurians Table

| Physique Score | Males Height | Weight | Females Height | Weight |
|---|---|---|---|---|
| 01-02 | 170 cm | 85kg | 160 cm | 55 kg |
| 03-04 | 173 cm | 90kg | 163 cm | 59 kg |
| 05-06 | 176 cm | 95 kg | 166 cm | 63 kg |
| 07-08 | 179 cm | 100 kg | 169 cm | 67 kg |
| 09-10 | 182 cm | 105 kg | 172 cm | 71 kg |
| 11 | 185 cm | 111 kg | 175 cm | 75 kg |
| 12 | 188 cm | 117 kg | 178 cm | 80 kg |
| 13 | 191 cm | 123 kg | 181 cm | 85 kg |
| 14 | 194 cm | 129 kg | 184 cm | 90 kg |
| 15 | 197 cm | 135 kg | 187 cm | 95 kg |
| 16 | 200 cm | 142 kg | 190 cm | 100 kg |
| 17 | 203 cm | 148 kg | 193 cm | 106 kg |
| 18 | 206 cm | 156 kg | 196 cm | 112 kg |
| 19 | 209 cm | 167 kg | 198 cm | 118 kg |
| 19+ | 212 cm | 180 kg | 200 cm | 125 kg |

## PERSONAL CHARACTERISTIC: STRENGTH
Strength is a measure of the sheer physical power of the character. Strength is used along with other factors to determine a number of related attributes, notably a PC's carrying capacity, damage factor, and shock resistance, which will be described later, It also has an effect on close combat.

## PERSONAL CHARACTERISTIC: CONSTITUTION
Constitution is a measure of the ability of a character to resist disease and to recover from injury and illness, to survive poisons and toxic chemical damage, and to endure some kinds of physical hardships. Constitution is used along with other factors to determine a number of related attributes, such as carrying capacity, damage factor, and shock resistance, which will be described later.

## PERSONAL CHARACTERISTIC: AGILITY
Agility is a measure of a character's reaction speed, his Agility of movement and ability to act decisively in an emergency instead of 'freezing' momentarily. Agility will act as the basis of 'characteristic rolls' or CRs which determine whether a character has succeeded at certain types of movement and reactions. These CRs will be described later.

## PERSONAL CHARACTERISTIC: DEXTERITY
Dexterity is a measure of a character's manual co-ordination, and it will act as the basis of 'characteristic rolls' or CRs which determine whether a character has succeeded at some kinds of manipulations. These CRs will be described later. Dexterity will also have an effect in combat Situations.

## PERSONAL CHARACTERISTIC: INTELLIGENCE
Intelligence is a measure of a character's general intellectual powers--problem solving ability, memory, and other such operations. As far as 'IQ' goes, it should be noted that 01 represents the equivalent of a contemporary IQ 95-105. That is not to say that there are no individuals of low intellect. A fair proportion of the population of most races will be quite 'average' even by today's standards. But such people will not likely be in government or civilian service. Nor would they have the desire, ability, and temperament to become interstellar adventurers. Thus PCs are not liable to their intellectual levels.

In Space Opera , Intelligence has the chief function of standing as a pre-requisite for the learning of certain areas of knowledge. Also, 'characteristic rolls' or CRs based on the PC's Intelligence score may be made in situations in which the PC is attempting to remember a relevant fact, etc., in order to solve a problem. These CRs will be described later.

## PERSONAL CHARACTERISTIC: INTUITION
Intuition is a measure of a character's ability to utilise a 'sixth sense' in potentially dangerous situations so that he is alerted to the chance of possible injury or death before he has had any real reason to suspect it. It also represents a capacity to solve problems before he has all the facts. Intuition will serve as the basis for 'characteristic rolls' or CRs to determine the outcome of such situations. These CRs will be described later.

## PERSONAL CHARACTERISTIC: LEADERSHIP
Leadership is the character's ability to inspire others to follow him, even when the situation is dangerous in the extreme. It is also a measure of his capacity to be 'decisive' under pressure. Leadership is not a measure of how good a leader the PC is, only his sheer ability to cause others to follow him. Leadership will serve as the basis for morale CRs made by NPCs or non-player characters who are his hirelings or subordinates. It will also affect a PC's chances for promotion.

## PERSONAL CHARACTERISTIC: BRAVERY
Bravery is a measure of a character's ability to summon up physical courage and to exhibit a kind of mental 'toughness' in a tense situation. It is, in short, his capacity to remain cool, calm, and collected when his life is threatened or when he has to face a test of his moral fibre. All PCs will have a minimum bravery of 11+ if they become Armsmen or Astronauts, and lower characteristics may be raised to 11: Bravery is the basis of 'characteristic rolls' or CRs made when questions of personal morale arise. These CRs will be described later.

## PERSONAL CHARACTERISTIC: EMPATHY
Empathy represents the unconscious and largely uncontrolled broadcast of a character's personality aura and its interaction on the auras of those around him. In this context, Empathy has little to do with one's intentions towards a particular being, Rather, it is a quantification of the character's 'openness' to contact and will be sensed by those he meets. Generally, the more a character is empathic, the more others will be prepared to reserve final judgement and 'hear him out.' The ability in especially valuable to Contacts personnel charged with opening relations with new races, but virtually every type of character will find the ability useful, whatever their calling.

Empathy
Score Effect on Personality and on Others

01-06 Empathetically, the character is a 'loner' who keeps very much to himself. Players should regard such a character as ranging from 'anti-social' to outright psychopathic, The lower the score, the 'colder' and the more 'withdrawn' the character should be in his impact upon others--which influences the general role-play of such a personality by the player. An Empathy score of  01 to 02 means a character with psychopathic and anti-social tendencies, the man with the true 'killer instinct.' Such a character will never check morale and may prove to be a beserker in combat. He simply does not relate to anyone not 'useful' to him (comrades tend to be 'useful' and so come under his area of concern; his loyalties are based upon personal survival and a code of conduct uniquely his own.) In summation, he chooses his 'friends' very carefully, stands by them to the death because he takes threat to them as a personal affront, and could care less about everybody else. He is a man without a conscience in search of a personal, living 'god' to give his troubled life security and purpose, a sword looking for a strong hand to wield it.

07-08 Empathetically, the character is 'reserved' and cannot 'loosen up' except in the company of his closest friends. To strangers he is customarily aloof-polite if not cool in his manner.

09-13 Empathetically  'average,'  the  character  has  'a reasonably positive effect on others but does not inspire

them with unusual confidence in his leadership or special qualities.

14-16 Empathetically 'outgoing, the character is capable of striking up a friendly or working relationship with others in a very short time. He proves rather 'likeable' and exhibits leadership qualities which can inspire the confidence of subordinates, whether or not he is really possessed of true Leadership talents.

17 Empathetically radiating sensitivity to the concerns and desires of others, the character has a 'warm' personality aura to which others respond in a trusting way. Associates and subordinates will tend to respond to his good points and will tend to minimise or overlook some of his faults. Strangers will be less suspicious of his motives and intentions because he appears on the surface to be a 'good fellow at heart.

18 Empathetically 'sensitive,' the character has a powerful effect on the opinions of others towards him and can readily interact with complete strangers as if he has known them all his life. He also picks up on the subtle nuances of other's responses and can fit his behaviour to their moods without difficulty.

19 The character is an Empath, highly sensitive to others and capable of projecting his own moods or reading those of others with a high degree of success. The Contacts Service is always on the look out for such personalities and is quick to enlist or draft them into service as First Contacts Personnel. Rarely do they have real enemies, for they can get 'inside' the moods of others and accommodate their conduct to those moods so well that it is hard to actively dislike them. For his part, an Empathic character finds it equally difficult to dislike others; he knows other beings too well because of his unusual talent and may understand and sympathise with their feelings even if he does not personally share them or approve of them.

## PERSONAL CHARACTERISTIC: PSIONICS

Psi or Psionics is an ability which is a combination of active and passive manifestations of extraordinary mental powers. Intuition is related to, but is not the same as, Psi ability in that the character's senses are 'heightened' and his mental powers are capable of reaching a correct conclusion in the absence of sufficient information to draw logically reasoned conclusions about a situation. Psionics, however, reaches far beyond Intuition in that the very mind of the character can act upon the environment and upon others through the exercise of Psionic Talents. (See 4.10, Psionics, for a detailed description of these Talents.)

## PERSONAL CHARACTERISTIC: GENERAL TECHNICAL APTITUDE (GTA)

General Technical Aptitude, abbreviated GTA, is a measure of the character's ability to comprehend and master certain skills. The GTA will be applied in learning situations and affects the chances of a character to acquire a skill and to advance in expertise. Skills affected by the GTA will be described later.

## PERSONAL CHARACTERISTIC: MECHANICAL APTITUDE (MechA)

Mechanical Aptitude, abbreviated MechA, is a measure of the character's ability to master skills involving machinery. It will be applied in learning situations and affects the chances of a character to acquire a skill and to advance in expertise, Skills affected by the MechA will be described later.

## PERSONAL CHARACTERISTIC: ELECTRONICS APTITUDE (ElecA)

Electronics Aptitude, abbreviated ElecA, is a measure of the character's ability to master skills involving electrical and electronic equipment. It will be applied in learning situations and affects the chances of a character to acquire a skill and to advance in expertise. Skills affected by the ElecA will be described later.

## 2.5 PC CARRYING CAPACITY

Carrying Capacity (CC) is determined by adding a character's Physique, Strength, and Constitution scores and dividing by 3. The result is then multiplied times his body mass/weight times his racial CC Factor.

| Race | CC Factor | Race | CC Factor |
|------|-----------|------|-----------|
| Humans | 0.05 | Arachnids | 0.08 |
| Humanoids | 0.05 | Scorpionids | 0.08 |
| Felines | 0.06 | Insectoids | 0.08 |
| Canines | 0,06 | Amoeboids | 0.01 |
| Pithecines | 0.07 | Icthyoids | 0.05 |
| Ursoids | 0.10 | Silicates | 0.15 |
| Saurians | 0.08 | Cold Planet | 0.10 |
| Transhumans | 0.10 | Avians | 0.05 |

For example, a Pithecine Male has a Physique/16 (115 kg mass), Strength/I?, and Constitution/16, The average of the traits is 16.33, so 16.33 x 115 x 0,07 = 131 kg CC.

| Category | Amount Carried | Effect |
|----------|----------------|--------|
| Light Load | 1/7 CC | None |
| Moderate Load | 1/4 CC | Double fatigue cost for run, climb, or hand-to-hand combat; -1 to initiative determinations. |
| Heavy Load | 1/3 CC | Double fatigue cost for trot; triple for run, climb, crawl, or hand-to-hand combat; -3 to initiative;-I to Dexterity CRs. |
| Full Load | 1/2 CC | As above, but Cut hand-to-hand combat by 1/4. |
| Partly Encumbered | 2/3 CC | As above, but Cut all movement end hand-to-hand combat by 1/2; -10 from initiative; -5 from Dexterity CRs. |
| Fully Encumbered | 4/5 CC | Triple all fatigue costs; Cut movement and hand-to-hand combat by 1/2; -15 from initiative; -8 from Dexterity CRs. |
| Optimum Load if 50% Wounds | 1/12 CC | Add 10 SF to SF total and otherwise treat as a Light Load. |
| Under 25% Wounds | | Increase category of load by 1 level. |
| 25+% Wounds | | Increase category of load by 3 levels. |

If the load exceeds 100% CC, the character is literally staggering under the Sheer mass of it and will be able to go no farther than 100m. before a rest is required. Up to 11/2 CC can be carried in this fashion, with combat impossible. Wounded characters in this situation cannot carry more than 1/12 CC; heavier weights result in inability to move.

The Lift Capacity (LC) of a character is equal to twice his CC. A maximum lift can be raised overhead for 5-10 seconds at a cost of -5 SF. Each additional 5-10 seconds costs -10 SF to hold the weight overhead, in arms, etc. Movement is impossible.

## 2.6 PC DAMAGE FACTORS

Damage factors or DF represents a PC's ability to withstand physical injury. Initially, the DF is computed by adding Physique, Strength, Constitution, and PC body mass, then dividing that sum by 10. This result is then multiplied by the racial factor, given below:

| Race | Multiplier | Race | Multiplier |
|------|-----------|------|-----------|
| Humans | 2.5 | Avians | 2.5 |
| Humanoids | 2.5 | Ursoids | 3.26 |
| Felines | 3.0 | Saurians | 3.0 |
| Canines | 2.5 | Transhumans | 3.5 |
| Pithecines | 2.76 | | |

For example, a human male has Physique/l3 (85 kg), Strength/16, and Constitution/19. The total of the four elements of his DF = 13 + 85 + 16 + 19 = 133. Dividing 133 by IC, we obtain 13.3. Multiply 13.3 by the Human DF multiplier or 2.5 to obtain the PC's DF, which is 33.25. Fractions are always rounded up. so the DF = 34.

## 2.7 PC DEATH

In an advanced society, death is not quite as final as one might think. The drug Thanokalamine or TKM can be administered within 5 minutes of 'clinical death and arrests all cellular decomposition for a period equal to 7 hours plus the Constitution score of the victim. So long as a critical hit to the head, resulting in irreparable brain damage, has not occurred, the victim can be 'repaired' and restored by a Physician with QuickTime Base Hospital or Hospital Ship facilities. A dose of TKM can be administered as required until the victim is in the hands of such a Physician, or until he can be quick-frozen in a cryogenic capsule.

Many personnel wear TKM MediBracelets or equivalent equipment which monitor pulse and other physiological functions and instantly inject a dose of TKM when clinical death occurs. The survival of 'killed' personnel thus depends largely upon the survival of the body until his comrades can effect a 'pickup.' Even when as much as 50% of a slain person's body has been destroyed, Regeneration Centres can repair and restore the victim so long as the brain is not critically damaged.

Death Reversal techniques require three times the PC's Constitution score in days of recovery, in addition to critical wound recovery times. While it is itself amazing that even death is conquerable, more amazing is the fact that the more fit a victim is the longer it takes to restore him the time factor reflecting the period needed to restore a body to its maximum levels, and the more fit a person was the more 'healing' is required. Unfortunately, each application of the procedure reduces the Constitution score by 1/2d6 (1-3 points), and once the restored Constitution is 0, reanimation is impossible.

Given the possibility of Death Reversal, PC's desiring a 'permanent' kill should try for a head shot. Corpses can also be given a short or burst through the head to destroy the brain. This procedure can be used by the Starmaster only when he rolls 10+ on 2d6. He has NPCs to burn, but PCs are relatively difficult to develop and should not be subject to Starmaster whims. If a PC has been slain by injuries not involving the brain and is not subsequently 'totalled' by an NPC, he has every right to a chance at pick-up if he is TKM preserved. On the other hand, a PC can always try to put another PC away permanently, if the victim is an enemy, but he has to roll an Intelligence CR to think of it at the time. Players are warned that this sort of thing can build bad feelings in a playing group if anyone makes it a habit of wiping out the PCs of a player or players he does not like. The identification of a player with his PC is considerable. and he will regard deliberate murder with more than a touch of vendetta.

Death is presumed to occur whenever the DF or Damage Factors of a PC fall below zero level.

## 2.8 PC SHOCK RESISTANCE CR

A person might go into 'shock' at any time he is subjected to a severe physical trauma. Shock may occur whenever a character is seriously wounded or injured by weapon fire or explosion or impact (from a solid object or a melee weapon). Shock might also be possible when a character is seriously burned, falls from a considerable height, breathes in toxic gases, suffers an electric shock of moderate to high intensity, etc.

Shock Resistance arises from a PC's Constitution. The SR is found by using the Constitution score. No character will have a Shock Resistance under SR/8, so any Constitution scores below eight will yield SR/8 as a minimum.



A Shock Resistance CR involves rolling 1d20, with the character avoiding the effects of shock if 1d20 result is equal to or lower than his SR number.

If shock results, the character loses 25% of his Stamina Factor. If the SF is reduced below zero, or is already below zero levels, the character is rendered unconscious for a number of minutes equal to 30 minus his Constitution score.

Characters with Empathy scores of 01 to 06 will check to see if they 'berserk' whenever a Shock Resistance CR is failed. The 1d20 CR dice are rolled a second time, and if a result under 9 occurs, the character is not rendered unconscious. Rather, his hysterical energy levels are such that he will make no checks for shock exhaustion until the emergency is clearly over. His combat capabilities are increased +25% in hand-to-hand situations and his morale is unshakeable.

The Shock Resistance CR is therefore a measure of a character's physical reaction to some dramatic threat to his bodily safety and survival.

## 2.9 PC WOUND RECOVERY RATE

Characters will receive wounds in the course of the game by engaging in various forms of personal combat or by being exposed to hazardous situations. Wounds are classified into three categories light. serious, and critical.

Light wounds do not incapacitate a character, but three light wounds or wounds equal to more than 33% of the PC's total DF constitute a serious' wound situation.

Serious wounds will reduce a character's physical performance and may even incapacitate him. Three serious wounds or wounds equal to 67% of the PC's total DF constitute a 'critical' wound Situation.

Critical wounds represent considerable physical injury, usually enough to impose partial or total incapacitation and a grave threat to the very survival of the character if adequate treatment and facilities are not available.

The following table represents the recovery times for various wounds, as modified by a variety of medical treatment and hospital                                                                      facilities:

| Treatment & Facilities Available to Character | Light Wound Recovery Rate | Serious Wound Recovery Rate | Critical Wound Recovery Rate |
|---|---|---|---|
| None: Natural Recovery Time | (1) 2 + 2.d6 | (2) 20 + 10.d10 | (3) 20 + 30.d10 |
| With First Aid | 90% | 90% | 90% |
| With First Aid & Drugs | 85% | 80% | 80% |
| Medic with Drugs | 80% | 70% | 70% |
| Medic with QuickTime (QT) | 1 | 3 + 1d10 | 35% |
| Dispensary or Aid Station | 75% | 60% | 60% |
| Dispensary or Aid Station with QT | 1 | 1+ 1d10 | 30% |
| Sick Bay or Field Hospital | 70% | 50% | 50% |
| Sick Bay or Field Hospital with QT | 1 | 1+1.d6 | 25% |
| Base Hospital or Hospital Ship | 60% | 40% | 40% |
| Base Hospital with QT | 1 | 1.d6 | 20% |
| Hospital Ship with QT | 1 | 1.d6 | 20% |
| Regeneration Centre | 1 | 1/2 .d6 | 10% |

(I)   Untended light wounds have a 25% chance each day they are medically unattended of becoming infected and turning into serious wounds if the victim fails a Constitution CR rolled on 1d20, Failure = higher 1d20 result than Constitution score. CRs are made daily for 1/2 the period of wound recovery rolled. Minimum CR = 12.

(2)   Serious wounds have a 25% chance each day they are medically unattended of becoming infected and turning into critical wounds if the victim fails a Constitution CR minus I per day of no medical attention, rolled on 1d20. Failure = higher 1d20 result than the Constitution score as modified by time unattended. CRs are made daily for 30 days minus 1/2 Constitution score. Minimum CR =8.

(3)   Critical wounds have a 25% chance each day they are medically unattended of becoming infected so badly that the victim will die if he fails a Constitution CR minus 1 per day of no medical attention, rolled on 1d20. Failure higher 1d20 result than Constitution score as modified by time unattended. CRs are made daily for 50 days minus Constitution score if Constitution is 10+ or 50 days if Constitution is under 10. Minimum CR = 8, A character suffering from critical wounds also has to survive a Shock CR, or he rolls to see if death occurs within the hour he has been wounded if no medical attention has been obtained.

Medical attention is considered to be ongoing, and close care and detailed treatment are needed for the minimum recovery period under a given type of medical treatment, For example, a PC is seriously wounded and rolls 6 on the d10 roll, giving him 20 days + 10 x 6 days=80 days of serious illness, The minimum roll is 20 + 10 x 1=30 days, and during that time he runs a daily risk of untended wounds becoming critical, Under the care of a Medic with drugs and minimum medical facilities, that 'crisis' period is reduced to 80% of 30 days or 24 days. In a Sick Bay, the 'crisis' period is reduced to 50% or 15 days.

During a crisis period, a patient still runs the risk of a wound becoming more serious and advancing to the next wound stage. However, before a Constitution CR is rolled, a Medical Treatment CR is made on 2d6 by the MediTech or Physician, who must roll equal to or lower than his expertise level to avert a crisis and a patient Constitution CR.

The natural recovery period is also modified by each type of medical treatment received. If our patient would be suffering the effects of a serious wound for 80 days without treatment, the attentions of a Medic for 24 days would reduce the total recovery time to 80% or 64 days, the time remaining after the 24 days of intensive treatment being the convalescent period. If the patient were taken to a Sick Bay within that 80-day period, the total recovery time would be reduced to 50% of 40 days, and the critical period drops to 15 days. If the patient had already gone through 15 critical days under a Medic's attention, no further crises will occur, but the patient would still need 15 days in hospital/sick bay before he would be considered as a convalescent. In any event, he would be released after 40 days as recovered.

QuickTime facilities speed healing dramatically. Light wounds are restored within 24 hours, More serious wounds require from 1 to 13 days, while critical wounds require from 10% to 35% of the natural recovery time. QuickTime treatment may be applied only once, but it may be applied anytime and takes effect from that time on, For example, if a patient had a recovery time of 80 days and had gone 20 days under no medical attention before a chance arrived to take him to a Dispensary with QuickTime, his serious wound would be cured in 2-11 days after he had been placed in the care of the MediTech or Physician operating out of the Dispensary with QuickTime. The original 20 days spent unattended cannot be cancelled, in other words, by the subsequent application of QuickTime procedures.

QuickTime also reduces critical time periods to 10% of the minimum recovery time.

Light wound recovery occurs at the rate of the DF lost divided by the healing time. For example, if a recovery period of 9 days was called for, and 7 DF had been lost, 7/9 DF or .78 DF would be recovered each day.

Serious wound recovery occurs at the rate of 10% of the DF lost per 10% of the healing time. For example, If a recovery period of 100 days was called for, and 26 DF had been lost, 2.6 DF would be recovered every 10 days.

Critical wound recovery occurs at the rate of 10% of the DF lost per 10% of the healing time, as outlined for serious wounds.

Regeneration Centres are super-hospitals' capable of performing organic and genetic engineering A Regeneration Centre can replace lost limbs, eyes, organs, etc., by stimulating tissue growth and regeneration so that the patient grows a new limb, eyes, organ, etc., to replace the ones that were lost. The Procedure requires from 30 to 90 days, depending upon the seriousness of the procedure (StarMaster's discretion). The failure rate is 20% minus Constitution score, and failure will be apparent within 10 days. In such instances, 'bionic' Electro-mechanical limbs and organs may be used to replace lost limbs and organs, with a 90% success rate. Transplants may also be attempted with a rejection rate equal to 20% minus Psionic score. Such procedures require a recovery period and adjustment period equal to 60 + 20.d10 days. Note: such treatment is not the same as recovery/ treatment of wounds; regeneration repairs the body by replacing lost tissue, not simply encouraging the healing soft tissue that is damaged but still functional. The healing rates are as given in the Wound Re-covery Table.

## 2.10 PC STAMINA FACTOR

The Stamina Factor or SF represents the PC's energy levels and has a significant effect on his performance under stress and severe physical activity, The Stamina Factor is found by adding the Strength and Constitution scores of the PC, then multiplying the sum by the following racial factors, as applicable:

| Race | Multiplier | Race | Multiplier |
|---|---|---|---|
| Humans | 3.0 | Avians | 2.75 |
| Humanoids | 2.75 | Ursoids | 3.25 |
| Felines | 2.75 | Saurians | 3.0 |
| Canines | 3.0 | Transhumans | 3.5 |
| Pithecines | 3.25 | | |

Gravity will modify the SF. If a PC is working on a planet with a gravity field of more than 0.2G higher than the gravity field he is used to, he will require 1 week's acclimatisation per 0.2G higher, or part thereof. In the meantime, his SF is reduced by 5% per 0.2G the gravity is higher than his natural gravity field. Note:

'natural' refers to the gravity in which he normally works, not necessarily the gravity of his home planet.

For example, a Human PC has Strength/16 and Constitution/I15. His SF is (16 + 15) x 3.0 = 93. If a fraction occurs, always round up to the next whole number. If he were used to a working gravity field of 1.0 G and had to land on a planet With gravity 1.35 G, he would have his SF reduced by 10% or 9.3 - 10, resulting in an SF of 83. It will take him two weeks to acclimatise.

The Gravity rule can be worked in reverse, If a PC is working on a planet with a gravity field more than 0.2 lower than the gravity field he is used to, he will have his SF raised by 5% per 0.2 G the gravity is lower than his natural gravity field. He will retain this benefit for a number of weeks equal to his Constitution + Strength divided by 1.5, after which time he will become acclimatised to the lower gravity field as his new 'natural' gravity.

For example, if the PC mentioned above was to land on a planetoid with a gravity of 0.2 G, he Would have his SF increased by 20% or 18.6 = 93+18.6 resulting in an SF of 122. It will take him (16 + 15)x1.5 = 21 weeks to acclimatise. Thus, for 21 weeks he Will evidence a higher than normal SF before it drops to his usual 93 level. Once acclimatised, he will find a 1.0 G field 'heavier' than 'normal,' and must reacclimatize as described earlier.

The effects of Stamina on a PC's ability to get around is explained in the PC Movement Section, which follows.

## 2.11 PC FATIGUE

March turns are I hour long and are used to Work Out strategic or Cross-country movement. Fatigue is therefore handled by the hour. Depending upon the type of movement, a PC will become 'fatigued' by losing Stamina Factors as indicated in the table below,

| Type of Movement | A | B | C | Stamina Cost/Hour |
|---|---|---|---|---|
| Walk | 3.6 | 3.6 | 3 | -I (-1/2 on good trail, road) |
| March (Fast Walk) | 5.4 | 5.4 | 4.8 | -2 (-I on good trail, road) |
| Trot (Double Time) | 9 | 12 | 9 | -4 (-3 on good trail, road) |
| Run | 18 | 24 | 12.5 | -10 (-8 on good trail, road) |
| Sprint | 36 | 48 | 30 | -15 (-13 on good trail, road) |
| Slow Crawl | 0.6 | 0.9 | 0.9 | -3 |
| Fast Crawl | 3.0 | 4.5 | 3.6 | -7 |

A =Speed of humans, Humanoids, Pithecines, Ursoids, Saurinas, Icthyoids in km per hour.
B =Speed of Transhumans, Canines, Felines, Arachnids, Avians in km per hour.
C =Speed of Scorpionids, Insectoids, Silicates, Cold Planet Species in km per hour.

Terrain will double fatigue costs if rough, Jungle, or swamp and the species is not naturally suited to it. Mountains will double and perhaps triple costs. Climbing is always rated at a slow or fast crawl and Is Ct double the normal fatigue costs.

When the Stamina Factors of a PC drop to zero, he must rest. Resting recovers SF at 3 points per hour for PCs with Constitution/1 - 12, 4 points per hour for PCs with Constitution 13 - 16, and 5 points per hour for PCs with Constitution/I7+. Sleep restores SF a double the resting rate. Eight hours of sleep will always restore SF levels to maximum.

See 2.14 PC MOVEMENT for details on fatigue effects on Stamina Multiplier Factor levels.

Use of a Jump Belt expends no SF unless used for more than 1 hour per day, at which point a 'walking fatigue cost is applied as if on a good trail when in the open (1/2 SF) and as if cross-country when in any enclosed region, such as light Woods, requiring concentration to avoid obstacles (I SF).

Use of Powered Armour is detailed under the PC MOVEMENT rule (See 2,14),

Effects of loads are detailed under PC CARRYING CAPACITY (See 2.5).

## 2.12 PC WIND

A PC's wind should be equal to 3 x Stamina. The 5d10% conditioning bonus for a PC in active service can be treated as a skill to be learned, either by oneself or in a physical fitness course. This fitness training requires two weeks and can increase PC wind levels by 1d10% each time it is taken. A PC can attempt as many fitness courses as he desires until such time as 5d10 are being rolled, The highest levels are retained and wind levels rise until a maximum +50% wind is attained. Pre-requisite characteristics are an average of Intelligence and Intuition (note that Bravery can be used in place of Intelligence). PCs in an active service (military or police) roll 5d10 initially to establish bonus wind levels. At the Starmaster's discretion, PCs may lose —1d10% from wind levels through inactivity. Wind levels may be recovered as follows:

| Constitution | Standing | Resting |
|---|---|---|
| 1—10 | +1/minute | +3/minute |
| 11—15 | +2/minute | +4/minute |
| 16—18 | +3/minute | +5/minute |
| 19—20 | +4/minute | +6/minute |

Wind points are expended per minute of activity, rather than per hour, as is the case with stamina points. Strenuous activity is impossible when wind points are exhausted and such points must be restored by rest for such activity to resume. Wind costs are based on the Stamina Points System and wind costs per minute are listed below.

| Action Performed | Wind Cost/Minute |
|---|---|
| Resting | +5WF |
| Walking | .+2 WF (or +3 on trail) |
| Marching | -2 WF (or-1 on trail) |
| Quick Marching | -4 WF (or -2 on trail) |
| Running | -10 WF (or -8 on trail) |
| Sprinting | -20 WF (or -15 on trail) |
| Slow Crawling. | -3 WF (or -2 on trail) |

Fast Crawling -                -7WF (or -4 on trail)
Climbing                                       -3WF
60 seconds in Firefight (moving)        -1WF
60 seconds in Firefight (unmoving).    +1WF
6 seconds in Close Combat (melee)  -1WF

• Winding penalties assessed in addition to costs of Other activity.

## 2.13 EFFECTS OF BEING FATIGUED OR WINDED

While it might seem like a fair bit of bookkeeping, the fatigue and wind rules serve to define the capacities of PCs perhaps more than any other factors when it comes to comparing relative physical condition and potentials.

When a character becomes winded, and has expended all of his WF or Wind Factor, he cannot trot, run, sprint, or crawl. He can't even march at a good, swinging pace. In combat he will suffer penalties both in firing weapons and in hand-to-hand combat. He can Continue fighting at a reduced level, but he will have to take the first opportunity to rest and recover his wind factor which may have fallen well below zero to negative values (possible Only in combat; movement must drop to a walk when WF = 0 or less). Thus a well-conditioned character with a high WF will tend to outperform and outlast a character with lower wind levels.

The same is true of fatigue. When a character has expended all of his Stamina Factors, he is unable to move, unable to fight; he is totally exhausted. Indeed, he can perform actions only by massive exertion of will, with double wind costs and a successful Constitution CR taken every six minutes in cross-country turns, every minute in fire-fights, and every six seconds in melee, A failure of that Constitution CR means that the character with SF levels of 0 will collapse. He has driven himself beyond the bounds of endurance, Success drives SF levels into negatives.

Fatigue will bring the chance of sleepiness. Once fatigue levels

reach 0, a Constitution CR must be made each hour the character remains awake. Failure means he falls asleep. Also, when he has been awake for a period of 24 hours or double his Constitution score, whichever is higher he must make a Constitution CR to remain awake for each hour above that limit. A PC with a Constitution/1 - 10 needs 8 hours of Sleep in 24; with Constitution/11 - 14, a PC needs 7 hours of sleep in 24; with Constitution/15+, a PC needs 6 hours of sleep in 24. If the character does not get the required sleep, he has 1/2 the normal Stamina Factor recovery rate until he does get the amount needed in any 24-hour period.

Some drugs will give character's inflated Stamina and Wind levels, but the cost is high. The effects of such drugs as Tempo and Expeditor will be dealt with in the Medical rules (See 5.5).

## 2.14 PC MOVEMENT

Game turns will vary, depending upon the situation.

March Turns are 1 hour long and are used to mark large-scale movements in which no action is normally expected. These turns really act only to indicate the distance covered in large time segments to reduce Starmaster computations.

Basic Turns are 6 minutes long and are used to mark shorter segments of time, serving much the same function as March Turns. They are also employed in role-play as segments of time in which player-NPC interactions of a non-violent nature occur.

Tactical Turns are I minute long and are used in mass actions and combats involving considerable ranges.

Combat Turns are 6 seconds long and are used in firefights and hand-to-hand combat situations, where the position and movements of characters and NPCs from moment to moment is of great significance to the battle.

The following movement table gives movement for various races in meters. The time scales are adjusted for each type of game turn, so that computations are unnecessary:

Humans, Humanoids, Pithecines
Ursoids, Saurians, Icthyoids:

| Type of Movement | 1 Hour | 6 Minutes | 1 Minute | 6 Seconds | Speed in km/hr | Speed in mph |
| --- | --- | --- | --- | --- | --- | --- |
| Walk | 3600 m | 360 m | 60 m | 6m | 3.6 km/h | 2,24 mph |
| Fast Walk (March) | 5400 m | 540 m | 90 m | 9m | 5.4 km/h | 3.36 mph |
| Trot (Double Time) | 9000 m | 900 m | 150 m | 15 m | 9.0 km/h | 5.59 mph |
| Run | 18000 m | 1800 m | 300 m | 30 m | 18 km/h | 11,18 mph |
| Sprint | -- | 3600 m | 600 m | 60rn | 36 km/h | 22.36 mph |
| Slow Crawl | -- | 60m | 10 m | 1m | 0.6 km/h | 0.37 mph |
| Fast Crawl | -- | 300 m | 50 m | 5m | 3.0 km/h | 1.86 mph |

Transhumans, Canines, Felines, Arachnids, Avians:

| Type of Movement | 1 Hour | 6 Minutes | I Minute | 6 Seconds | Speed in km/hr | Speed in mph |
| --- | --- | --- | --- | --- | --- | --- |
| Walk | 3600m | 360 m | 60m | 6m | 3.6 km/h | 2.24 mph |
| Fast Walk (March) | 5400 m | 540 m | 90m | 9m | 5,4 km/h | 3.35 mph |
| Trot (Double Time) | 12000 m | 1200 m | 200m | 20m | 12 km/h | 7.46 mph |
| Run | 2400Cm | 2400 m | 400 m | 40m | 24 km/h | 14.9 mph |
| Sprint | -- | 4800 m | 800 m | 80m | 48 km/h | 29.8 mph |
| Slow Crawl | -- | 90 m | 15 m | 1.6 m | 0.9 km/h | 0.56 mph |
| Fast Crawl | -- | 450 m | 75 m | 7.5 m | 4.5 km/h | 2.79 mph |

Scorpionids, Insectoids,
Silicates, Cold Planet Types:

| Type of Movement | 1 Hour | 6 Minutes | 1 Minute | 6 Seconds | Speed in km/hr | Speed in mph |
| --- | --- | --- | --- | --- | --- | --- |
| Walk | 3000 m | 300 m | 50m | 5m | 3.0km/h | 1.86 mph |
| Fast Walk (March) | 4800 m | 480 m | 80m | 8m | 4.8km/h | 2.98 mph |
| Trot (Double Time) | 9000 m | 900 m | 150 m | 15 m | 9.0km/h | 5.59 mph |
| Run | 12500 m | 1250 m | 208 m | 21m | 12.5km/h | 18.63 mph |
| Sprint | -- | 3000 m | 500 m | 50m | 30km/h | 18.63 mph |
| Slow Crawl | -- | 90 m | 15 m | 1.5 m | 0.9km/h | 0.56 mph |
| Fast Crawl | -- | 360 m | 60m | 6m | 3.6km/h | 2.24 mph |

Slight adjustments can be made to PCs (only) to reflect high Agility levels. A PC with Agility of 19+ can add 1% to his Run and Sprint speeds for every Dexterity point beginning at level 15. A Transhuman with Agility 19, for instance, could Sprint 6% faster than normal

or 84.8 m in 6 seconds (that's 100 m in 7.08 seconds). A Human would Sprint 63.6 m in 6 seconds or 100 m in 9.43 seconds if he had Agility 19. Reductions of 1% per Agility level below IC could also be introduced, if desired.

Flying Belts are powered to allow actual flight. The speed of such belts depends upon the Tech (technological) level of the culture producing it. Maximum speeds fall into the following ranges:

| Tech Level | 1 Hour | 6 Minutes | 1 Minute | 6 Seconds | Speed in km/hr | Speed in mph |
|---|---|---|---|---|---|---|
| Tech/7 | 36000 m | 3600 m | 600 m | 60m | 36 km/h | 22.36 mph |
| Tech/8 | 42000 m | 4200 m | 700 m | 70m | 42 km/h | 26.08 mph |
| Tech/9 | 45000 m | 4500 m | 750 m | 75 m | 45 km/h | 27.95 mph |
| Tech/10 | 48000 m | 4800 m | 800 m | 80 m | 48 km/h | 29.81 mph |
| Tech/11 | 54000 m | 5400 m | 900 m | 90m | 54 km/h | 33.53 mph |

Flight is 'effortless' and causes no fatigue or winding. The speeds are given for personnel in combat armour and for standard powered armour units/vacuum suits/space suits. High-speed scouting versions and units worn by lightly loaded personnel could be rated 10% to 20% faster.

Powered suits (armoured for combat, but non-armoured powered suits may be used in civilian roles to reduce fatigue) will cut fatigue costs ,to SF levels for trotting, running, and sprinting. No fatigue costs apply to movement speeds up to and including a trot, Running costs -3 SF from normal fatigue values. Sprinting costs -6 SF from normal fatigue values (See 2.10, PC Stamina Factor). Carrying capacity limitations are offset by powered armour until the limits of the servo-units are reached, which is equal to twice the CC of the character, at which point the load shifts from Light to Fully Encumbered. Speeds under jump belt could be adjusted down by 5% per load level carried.

Terrain effects on movement are almost always going to act to slow personnel down. They may add to fatigue costs as well, Personnel wearing powered armour will enjoy the advantages indicated above as far as fatigue costs are concerned, but movement on foot may be slowed down:

Terrain Type  Effect on Movement

Clear Woods  Movement as indicated in sections given above. Movement as indicated, except in dense thickets--which are treated as 'Jungle.' Flying speeds are cut to 1/4 for Jump Belts, and flying is possible only in open woods. Vehicle speeds are cut in half

Jungle  Movement is cut in half. Fatigue casts levied against SF are doubled for trot, run, and sprint, unless in powered armour. Fast walk and walk costs remain at normal levels. No untracked vehicles can move off roads, and flying is not possible. Tracked vehicles move at 1/2 speed, maximum , and 1/4 speed for safety.

Swamp  Movement as indicated for Jungle. Flying may be conducted as if in open or else in woods, depending on the density of trees. Amphibious vehicles may operate in swamps, others bog down.

Rough Ground  Movement is normal, but fatigue costs for trot, run, and sprint increase to 125% of usual SF loss, unless in powered armour..

Gentle Slopes  Treat as clear terrain

Steep Slopes  Treat as Rough Ground if clear or very lightly wooded; treat as Woods or Jungle if well wooded. Jungle terrain on a slope reduces movement to 1/4 with all other costs as given for Jungle.

Mountains  Cross-country infantry speeds are cut to 1/4: fatigue costs are as given for the prevailing terrain type on the slopes. Valleys are treated as other types of terrain for movement. In tactical or basic movement (as opposed to hourly cross-country movement), the Starmaster must use discretion and award bonuses or penalties on the movement rate because the infantry must find usable paths, climb steep slopes, etc., in especially rough ground. Vehicles are restricted to passes and trails on mountain slopes, but may move cross-country in valleys. Aircraft may be given normal movement, unless the Starmaster wishes to include air current effects.

Cliff  Infantry must climb cliff faces and may do so if there are ledges and hand-holds. Movement is at crawling rates, with fatigue loss as indicated for Climbing (See 2.10, Stamina Factor.)

Road, Trail  Clear terrain for infantry; vehicles receive road bonuses.

Certain PC actions can affect movement rates. Changing posture, for example, subtracts from a character's movement rate. Assuming movement is in 6-second combat turns, it will take:

(a) 1 second (1/6 turn) to drop to one's knees or turn 1800 or part there of.
(b) 2 seconds (1/3 turn) to fall prone and ready for action;
(c) 1 second (1/6 turn) to rise erect from a kneeling position;
(d) 2 seconds (1/3 turn) to assume kneeling position from a prone position;
(e) 3 seconds (1/2 turn) to rise erect from a prone position;
(f) 3 seconds (1/2 turn) to enter or leave a vehicle or go through a narrow opening like a window;
(g) 2 seconds (1/6 turn) per man to go through a normal single door (maximum of 3 men in a 6-second combat turn).

Movement rates will be modified accordingly.

## 2.15 PC INTELLIGENCE CR

An Intelligence CR may be rolled in situations in which a character is attempting to remember facts or data relevant to the solution of a problem. It may also be used to determine whether a character would in fact know the solution to certain problems—especially in the case of an NPC.

The Intelligence CR should never be allowed to replace a player's own ability to work out the problem himself. But it can enable him to obtain information from the Starmaster which his character would know, even if he (the player) has forgotten it in the heat of the role-playing situation. Starmasters should understand that the PC is not the player, that a PC is supposed to be a native of his environment and knows it in a way that no player ever could. Secrecy and refusal to give information that should be known and remembered by a PC, were the situation real instead of imaginary game play, is plain bad refereeing,

The Intelligence CR is made by rolling 1d20. A base score of 11 or less is required for a PC or NPC to 'remember' the required information. Characters with Intelligence of 1-5 will subtract -I from the basic CR chance for each point under Intelligence 6. Characters with Intelligence 12+ will add +1 to the basic CR chance for each point over Intelligence 11. This yields a range of 6 to 19 on 1d20.

The use of an Intelligence CR might be illustrated by an example drawn from fantasy role-play. Consider the well-known 'mapping' procedure used by players to plot the course and position of their characters in a 'dungeon.' The map is actually an aid to the player's memories. However, in some hyper-competitive games, everything is shrouded in trickery and secrecy; and the open competition between the players in search of treasure and the referee, who attempts to deny any reward to them, results in a total denial of 'realism.' If the players can't remember or were confused, too bad. They are

their characters, so the characters are confused too.

That's well and fine when the object of the game is to outsmart the referee, or to outsmart the players. No simulation of anything is intended. This is pure fantasy time, and nothing more, Role-playing, on the other hand, is not a competition. It is a solid game of 'let's pretend' in which everyone really attempts to enter another personality and live his life vicariously through the imagination. Characters become imaginatively 'real,' and so do their worlds. In such an activity, it has to be understood that the players are sitting around a table and cannot really experience an actual environment in the way that a character living in that environment would experience it. People in real situations will see and remember details in a more meaningful and permanent way than a player can do simply by hearing brief descriptions. In short, a player character would possibly remember the way he had come, while a player can become confused by poorly phrased 'descriptions' and confusing interruptions which have nothing to do with the experience of the PC and his ability to perceive and remember.

Rather than having players draw the maps, the Starmaster should do it. The Silly fact is that too much time is wasted by players drawing maps and attempting to extract precise descriptions from referees. That time would be better spent in role-play and exciting action. The Intelligence CR is a good alternative. The character reaches a branch in the tunnel. Does he now remember the way he came? A CR is rolled. He forgot. Roll a random dice and pick one way or the other at random. And on with the action.

An Intelligence CR will also be attempted whenever a briefing is required by a player whose character would likely know about a given situation, locality, etc. It is a simple request that the Starmaster provide information that would be available to a character with a fair memory and same basic thinking capacity. Besides, there is never enough time to give players a total briefing on everything a PC knows before the action starts. And to expect a player to remember everything is both foolish and unfair, Spot briefings can keep players clued in, and the action can be kept moving. Starmasters should therefore keep players informed with data and understandings vital to reasonable operation of PCs in a fast-moving game. Remember, Science Fiction assumes a time in which mental training and education is a lot better than today. PCs will have sharpened intellectual
powers. This quality must, to a degree, be simulated in a role play game. Intelligence CRs are the means of effecting such a simulation.

## 2.16 PC INTUITION CR

Intuition can warn a PC of some impending danger. It is also a capacity to 'leap' to the solution of a problem before sufficient facts are known to do so logically.

Both of these intuitive talents depend upon the Starmaster's fairness and discretion. It cannot be too highly stressed that intuitive abilities are not a replacement for the player's own quick wit and sensitivity to the direction that the action is taking. Intuition CRs should be used by the Starmaster to determine whether the character(s) in question should be given some vital information about a situation. That information is presented in the form of a 'hint' that all is not well, that the 'hairs are rising at the back of the PC's neck' (or the equivalent racial reflex). The player is thus forewarned that his PC is uneasy, that unexpected action is impending. The exact nature of the emergency is still unknown, but the PC is in a heightened state of readiness. The hint might also take the form of a piece of leading information or a strong suggestion that the PC consider a particular fact carefully. The player is left to draw his own conclusions, but he does have a definite clue to the solution of the problem confronting his PC. But in every instance, the player should never be told the solution outright,
Intuition CRs are rolled on 1d20 and may be done secretly when the Starmaster does not want to tip off the players that an unusual event is in the offing. It may also be done openly when the player requests it after he becomes 'suspicious' that all is not what it appears on the surface. A successful Intuition CR that something is 'up' occurs on a result of II or less on the 1d20 roll. This chance is reduced one point for every point the

Intuition score is below 14. It is increased one point for every point the Intuition score is above 14. This gives a range of 0 to 19 for an Intuition CR, with a CR level over 19 not possible under any circumstances.

The Starmaster may introduce special modifiers to reflect the ease or difficulty of intuiting a given situation, typically from +4 to -4 on theCR.

Intuition CRs should be used a bit sparingly. They are clearly subject to the discretion of the Starmaster, and his ruling on whether or not a CR is called for shall be final. When a party of characters is involved. only one CR will be attempted, based either on the character with the highest Intuition score or else on an average of the scores of everyone in the party, as seems appropriate. If the Starmaster desires a 'random' choice to keep things fair, every player rolls 1d6 for his PC. The lowest score indicates the PC who has the intuitive flash.

Finally, Intuition is somewhat untrustworthy. If a PC's Intuition is under 14 and he fails his CR, the Starmaster could give a false intuitive flash to reflect the misleading nature of such a faculty. However, he should be reasonable and fair in the manner this is done, as some players become upset when they are led astray in this fashion. It should be carefully explained to them that it is their own fault that they trust such an unreliable talent. Only truly 'intuitive' PCs can place some reliance on their 'sixth sense.'

## 2.17 PC BRAVERY CR

A Bravery CR is made whenever a PC, NPC, or group of characters is faced with a situation that demands a show of courage and decisive action in the face of a serious physical threat. Bravery CRs are morale checks taken by individuals or units of 'men' at any time that:

1. A clearly 'heroic' or suicidal act is contemplated.
2. A PC/NPC/ group of characters advances into enemy fire (veteran and elite PCs and NPCs will ignore this factor, but green, militia, and untrained civilians will invariably check morale).
3. A green, militia, or civilian group first suffers casualties.
4. A PC/NPC/ group is ambushed or is surprised by seemingly hostile and nasty-looking beings.
5. Any group suffers 25%, 50%, or 75% casualties.
6. The PC/NPC is in a vehicle penetrated by enemy fire.
7. A PC/NPC/ group is surrounded and overrun by superior numbers of the enemy.
8. A 'Barbarian' or 'Aboriginal' sees his leader struck down in battle
9. The Bravery CR is made by rolling 2d6, with the result modified by the factors listed below:

| | |
|---|---|
| Civilians | -2 |
| Green Troops | -1 |
| Militia Troops | -1 |
| Veteran Troops | +1 |
| Elite Troops | +2 |
| In Soft Cover or Powered Armour | +1 |
| In Hard Cover | +2 |
| In Contact with Higher Command | +1 |
| Leader is a casualty | -1 |
| Group has suffered 25% casualties/dangerous act | -1 |
| Group has suffered 50% casualties/very dangerous act | -3 |
| Group has suffered 75% casualties/suicidal act | -4 |
| PC NPC/group in damaged vehicle (no cover bonus) | -1 |
| PC/NPC/ group is surrounded, outnumbered, and overrun | -2 |
| PC/NPC/ group has artillery support | +1 |
| PC/N PC/ group facing armoured attack | -2 |
| PC/NPC/ group 'surprised' or 'ambushed' | -2 |
| Bravery II - 13 | +1 |
| Bravery 14 - 15 | +2 |
| Braveryl6-17 . | +3 |
| Bravery 18 | +4 |
| Bravery 19 | +5 |

If a Leader has Bravery 18 his Bravery CR will carry the group until 50% causalities have been sustained. If his Bravery is 19, his Bravery CR will carry the group until 75% causalities have been sustained.

Two types of Bravery CR will be contemplated. The first is a 'combat' CR used for battle situations. The second is a 'personal heroism' CR used when a character faces some task or trial involving great personal risk, but not actual combat.

| 2d6 Roll | Effect of Combat Bravery CR |
| --- | --- |
| Less than 2 | PC/NPC/ group of characters panics and routs. Flight ensues or, if flight is impossible, surrender follows. All equipment, heavy weapons, and penetrated vehicles will be abandoned, but fleeing characters may retain weapons and light equipment in hand. Note: In some instances, surrender is an impossibility, as in a conflict between Bugs and humans, so the characters will attempt to shoot their way out but will clearly be running away. |
| 2-3 | PC/NPC/ group of characters will retire to a less threatened position. Disabled vehicles will be evacuated and possibly abandoned entirely. Characters will retain weapons and essential equipment. Fire will be returned as the individual/group withdraws. |
| 4-6 | PC/NPC/ group of characters refuse to leave cover. If exposed, characters take cover immediately or else go prone. Vehicles refuse to advance in the face of enemy fire. A PC/NPC/ group of characters will fire and can retreat in order if desired. Personnel will remain in damaged vehicle and return fire, if possible. |
| 7+ | PC/NPC/ group of characters maintain morale and functions with discipline and courage. Characters will re-enter damaged vehicles or perform ordered/desired tasks, however dangerous. Group which routed has reformed. |

| 2d6 Roll | Effect of Personal Heroism CR |
| --- | --- |
| Less than 4 | PC/NPC/ group of characters refuses to perform the heroic act. |
| 4-5 | PC/NPC/ group of characters will perform the heroic act, but with great care. Tension is high, and |

if anything goes wrong, a second morale check -3 is made.

| | |
| --- | --- |
| 6-7 | PC/NPC/ group of characters will perform the heroic act, but care will be taken to preserve personal safety and precautions will be taken (which may consume time) |
| 8+ | PC/NPC/ group of characters act with decisiveness and will take whatever risks are required, given the urgency of the situation. When time is of the essence, personal safety will be sacrificed to get the task done, so that the life of the threatened person will not be placed in further jeopardy by delay. |

## 2.18 PC 'SURPRISE' CR

Whenever a character is caught in a 'surprise' situation and must react suddenly, a basic Agility CR is required. Failure in such instances means that the character has momentarily 'frozen' and does not react instantaneously to save himself ( or others) from the emergency. This might prove fatal in extreme circumstances. The character might have been climbing a cliff face, for example, and a handhold suddenly crumbles under his fingers. He has split-seconds to find and grab hold of another handhold or he will fall. The Agility CR. provides the basic check to see if he would be successful or not. Or again, he might suddenly come under fire from ambush and would have to dive for cover or whirl and snap-fire at his assailant. A complete list of such situations would occupy pages. A basic 'surprise' CR is therefore applied whenever the Starmaster rules it is necessary.

## 2.19 PC HAND—OFF & PASS CR

If one character wishes to give an item to another, the easiest and safest way to do so is with both of the characters stationary or else walking slowly side by side and devoting a good deal of their attention to a direct, hand-to-hand transfer. Unless one of the characters is badly uncoordinated (Dexterity 01 - 05), no fumbles will occur in such a situation.

Circumstances sometimes dictate that a character receive such a hand-off or pass in haste. For example, it might be necessary to hand a character an item as he passes at a full run; or while he is involved in a melee. It could easily happen that the person passing the item is nowhere near the character, and the item will have to be thrown. In such cases, a Hand-Off/Pass CR is clearly indicated. The CR is rolled on 1d20, with the following modifiers applying.

| Action: Hand-Offs | Modifier to hand-off CR |
| --- | --- |
| Hand-off occurs when there is movement that is significant, even if the PCs are moving at the same speed side-by-side | -2 |
| Hand-off occurs when there is a difference in velocity | -1 per 5 m difference in speed |
| Hand-off occurs behind the back of one of the PCs | -4 |
| Hand-off occurs when recipient is engaged in melee | -4 |
| Hand-off occurs when donor is engaged in melee | -3 |
| One PC is mounted (animal, motorcycle, jump-belt, etc.) | -2 |
| Both PCs are mounted | -1 |
| Item is unusually bulky, awkward, slippery, etc. | -1 to -5, as appropriate |
| | |
| Action: Passes | Modifier to Pass CR |
| Pass occurs behind receiver's shoulder/back | -4 |
| Passer throws to his own rear | -5 |
| Receiver is moving | -1 per 10m of speed to -3 |
| Passer is moving | -1 per 10 m of speed to -4 |
| Passer/Receiver is involved in melee situation | -5 per PC so occupied |
| Receiver is using one hand to catch | -3 |
| Passer/Receiver is mounted | -2 per PC mounted |
| Item is unusually bulky, awkward, slippery, etc. | -1 to -5, as appropriate |

All CRs will be modified by +1 If the PCs have an average Dexterity of 16 - 18, and by +2 If the average Dexterity is 19 - 20.

When finding the CR level, average the Dexterity scores of the two characters, rounding all fractions up. Then add in the relevant modifiers. One of the players makes a 1d20 roll. If a result equal to or lower than the CR turns up, the action is successful.

If the CR is unsuccessful, a number of possibilities may arise:

| Amount by Which the | hand-off | Pass Attempt |
| --- | --- | --- |

| Dice Result Exceeded the Modified CR Level | Attempted | |
|---|---|---|
| +1 or +2 | Bobbled | Bobbled |
| +3 to +5 | Bobbled | Miss Receiver |
| +6 to +8 | Fumbled | Wild Throw |
| +9 or more | Dropped | Wild Throw |

Bobbled hand-offs or passes result in the receiver's juggling the item. He does not have full control and may drop it. Make a second CR roll at the receiver's Dexterity level minus 4.

Missed Receiver passes are off target but might yet be caught. The receiver must make a headlong lunge towards the thrown item as it passes by him or overhead if he desires to catch it. (I-lla can also let it land where it will, especially if he is in close combat and cannot
ignore his adversary.) Roll 1d6 to find out where the item is, in relation to the receiver:

| Dice Result | Position of the Thrown Item |
|---|---|
| 1 | 3 m to the receiver's left. |
| 2-3 | Overhead and will land 3 m farther from the passer than intended, along a line from the passer through the current position of the receiver. |
| 4-5 | Short. and will land 3 m closer to the passer than intended, along a line from the passer through the current position of the receiver. |
| 6 | 3 m to the receiver's right. |

The receiver will be moved to the left or right if he must lunge to the
side to attempt the catch, and figures marking the action will be adjusted accordingly. If the move involves his making more than a 900 turn to face the thrown object, the second Pass CR is modified downward -5 to avoid slipping if the receiver is on wet grass, rocks, sand, or a slope. If he misses, he also falls down Other modifiers for passes also apply (catching with one hand, etc.).

It should be noted that mounted characters cannot attempt such spectacular catches. If the throw is not dead on target, an outright miss Occurs.

If a character misses the second CR and falls down, he has a third chance of still catching the item (diving catch). This CR is based upon his Dexterity minus a modifier of -9. If he misses again, the thrown item is definitely on the ground and out of reach.

Fumbles occur when the character's have fouled up a hand-off. They are juggling the item between them, so roll a CR based on their average Dexterity minus a modifier of -8. If they manage to hold onto the item, roll 1d6 to see who has possession, with even results indicating one of the PCs and odd results the other PC. If the original character still has possession, he may attempt a second hand-off, but a further modifier of -4 is applied for 'nervousness, in addition to any other modifiers. If the second hand-off CR fails, the item is dropped, with no chance of recovering it at the last instant.

Wild Throws are similar to Missed Receiver situations, except that the distance is 6 m, and a further modifier of -4 is applied to all CRs.

Dropped means just what it says: the item is on the ground or floor, somewhere underfoot.

A hand-off or a pass can become a desperate (and sometimes humorous) mini-scenario in the middle of an encounter. The 'fun' arising from the tension generated in these situations is well worth the effort of portraying them.

For example, CAP Private Jones' weapon has jammed. He kicks his opponent in the stomach and staggers back, calling on Fleet Sergeant Kellerman all the while. Kellerman draws his forceblade and tosses it to Jones, the field off of course. Jones has Dexterity 16, and Kellerman 19, for an average Dexterity of 17.5 18 (rounding up). Jones is now running from his Humanoid opponent, who is pursuing with a rifle and fixed bayonet. Kellerman is running toward him. Jones' speed is 60 m; Kellerman's is 30 m. They are roughly facing each other.

The CR modifiers are: -3 for 60 m movement; -3 for 30 m movement; -5 for receiver's melee involvement (he is fleeing and has his mind on his enemy); -3 for the item (Jones must catch the force-blade by the handle); and +1 for superior Dexterity of 18. The CR is therefore 18 minus 13 = 5 or less, rolled on 1d20.

The Pass CR turns up a roll of 19! A difference of 19 - 5 = +14, so a Wild Throw has resulted. Jones elects to lunge for the forceblade. Rolling 1d6, a 6 results, so it lands 6 m closer to Kellerman than intended. Jones' new CR is 16 (his Dexterity) -3 (movement 60 m) .-3 (weapon) -4 (Wild Throw) -5 (he is on slippery grass) =l. Jones rolls 7 on 1d20, for +6 over the CR required to catch the blade. He falls to the ground, but is still diving in a final attempt to gain control, of the weapons, tantalisingly near his reach. His final CR is 16 (his Dexterity) -3 (movement) -3 (weapon) -4 (Wild Throw) = 6. He rolls a 7, and Bobbles the weapon, the hilt now in his hands. The last chance: the CR is 16 (Dexterity), -4 (Bobble) =12, and Jones comes up with a 9 on his roll. He has the weapon now, rolls to his back, and switches on the blade.

Fortunately for Jones, he attempted to catch with both hands, saving a further penalty of -3. Equally fortunate, just as his pursuer arrived to begin his bayonet lunge, Sergeant Kellerman also arrived, having fitted a fresh magazine into his blast rifle while on the run to help his subordinate. The burst caught the Humanoid full in the chest, and the enemy soldier fell on top of Jones, mortally wounded, his bayonet thrust going wild. For his part, Jones managed to point the forceblade in the right direction and ran the Humanoid through as he collapsed on the trooper, finishing it off quite neatly, considering his position.

## 2.20 PC BALANCE CR

It is a bewildering but true fact that a person who can run along a meter-wide sidewalk at ground level will often be tempted to creep along the centre of that sidewalk if it were suspended 30 or 40 meters In the air. This feeling of vertigo is due to many factors, but one of the most applicable elements is Agility. Of course, it does not require a very high Dexterity to walk on a wide sidewalk, but the person who is dextrous knows it in the very fibres of his being. He is sublimely confident in his co-ordination and can overcome most of the effects of vertigo. Clumsy people, on the other hand, are somewhat dubious about their situation because they have experienced embarrassing falls in perfectly normal circumstances and thus feel doubly threatened in unusual ones.

Whenever a character has need of his Balancing capability, make a basic Agility CR. If the character fails, a second CR is made. A success in the second instance means that he is going to move slowly and very carefully. A failure can signify a fall or else a 'freeze' a refusal to move. Initial success means, obviously, that the character is confident and in control of himself, so he can move as nimbly and speedily as he desires.

## 2.21 PC INITIATIVE

The Initiative CR is used to determine which character or NPC will react first in a 'surprise' situation. A surprise situation is one in which two characters meet unexpectedly and require quick reaction.

The Initiative CR is equal to the dice roll 1d20 plus the character's Dexterity. The following modifiers will be applied to adjust for the situation:

| Initiative Situation | Initiative CR Modifier |
|---|---|
| Character/NPC is surprised | -9 |
| Character is lightly wounded (less than25% DF) | -2 |
| Character is seriously wounded (less than 60% DF) | -4 |
| Character is grievously wounded (60% DF or more) | -6 |
| Character is running | -4 |
| Character is walking | -1 |
| Character is crawling | -4 |
| Character is aiming at target already | +5 |
| Character is Fatigued | -10 |
| Character is carrying Regular Load | -1 |
| Character is carrying Heavy or Full Load | -3 |
| Character is Partly Encumbered or Fully Encumbered | -10 |
| Per level of Combat Skill | +3 |

# 3.0 PC CAREER EXPERIENCE

In Space Opera , the players interact with each other and with the Universe (managed by the Starmaster) through their player characters. To this point, each character has acquired a number of personal traits and capabilities which define the scope of his actions and his reactions only in general terms. All PCs are, as yet, untrained and inexperienced. They lack a background which establishes their expertise in specific areas, and which assists the player to formulate a definite personality for his alter ego which will bring the PC 'alive' in the game.

Without experience and expertise, the PC is totally unsuited to the demanding life of a Space Opera adventurer. To acquire some experience and skill, the PC will enlist in a government or civilian service when he reaches the age of 18.

# 3.1 PC INITIAL ENLISTMENT

A PC has a wide choice of services open to him when he begins his career. The following table determines the length of service a PC will be able to perform before he has to actively seek to remain in a particular service:

| 1d20 Roll | Two-Year Terms Served by PC | 1d20 Roll | Two Year Terms Served by PC | 1d20 Roll | Two-Year Terms Served by PC |
|---|---|---|---|---|---|
| 1 | 2 tours: 4 years* | 6-7 | 6 tours: 12 years | 16 | 11 tours: 22 years |
| 2 | 2tours:4years | 8-9 | 7 tours: 14 years | 17 | 12 tours:24 years |
| 3 | 3 tours: 6 years | 10-ll | 8 tours: 16 years | 18 | 13 tours:26 years |
| 4 | 4 tours: 8 years | 12-13 | 9 tours: 18 years | 19 | 14 tours:28 years |
| 5 | 5 tours: 10 years | 14-15 | 10 tours: 20 years | 20 | 15 tours:30 years |

* PC resigns at end of tour of duty.

The PC enters the game in the final year of his last tour of duty. To re-enlist and remain in a particular service, he must roll 3d6 and attain the score indicated for enlistment. In such instances, the PC will be using the Re-enlistment Table during role-play.

Re-enlistment Table

| Enlistment Classification | 3d6 Score Required | +1 DM Bonus For Each of the Following Personal Characteristics |
|---|---|---|
| StarForce Astronaut | 13+ | Intel/13+, Dex/14+, Agil/14+, GTA/l3+, Ldr/15+, Brav/15+ |
| StarForce Scientists | 13+ | Intel/14+, Intuit/14+. Dex/13+, GTA/14+, Ldr/14+, Brav/15+ |
| StarForce Engineer | 13+ | Intel/14+, Dex/13+, GTA/14+, ElecA/14+, Ldr/14+, Brav/15+ |
| StarForce Physician | 13+ | Intel/14+, Intuit/14+, Dex/14+, GTA/13+, Brav/13+ |
| StarForce Tech | 13+ | Intel/12+, Dex/13+, GTA/13+, MechA/14+, E lecA/14+, Brav/14+ |
| Marine Armsman | 13+ | Str/13+, Con/13+, Dex/13+, Agil/13+, Ldr/13+, Brav/15+ |
| Marine Tech | 13+ | As above, plus one of GTA/14+, MechA/14+, ElecA/14+ |
| Commando Armsman | 14+ | Str/14+, Con/14+, Dex/14+, Agil/14+, Ldr/13+, Brav/16+ |
| Commando Tech | 14+ | As above, plus one of GTA/14+, MechA/14+, ElecA/14+ |
| BOSS Scientist | 13+ | Intel/14+, Intuit/15+, Dex/13+, GTA/14+, Ldr/15+, Brav/13+ |
| BOSS Armsman | 12+ | Str/12+, Con/12+, Dex/13+, Agil/13+, Ldr/14+, Brav/14+ |
| BOSS Tech | 12+ | Intel/12+, Intuit/l4+, Dex/13+, ElecA/15+, Brav/12+ |
| BRINT Astronaut | 13+ | As StarForce Astronaut, plus Psionics/14+ |
| BRINT Scientist | 13+ | As StarForce Scientist, plus Psionics/14+ |
| BRINT Armsman | 13+ | As BOSS Armsman, plus Psionics/14+ |
| BRINT Tech | 13+ | As BOSS Tech, plus Psionics/14+ |
| IPA Astronaut | 13+ | As StarForce Astronaut, plus Intuit/14+ |
| IPA Scientist | 13+ | As StarForce Scientist, but Intuit/15+ |
| IPA Armsman | 13+ | As Marine Armsman, plus Intuit/14+ |
| IPA Tech | 13+ | As StarForce Tech, plus Intuit/14+ |
| Survey Astronaut | 14+ | As StarForce Astronaut |
| Survey Scientist | 14+ | As StarForce Scientists |
| Survey Engineer | 14+ | As StarForce Engineer |
| Survey Physician | 14+ | As StarForce Physician |
| Survey Tech | 14+ | As StarForce Tech |
| Survey Armsman | 14+ | As Commando Armsman |
| Scout Armsman | 14+ | As Commando Armsman |
| Scout Tech | 14+ | As Commando Tech |
| Explorer Astronaut | 13+ | As StarForce Astronaut |
| Explorer Scientist | 12+ | As StarForce Scientist |
| Explorer Engineer | 12+ | As StarForce Engineer |
| Explorer Physician | 12+ | As StarForce Physician |
| Explorer Tech | 12+ | As StarForce Tech |
| Explorer Armsman | 12+ | As Marine Armsman |
| Contact Scientist | 15+ | Intel/l4+, Intuit/l5+, Dex/13+, GTA/14+, Ldr/16+. Brav/l6+ Psionics/14+, Empathy/14+ |
| Merchant Astronaut | 10+ | As StarForce Astronaut |
| Merchant Scientist | 10+ | As StarForce Scientist |
| Merchant Engineer | 10+ | As StarForce Engineer |
| Merchant Physician | 10+ | As StarForce Physician |

| | | |
|---|---|---|
| Merchant Tech | 10+ | As StarForce Tech |
| Merchant Armsman | 10+ | As Marine Armsman |
| Merchant Multi | 10+ | As any of above, plus Psionics/14+, Empathy/14+ |
| PDF Armsman | 11+ | As Marine Armsman |
| PDF Tech | 11+ | As Marine Tech |
| Police Scientist | 11+ | As BOSS Scientist |
| Police Tech | 11+ | As BOSS Tech |
| Police Armsman | 11+ | As BOSS Armsman |
| Mercenary Astronaut | 16+ | As StarForce Astronaut, plus +1 DM per 6 years experience |
| Mercenary Scientist | 16+ | As StarForce Scientist, plus +1 DM per 6 years experience |
| Mercenary Engineer | 16+ | As StarForce Engineer, plus +1 DM per 6 years experience |
| Mercenary Physician | 12+ | As StarForce Physician |
| Mercenary Tech | 16+ | As Commando Tech, plus +1 DM per 6 years experience |
| Mercenary Armsman | 16+ | As Commando Armsman, plus +1 DM per 6 years experience |

Initial enlistment in any of the services is automatic when a PC enters the game. However, his initial enlistment still requires a 3d6 roll. If the PC fails to obtain a modified dice result sufficient to qualify him for service, subtract the minimum enlistment score he needed from the base 3d6 roll (unmodified by PC DMs). This negative value represents a penalty DM applied in -2 DM blocks against his chances at promotion in his early tours of service. For example, if a PC diced StarForce Astronaut and failed to obtain a requisite score of 13+ with his dice roll and PC modifiers, a promotion penalty will occur. Suppose the base 3d6 roll was 6. He would have a 6 - 13 -7 DM against promotion, with a -2 DM in his first three tours, and a -l DM in his fourth tour of service.

Once a PC has completed his full term of initial service, he must actively seek to remain in the service or he will be discharged. This requires making a re-enlistment roll every two years.

When a PC is discharged from government military service (Star-Force, Space Marines, Commandos, or Planetary Defence Forces), he will receive various severance benefits. Veterans of 20+ years of service will also receive a pension. Roll 3d6, with the re-enlistment score required indicating that the PC is retained on 'active reserve.' A +1 DM will be applied to the Reserve Status roll for each 6 years of service, or part thereof. If a PC is retained as a Reservist, he has a chance of being recalled to duty at the end of any 2-year period subsequent to his discharge from the regular forces if he makes an unmodified 3d6 roll and qualifies for re-enlistment. In such a case, roll 1d6 and apply the result to the term of service table to see how many tours of duty he will make. Such tours will be conducted as an operating player-character, and the PC has the option at the end of every tour or resigning or continuing in the service. He may also apply for separation from the service during any tour if he makes a 10+ roll on 1d20. Separation in such circumstances will take 30 days to process. Application can be made only at a StarBase if the PC is in the StarForce, Marines, or Commandos. PCs discharged from Military service and PC Reservists who resign from a second term of duty are permanently separated from the service and will not rejoin.

When a PC is discharged from civilian government service (IPA, Survey, Scouts, Contact Service, Planetary Police), either because the PC resigns at the end of a tour or is refused a re-enlistment, his association with that service is permanently severed. PCs will receive severance benefits and, if veterans of 20+ years of service, a pension as well. It should be noted, however, that a Police or IPA veteran could apply for work in the service of another Planetary Police organisation. In such instances, the PC attempts re-enlistment and has a +1 DM for each 6 years of service in a previous police organisation. His rank will be reduced by 3 grades, however, from his retired rank in his initial service,

When a PC is discharged from civilian service (Explorer, Merchant), he is assumed to have been retired, fired, or voluntarily resigned. Roll 2d6. A 2 or 12 result means that he was fired and has a -7 DM when attempting to find a similar position. This penalty DM is reduced 1 DM for each grade in rank the PC will settle for below his rank when he was fired. A 3 - 8 result means that he was retired (laid off) by his employer. His record is not prejudiced, and if the PC rolls a 1 on 1d6, he obtains a glowing letter of recommendation that adds +2 DM to his chance of obtaining a similar position. He has +1DM when attempting to 're-enlist' (find employment) per grade in rank below his rank when laid off, A 9 - 11 result means that the PC resigned from the service of his last employer. His record is not

prejudiced if he rolls 1- 5 on 1d6, but a 6 result means that he left his employer without proper notice and he has a -4 DM when attempting to find a similar position, This penalty DM is reduced 1 DM for each grade in rank the PC will settle for below his rank when he resigned suddenly. The penalty DMs cease to apply once the PC becomes gainfully employed again, but may be re-invoked if similar circumstances occur again. The letter of recommendation DM applies only once, and ceases to be of value if a re-enlistment is not obtained the first time it is used.

When a PC is discharged from a Mercenary position, he is assumed to have been fired, retired at the end of a contract period, or voluntarily resigned. Roll 2d6. A 2 result means that the PC was court-martialled by his peers and broken to the ranks for a major breach of the Mercenary Code. The PC has lost all rank and must begin his career over as a Private. A 12 result means that the PC's employer was dissatisfied and fired him without back pay or severance benefits. A 3- 8 result means that the PC's Mercenary Contract has been returned to him by his employer and he is now looking for work. He retains the last Mercenary rank won and has full severance and pay benefits coming to him from his employer. A IC - Il result means that the PC sought to resign from the service of his last employer and was let go, but with severance benefits at 10% x 1d6 of what they would have been.

## 3.2 PC EMPLOYMENT

When the PCs actually enter the game as functioning characters under the direction of their players, they will have to seek some form of employment to support themselves and to involve them in adventures. The procedures to be followed are described in Adventure Scenarios (See 10.0 for details).

## 3.3 THE STAR FORCES

The StarForces are the elite units of the StarFleet, Space Marines, and Special Services Commandos who guard the spacelanes from enemy attack, and who carry death and destruction to the enemy's home planets.

### STAR FLEET

The StarFleet is the Space Navy. Except for Armsmen, who join the Marines or Commandos, all PC types may enlist. However, only Astronaut PCs will normally qualify for actual command of a Starship, as only they know how to navigate a vessel in interstellar space, Non-Astronauts may qualify for command rank if they are willing to expend a large number of skill points and possibly learning time once the game begins in order to acquire astronautic skills.

StarFleet Astronauts require Strength/10+, Constitution/10+, Dexterity/12+, Agility/11+, Intelligence/12+, Leadership/12+, and Bravery/ 13+. PCs failing to meet these standards will not be accepted for service.

StarFleet Scientists require Strength/l0+, Constitution/10+, Dexterity/l0+, Agility/10+, Intelligence/l3+, Intuition/12+, and GTA/12+. PCs failing to meet these standards will not be accepted for service. Scientists include Science Officers, Engineers, and Physicians.

StarFleet Techs require Strength/l0+, Constitution/l0+, Dexterity/11+, Agility/10+, intelligence/11+, and two of GTA, MechA, and ElecA at 12+. PCs failing to meet these standards will not be accepted for service.

Psionic Talents will be accepted for service regardless of their other qualifications if they have Psionics/16+. They will be enrolled as Science Officers and will advance automatically in rank to rank grade/5, after which they will have to obtain promotions like other personnel.

## SPACE MARINES

The Space Marine Corps is the elite assault force of the StarFleet. Every Starship carries a compliment of Marines for landing and boarding actions, as well as for major planetary raids and invasions. All Armsmen are trained in vacuum combat and Power Armour combat as CAP Troopers. Techs tend to be Armourers, ComTechs, and MechTechs specialising in fighting vehicles. Only Armsmen and Techs may enlist; all other services are supplied by StarFleet support personnel.

Marine Armsmen require Strength/12+, Constitution/12+, Dexterity/12+, Agility/11+, intelligence/10+, Leadership/10+, and Bravery/13+. PCs failing to meet these standards will not be accepted for service.

Marine Techs require Armsmen pre-requisites plus one of GTA, MechA, or ElecA at 12+. Marine Techs tend to be heavy weapon and vehicle specialists as well as 'repairmen' and specialist communicators or armourers.

## SPECIAL SERVICES COMMANDOS

The StarForce Commandos are an elite force within the Space Marines organisation which trains for deep penetration raids and prolonged operations behind enemy lines. Commandos are also dropped onto enemy-occupied planets to assist BRINT agents to mobilise resistance groups.

Commando Armsmen require Strength/13+, Constitution/14+, Dexterity/13+, Agility/13+, Intelligence/10+, Leadership/10+, and Bravery/ 15+, PCs failing to meet these standards will not be accepted for service.

Commando Techs require Armsmen pre-requisites plus two of GTA, MechA, ElecA at 12+. Commando Techs tend to
.

specialise in communications, armaments (armourers), and fighting vehicles.

## STAR FORCE RANKS, PROMOTIONS, AND PAY

StarForce personnel divide into a number of branches. In general, only Astronauts will be able to succeed to Starship command rank (C) as only they can actually navigate Starships. The other divisions include Science Officers (S), Engineering Officers (E), Technicians (T), Medical Officers (M), Space Marines (SM), and Commandos (SC). Command, Science, and Engineering ranks are placed side by side, as Science and Engineering Officers can acquire astronauts skills and might therefore succeed to command. The StarForce Command column to the right of these three branches indicates the size of vessel that would normally be commanded by an officer of a given command rank. Similarly, Space Marine and Commando ranks are placed side by side, with the Assault Command column indicating the size of force that would normally be commanded by an Officer of a given rank. Starship officers can also command ground troops, but they would likely be less effective because their training is suited to space warfare, not planetary combat.

All StarForce promotions are based on obtaining 9+ on the roll of 2d6, made every two years at the end of a tour of duty. Ranks below grade/3 require a minimum of Leadership/10 to qualify. Ranks above grade/3 require +1 to the minimum Leadership/10 Pre-requisite for each grade level above rank grade/3. A rank grade/13 Fleet Admiral or Sky Marshal requires Leadership/19 to qualify for the position. PCs below rank grade pre-requisites lose -I DM per Leadership point under the requirement. If a PC is 'passed over' for promotion three times, he is frozen in grade for the duration of his term of duty. He has risen as far as he can in the service.

If a PC receives a promotion in his final tour of duty before possible release from the service, he may serve another two-year term without having to roll for re-enlistment.

Field promotions may also be awarded for particularly hazardous duty carried out with valour. Such promotions will occur only during role play and are received at the StarMaster's discretion upon the PC's rolling 8+ on 2d6 at the conclusion of a successful mission. The higher the PC's rank, the less chance he should have at such promotions, as courage beyond the normal call of duty is expected of officers of high rank

| Rank Grade | Executive Branch (C) Astronauts | Science Branch (S) Scientists | Engineering Branch (E) Sci. Engineers | StarForce Command |
|---|---|---|---|---|
| 0 | -- | -- | -- | -- |
| 2 | -- | -- | -- | -- |
| 3 | Cadet/2 | Cadet/2 (S) | Cadet/2 (E) | -- |
| 4 | Cadet/I | Cadet/I (S) | Cadet/I (E) | small craft |
| 5 | Ensign | Ensign (S) | Ensign (E) | StarFighter, Small. craft |
| 6 | Lieutenant | Lieutenant (S) | Lieutenant (E) | Corvette |
| 7 | Lt. Commander | Science Off./4 | Eng. Officer/4 | Destroyer |
| 8 | Commander | Science Off./3 | Eng. Officer/3 | Light Cruiser |
| 9 | Cruiser Captain | Science Of f./2 | Eng. Off icer/2 | Cruiser |
| 10 | Captain | Science Officer | Eng. Officer | Heavy Unit |
| 11 | Commodore | Starship Scientist | Starship Engineer | Squadron, StarBase |
| 12 | Admiral | Admiral (S) | Admiral (E) | BattleFleet |
| 13 | Fleet Admiral | -- | -- | StarFleet |
| 14 | Admiral-General* | -- | -- | StarFleet Command |

*There are only 7 Admirals-General in the StarFleet. The chance of any opening being available is 7%. Promotion is contingent upon a PC's reaching rank grade/13.

A (--) signifies that no rank exists at that grade. PCs entering the Executive Branch, Science Branch, or Engineering branch begin at Cadet rank/2 grade/3. Where a (--) appears at the bottom of a column, the PC is unable to advance farther unless he acquires astrogation skills and spacecraft pilot skills and transfers to the Executive Branch.

| Rank Grade | Medical Branch (M) Physicians | Technical Branch (T) Technicians | Space Marine Corps (SM) | StarForce Commandos (SC)*** | Assault Force |
|---|---|---|---|---|---|
| 0 | MediTech/4* | Starship Tech/3 | StarTrooper (SM) | StarTrooper (SC) | — |
| 1 | MediTech/3* | Starship Tech/2 | CAP Trooper (SM) | CAP Trooper (SC) | — |
| 2 | MediTech/2* | Starship Tech/I | Corporal (SM) | Section Leader | section |
| 3 | MediTech/1* | Petty Officer | Sergeant (SM) | Sr. Sec. Leader | section |
| 4 | Cadet (M)** | Chief P.O. | Fleet Sgt. (SM) | Group Sergeant | platoon |
| 5 | Ensign (M) | Warrant Officer | Cadet (SM) | Group Leader | platoon |
| 6 | Lieutenant (M) | Lieutenant (T) | Lieutenant (SM) | Troop Leader | company |
| 7 | Med. Off icer/5 | Tech Off icer/4 | Captain (SM) | Force Leader | company |
| 8 | Med. Officer/4 | Tech Officer/3 | Major (SM) | Wing Leader | battalion |
| 9 | Med. Off icer/3 | Tech Off icer/2 | Colonel (SM) | Commandant | regiment |
| 10 | Med. Officer/2 | Tech Officer/I | Brigadier (SM) | Strike Commander | brigade |
| 11 | Med. Officer/I | — | General | — | division |
| 12 | Admiral CM) | — | Fleet General | — | Corps |
| 13 | — | — | Sky Marshal | — | Marine Corps |

*Techs begin at rank/grade/0; promotion to Cadet (M) contingent on Physician training.
**Scientist/Physicians begin at rank grade/4.
***Transfer to the Space Marines is possible at any time; promotion in Space Marines has a +1 DM on the first attempt after transfer.

Salaries in the StarForce are dependent upon the degree of command responsibility assumed and upon the degree of risk to personnel. The following table presents standard salaries:

| Rank Grade | Executive Branch | | StarForce S, E, M, T | | Space Marines & Commandos | | |
|---|---|---|---|---|---|---|---|
| | Monthly | Yearly | Monthly | Yearly | Monthly | Yearly | Per Drop |
| 0 | — | — | CR 500 | CR 6000 | CR 500 | CR 6000 | CR500 |
| 1 | — | — | CR 600 | CR 7200 | CR 600 | CR 7200 | CR500 |
| 2 | — | — | CR700 | CR 8400 | CR 700 | CR 8400 | CR 600 |
| 3 | CR 500 | CR 6000 | CR800 | CR 9600 | CR 800 | CR 9600 | CR500 |
| 4 | CR600 | CR 7200 | CR900 | CR 10800 | CR 900 | CR 10800 | CR500 |
| 5 | CR 1000 | CR 12000 | CR 1000 | CR 12000 | CR 1000 | CR 12000 | CR500 |
| 6 | CR 1250 | CR 15000 | CR 1100 | CR 13200 | CR 1250 | CR 15000 | CR 750 |
| 7 | CR 1500 | CR 18000 | CR 1250 | CR 15000 | CR 1500 | CR 18000 | CR 750 |
| 8 | CR 1750 | CR 12000 | CR 1500 | CR 18000 | CR 1750 | CR 21000 | CR 750 |
| 9 | CR 2000 | CR 24000 | CR 1750 | CR 21000 | CR 2000 | CR 24000 | CR 750 |
| 10 | CR 2500 | CR 30000 | CR 2000 | CR 24000 | CR 2500 | CR 30000 | CR 1000 |
| 11 | CR 3500 | CR 42000 | CR 2750 | CR 33000 | CR 3000 | CR 36000 | CR 1000 |
| 12 | CR 5000 | CR 60000 | CR 3500 | CR 42000 | CR 4000 | CR 48000 | CR 1000 |
| 13 | CR 7500 | CR 90000 | — | — | CR 5000 | CR 60000 | CR 1000 |
| 14 | CR 10000 | CR 120000 | — | — | — | — | — |

Command of a vessel brings the following bonuses:

| | | | | |
|---|---|---|---|---|
| Small Craft, per month: | CR 100 | Fleet Cruiser, per month: | CR650 |
| StarFighter, per month: | CR 150 | BattleCruiser, per month: | CR800 |
| Corvette, per month: | CR 250 | Battle Starship, per month: | CR900 |
| Lt. Cruiser, per month: | CR 375 | Battle Star, per month: | CR 1250 |
| Cruiser, per month: | CR500 | Squadron | CR 1500 |

Starship command will not play a part until the character enters the role-play. Fleet commands are included in the basic salary schedule for Fleet Admirals and Admirals-General.

To obtain a Starship Command, a PC must roll equal to or better than the number indicated on 2d6. He may make a bid for command promotion if he is an Executive Officer with the years of service and the rank required. One attempt at command may be made each year.

| Type of Vessel | Rank Required | Service Required | 1d6 to Command | Pre-requisite Command |
|---|---|---|---|---|
| Small Craft | Ensign | 4+ years | 5+ | — |
| Star Fighter | Lieutenant | 6+ years | 6+ | — |
| Corvette | Lt. Commander | 8+ years | 7+ | — |
| Light Cruiser | Commander | 10+ years | 8+ | StarFighter/Corvette |
| Cruiser | Cruiser Captain | 12+ years | 8+ | Corvette/Lt. Cruiser |
| Fleet Cruiser | Captain | 14+ years | 8+ | Lt. Cruiser/Cruiser |
| Battle Starship | Captain | 16+ years | 9+ | Lt. Cruiser/Cruiser |
| Battle Star | Captain | 18+ years | 10+ | Battle Starship/BattleCruisers. |
| Squadron/Base | Commodore | 16+ years | automatic | equivalent vessels |

A PC will enjoy a +1 DM on each level of craft lower than his rank requirement, but cannot go farther than two ranks below his current status. For example, a Captain could attempt to gain command of a Lt. Cruiser, with +2 DM. If an officer fails to obtain a command, he is a serving officer aboard a vessel up to Commander rank. Officers of Cruiser Captain and up (rank grade/9+) are assumed to be detached on shore duty for a year, and enjoy a +1 DM in their next attempt to obtain a command because of important contacts made in Star-Fleet Command.

## 3.4 BUREAU OF STATE SECURITY: GOVERNMENT CIVILIAN SERVICE

BOSS is a paramilitary organisation which combines the duties of such services as MI5, the FBI, the KGB, and similar security institu-

tions. All applicants must have minimum intelligence/11+, Intuition/ 12+, and Strength/10+ and Constitution/10+. The Bureau of State Security is a powerful arm of the government, for it is charged with conducting counter-espionage and anti-sabotage investigations, suppressing revolutionary and terrorist organisations, and maintaining the security of the state in general. Thus BOSS agents may be found in any government or civilian service, or in private business and industry. The Bureau is under the direct control of the Head of State. In democratic regimes, BOSS has its activities modified by due process and by the requirement that it respect citizens' rights, although it can be given sweeping powers in times of emergency. In totalitarian regimes it is a veritable Thought Police unchecked by regular laws and government channels of authority.

All BOSS promotions are based on obtaining 9+ on the roll of 2d6, made every two years at the end of a tour of duty. Ranks below grade/ 3 require a maximum Empathy of 13 to qualify. Ranks above grade/3 require -1 Empathy per rank grade above grade/3, and also minimum Leadership/12. PCs with Empathy/ 1- 6 obtain +1 DM on promotion rolls. PCs with Leadership/16+ obtain +1 DM on promotion rolls.

| Rank | | | Equivalent BOSS | BOSS Salary Schedule | |
|---|---|---|---|---|---|
| Grade | BOSS Rank | Command | Military Rank | Monthly | Yearly |
| 0 | Agent/5 | — | rank grade/2 | CR 700 | CR 8400 |
| 1 | Agent/4 | — | rank grade/3 | CR 800 | CR 9600 |
| 2 | Agent/3 | 3-man section | rank grade/4 | CR 900 | CR 10800 |
| 3 | Agent/2 | 3-man section | rank grade/5 | CR 1000 | CR 10800 |
| 4 | Agent/l | 9-man team | rank grade/6 | CR 11CC | CR 13200 |
| 5 | Lieutenant/2 | 27-man squad | rank grade/7 | CR 1250 | CR 15000 |
| 6 | Lieutenant/1 | Precinct (1-3 squads) | rank grade/8 | CR 1500 | CR 18000 |
| 7 | Captain | District Security | rank grade/9 | CR 2000 | CR 24000 |
| 8 | Major | Zone Security | rank grade/10 | CR 3000 | CR 36000 |
| 9 | Colonel | Regional Security | rank grade/11 | CR 4000 | CR 48000 |
| 10 | General | Planetary Security | rank grade/12 | CR 5000 | CR 60000 |
| 11 | Asst. Director | System Security | rank grade/l3 | CR 6000 | CR 72000 |
| 12 | Deputy Director | Prefecture | rank grade/14 | CR 7500 | CR 90000 |
| 13 | Director | Province | rank grade/15 | CR 10000 | CR 120000 |
| 14 | Minister of Security | BOSS | — | — | — |

There is only one Minister of Security. Chances of a vacancy are 5%.

## 3.5 BUREAU OF INTELLIGENCE: GOVERNMENT MILITARY SERVICE

BRINT is the intelligence-gathering agency of the StarForce. Ranks and pay are as for Executive Officers in the StarForce, regardless of specialisation, but only Astronauts can actually command BRINT Starships. BRINT operatives can expect to operate in enemy territory as 'spies' and saboteurs, and may be required to organise and train resistance groups on planets Occupied by the enemy. BRINT agents also keep a close watch on the Bureau of State Security, whose agents are not part of the Military Establishment and evidence over-zealous Police State mentalities which the military authorities resent and deeply suspect—especially in democratic societies. In totalitarian regimes, BRINT is the implacable foe of BOSS and delights in confounding the incursions of BOSS into military affairs. It should be noted that StarForce Commandos, Space Marines, and StarForce personnel can obtain a transfer to BRINT by roiling 7+ on 2d6 in any given year. However, PCs should also realise that it requires 10+ to transfer out of BRINT. Maximum rank is rank grade/12, Admiral (BRINT), and all ranks are converted to Executive Branch equivalents. Characters with Psionics/15+ are always accepted for enlistment and re-enlistment.

## 3.6 INTERSTELLAR POLICE AGENCY: GOVERNMENT CIVILIAN SERVICE

The IPA is a paramilitary organisation very similar to the StarForce and BRINT, except that it is charged with maintaining law and order in the volume of space controlled by the StarCulture and concerns itself with criminal activities of an interplanetary and interstellar nature. The IPA maintains naval quality vessels up to Fleet Cruiser displacement and armament in order to combat piracy and to patrol the spacelanes. Pre-requisites for enlistment are as given for the Star-Force and Space Marines, except that Intuition has to be a minimum 11+.

Promotion in the IPA is on 8+, rolled on 2d6, to rank grade/3, after which it is 9+. Leadership/10+ is required for promotion to rank grade/5, Leadership/l2+ is required for rank grade/6, and +1 Leadership is required per rank grade thereafter.

| Rank | | | IPA Salary Schedule | |
|---|---|---|---|---|
| Grade | IPA Officer | IPA Command | Monthly | Yearly |
| 0 | Cadet/2, IPA | — | CR 700 | CR 8400 |
| 1 | Cadet/l, IPA | — | CR 800 | CR 9600 |
| 2 | Officer, IPA | — | CR 900 | CR 10800 |
| 3 | Sergeant, IPA | 2-man squad | CR 1000 | CR 12000 |
| 4 | Sub-Lieutenant, IPA | 6-man squad | CR 1100 | CR 13200 |
| 5 | Lieutenant, IPA | StarFighter | CR 1250 | CR 15000 |
| 6 | Inspector | Corvette | CR 1500 | CR 18000 |
| 7 | Chief Inspector | Lt. Cruiser | CR 1750 | CR 21000 |
| 8 | Captain | Cruiser | CR 2000 | CR 24000 |
| 9 | Asst. Co-ordinator | Fleet Cruiser | CR 2750 | CR 33000 |
| 10 | Co-ordinator | Sector (squadron) | CR 4000 | CR 48000 |
| 11 | Deputy Director | Province (3 Sectors) | CR 5500 | CR 7500 |
| 12 | Director | I PA | CR 66000 | CR 90000 |

A bonus of +20% salary is paid to personnel posted to frontier regions.

## 3.7 INTERSTELLAR SURVEY: GOVERNMENT CIVILIAN SERVICE

The Department of Interstellar Survey is charged with the exploration of deep space, to discover and chart new planets suitable for colonisation, resource exploitation, etc. Survey personnel are identical to StarForce personnel, insofar as pre-requisites are concerned, with Armsmen the equivalent of StarForce Commandos. The Survey Service operates naval class vessels up to BattleCruiser displacement, as deep space beyond the frontiers tends to produce hostile aliens. The ships are heavily modified for scientific research, however.

Ranks and promotions are as described far the StarForce, except that the 2d6 roll required for promotion past rank grade/5 is. 9+, and past rank grade/10 is 10+. Salary scales are at 125% of StarForce pay when beyond the frontier and standard StarForce pay inside the frontier.

## 3.8 SURVEY SCOUTS: GOVERNMENT CIVILIAN SERVICE

The survey Scouts are highly trained explorers assigned to the vessels of the Survey Service. Scouts are Armsmen and Techs who meet StarForce Commando pre-requisites. PCs should ensure that their skills purchases prior to entry into the game are heavy with survival skills. The Scouts are trained to conduct initial landings on.. planets and make preliminary surveys before the planetary survey teams aboard the Survey Service Starship are landed to conduct detailed analysis of the new world. Survey Scouts have to be prepared for just about every contingency, whether it be harsh surface conditions, dangerous animal life, or hostile natives,

Promotion is on 9+, rolled on 2d6, until rank grade/5 is reached, after which a 10+ is required. Leadership and Bravery must be 13+ to be accepted into the Scouts.

| Rank | | | | Scout Salary Schedule | |
|------|-------|---------------|-----------|---------|---------|
| Grade | Scout | Scout Command | Base Ship | Monthly | Yearly |
| 0 | Scout/2 | — | variable | CR800 | CR 10800 |
| 1 | Scout/1 | — | variable | CR 1000 | CR 12000 |
| 2 | Senior Scout | 2-man Section | variable | CR 1250 | CR 15000 |
| 3 | Group Leader | 10-man patrol | Corvette+ | CR 1500 | CR 18000 |
| 4 | Sr. Group Leader | 20-man group | Lt. Cruiser+ | CR 2000 | CR 24000 |
| 5 | Asst. Expedition Leader | 40-man landing party | Cruiser+ | CR 2500 | CR 30000 |
| 6 | Expedition Leader | 80-man scouting unit | Fleet Cruiser+ | CR 3000 | CR 36000 |
| 7 | Sr. Expedition Leader | 160-man scouting unit | BattleCruiser | CR4000 | CR48000 |
| 8 | Leading Scout | major expedition | BattleCruiser | CR 5000 | CR 60000 |
| 9 | Co-ordinator | Frontier Sector | as required | CR 6000 | CR 72000 |
| 10 | Chief of Scouts | Scout Service | as required | CR 7500 | CR 90000 |

The Chief of Scouts is answerable to the Admiral-General of the Survey Services. Scouts are under the command of the Survey Starship while in space, but Expedition Leaders have command on planet and can require the support vessel to take whatever measures are deemed necessary until the preliminary survey is over.

## 3.9 CONTACT SERVICE & DIPLOMATIC CORPS: GOVERNMENT CIVILIAN SERVICE

The Contact Service is a highly professional branch of the Diplo-matic Corps. All First Contact personnel are Scientists with a strong background in the Social Sciences, Comparative Cultures, Linguistics, Historical Sciences, Xeno-Psychology, or Xeno-Ecology. A Contact Service officer must have Empathy 12+, Intelligence 14+, and Intuition or Psionics 12+. His Bravery must also be 13+. Leadership 11+ is required to qualify for promotion, with +1 Leadership required for each advance in rank above rank grade/5. Promotion is on 9+rolled on 2d6.

The task of the Contact Service is to initiate relations with aboriginal and primitive peoples so that undue dislocation will not occur through contact with the advanced StarCulture that has discovered them. Even totalitarian and imperialistic StarCultures are careful to manage their initial contacts in order to obtain the best possible chance of effective and profitable integration of less advanced races into the Empire. Heavy handed exploitation and unrestrained colonisation by civilian merchants, settlers, and prospectors tends to destroy the 'natural resources' a less advanced race represents. The Contact Service thus has sweeping powers, and Contact Officers can declare a planet to be a 'protectorate' if it contains an indigenous Sentient race. That means that all unauthorised contact, trade, settlement, or other exploitation is strictly forbidden. To this effect, the Service can require full co operation from the StarForce, IPA, or any other appropriate government agency. Often, a small StarForce base or IPA base will be established on a protected planet to provide the necessary enforcement muscle.' When a more advanced race (Tech/4+) is contacted, the Contact Service Officer aboard the Survey ship will take charge of the whole expedition with the intention of establishing diplomatic relation.

| Rank | | | Contact Salary Schedule | | Diplomatic |
|------|-------------------|-----------------|---------|---------|-------------------|
| Grade | Contact Officer (CS) | Contact Command | Monthly | Yearly | Corps Equivalent |
| 4 | Cadet | — | CR 1000 | CR 12000 | — |
| 5 | Contact Officer | — | CR 1250 | CR 15000 | UnderSecretary/5 |
| 6 | Contact Leader | — | CR 1500 | CR 18000 | UnderSecretary/4 |
| 7 | Asst. Administrator | District | CR 5750 | CR 21000 | UnderSecretary/3 |
| 8 | Administrator | Zone | CR 2250 | CR 27000 | UnderSecretary/2 |
| 9 | Commissioner | Region | CR 2750 | CR 33000 | UnderSecretary/1 |
| 10 | Chief Commissioner | Planet | CR 3500 | CR 42000 | 1st Secretary |
| 11 | Consul | Diplomatic Consulate | CR 4000 | CR 48000 | Consul |
| 12 | Ambassador | Diplomatic Embassy | CR 5000 | CR 60000 | Ambassador |
| 13 | Asst. Deputy Minister | Contact Service | CR 7500 | CR 90000 | — |
| 14 | Deputy Minister | Diplomatic Service | CR 9000 | CR 108000 | — |

Diplomatic Corps personnel are really identical to Contact Service personnel with regard to the qualifications required of PCs. The Dip-lomatic Corps is merely the political arm of the same department of government--Foreign Affairs. Personnel from other branches of the government services may be attached to the Diplomatic Corps as required
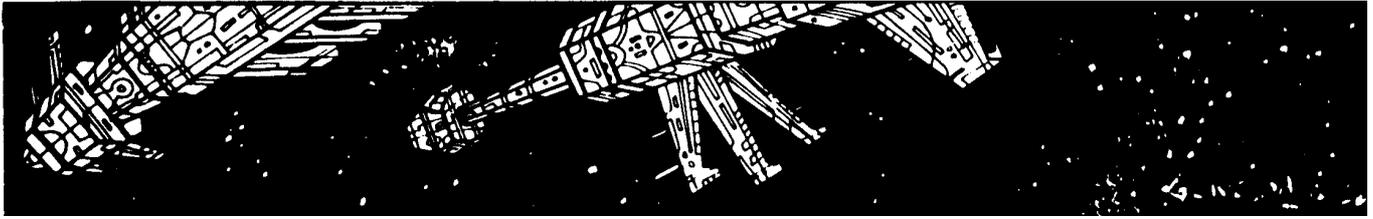
## 3.10 PLANETARY DEFENCE FORCE: GOVERNMENT MILITARY SERVICE

The PDF is the future equivalent of the Army, Navy, and Air Force.

Each planet with a significant population will have a PDF charged with the defence of the planet against attack, the maintenance of order in a state of emergency, the occupation of enemy planets conquered by invasion, and the second or third wave assault of enemy planets once the Marines and Commandos have secured adequate 'beachheads' on the surface to permit the PDF to be landed. PCs require minimum Strength and Constitution 9+ to enlist. Promotion is on 7+, rolled on 2d6, with Leadership/13+ required for rank grades/7+.

| Rank Grade | Planetary Defence Force | PDF Command | PDF Salary Schedule Monthly | Yearly |
|---|---|---|---|---|
| 0 | Private | — | CR 400 | CR 4800 |
| 1 | PFC | — | CR 450 | CR 5100 |
| 2 | Corporal | Section | CR 500 | CR 6000 |
| 3 | Sergeant | Squad | CR 650 | CR 7800 |
| 4 | Staff Sergeant | Platoon | CR 750 | CR 9000 |
| 5 | Lieutenant/2 | Platoon | CR900 | CR10800 |
| 6 | Lieutenant/1 | Platoon/Company | CR 1100 | CR 13200 |
| 7 | Captain | Company | CR 1300 | CR 15600 |
| 8 | Major | Battalion | CR 1550 | CR 18600 |
| 9 | Colonel | Regiment | CR 1800 | CR 21600 |
| 10 | Brigadier | Brigade | CR 2000 | CR 24000 |
| 11 | General | Division | CR 2500 | CR 30000 |
| 12 | Field Marshal | Corps | CR 3000 | CR 36000 |
| 13 | Planetary Marshal | Planetary Forces | CR4500 | CR54000 |

## 3.11 PLANETARY POLICE FORCE: GOVERNMENT CIVILIAN SERVICE

The Planetary Police forces are paramilitary law enforcement agencies charged with maintaining law and order on a particular planet or within a local planetary jurisdiction. Planetary police usually have no authority outside their jurisdiction and must depend upon the Interstellar Police Agency to pursue criminals escaping beyond planetary boundaries or to conduct investigations that are interplanetary or interstellar in nature. However, some highly developed planets may have a number of StarFighters available for high-speed pursuit and for patrol work in the moons, asteroids, and outer planets of the system.which tend to be included in the jurisdiction of a major planet. Thus, while Astronauts are not normally employed by the Police, some systems may have a limited number of positions available. PC pre-requisites are Strength and Constitution 10+, Intuition/12+. High GTA, MechA, and ElecA scores are definitely desirable, as are good Dexterity levels. Promotion is on 7+, rolled on 2d6, With Leadership/10+ required for promotion past rank grade/5, and Leadership/13+ required past rank grade/7.

| Rank Grade | Planetary Police | Police Command | Police Salary Schedule Monthly | Yearly |
|---|---|---|---|---|
| 0 | Constable/2 | — | CR 550 | CR 6600 |
| 1 | Constable/I | — | CR 660 | CR 7800 |
| 2 | Sergeant | 2 | CR 750 | CR 9000 |
| 3 | Detective Sergeant | 4-man team | CR 900 | CR 10800 |
| 4 | Lieutenant | 8-man squad | CR 1000 | CR 12000 |
| 5 | Detective Lieutenant | 8-man squad | CR 1200 | CR 14400 |
| 6 | Sub-Inspector | Precinct | CR 1500 | CR 18000 |
| 7 | Inspector | Precinct | CR 2000 | CR 24000 |
| 8 | Chief Inspector | District | CR 2500 | CR 30000 |
| 9 | Deputy Commissioner | Zone | CR 3000 | CR 36000 |
| 10 | Commissioner | Region | CR3500 | CR 42000 |
| 11 | Director | Planet | CR 5000 | CR 60000 |

## 3.12 INDEPENDENT EXPLORERS: CIVILIAN SERVICE

The need for new Colony and resource planets is never satisfied, and while the Survey Service does extensive work in the discovery of new planets for settlement and industrial development, independent exploration companies have also entered the field. Freedom-loving adventurers of all classes have taken on this hazardous profession for pure profit. According to Interstellar Law, the discoverer of a planet uninhabited by sentient races becomes a First Claimant to all land and resources on the planet. If the discoverer undertakes the development of the planet, a very costly enterprise until returns are won from that development, he literally owns the planet. In most cases, the Only organisations capable of such development are governments and the great interstellar corporations. However, a discoverer can also sell his interest in his First Claim, the value of the Claim being dependent on the potential of the planet for colonisation or resource development and the difficulties that may be encountered in undertaking such development.

The independent explorers provide their own ship, equipment,

supplies, and expertise. Their task is to find and conduct preliminary surveys of new planets. In essence, their work is not too different from that of the Survey Service. Complete, scientifically accurate reports are needed to establish a proper First Claim, and thus a good proportion of an exploration team consists of Scientists. However, Astronauts and Techs are required to navigate and maintain the Starship, usually a well-armed Corvette, while Armsmen provide the 'muscle' which is often necessary to deal with hostile animal life or 'claim-jumpers.' It must be admitted that some unscrupulous operations have laid claims to planets with primitive intelligent life forms and, using the very considerable influence of their large corporate patrons, have circumvented the usual restrictions of the Contact Service against exploitation of local natives.

PCs do not have to have pre-requisites to enlist with an exploration company. However, one's promotion chances are very much determined by personal characteristics.

Astronaut: 10+ on 2d6, with +1 DM for each complete 5-point block the sum of the following characteristics exceeds 113: Constitution, Dexterity, Agility, Intelligence, Intuition, Leadership, GTA.

Scientist: 10+ on 2d6, with +1 DM for each 5-point block sum of the following characteristics exceeds 113: Constitution, Dexterity, Intelligence, Intuition, Psionics or Empathy, Leadership, GTA.

Engineer: 10+ on 2d6, with +1 DM for each 5-point block the sum of the following characteristics exceeds 113: Constitution, Dexterity, Agility, Intelligence, Intuition, Leadership, GTA and MechA or ElecA. If all three areas of Technical aptitude are 15+, an additional +1 DM can be added.

Tech: As Engineer, but promotion on 9+ on 2d6.

Armsman: 10+ on 2d6, with 1+ DM for each 5-point block the sum of the following characteristics exceeds 113; Strength, Constitution, Dexterity, Agility, Intelligence, Leadership, Bravery.

A 5-point block means each group of I-5 points over the indicated total. If the bonus level is above 113, and a PC has a characteristics point total of 124, the difference is 11 or 3 five point blocks, for a +3DM'

| Rank | | | Astronaut Salary | | | Sci./Eng. Salary | | | | Tech Salary | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| rade | Astronaut | Command | Monthl | Yearly | Scientist | Engineer | Monthl | Yearly | Tech | Monthly | Yearly |
| 0 | Starshipman/2 | — | CR 1000 | CR 12000 | SSM/2 (S) | SSM/2 (E) | CR 1000 | CR 12000 | Tech/4 | CR 1000 | CR 12000 |
| 1 | Starshipman/ | — | CR 1250 | CR 1500 | SM/1 (S) | SSM/1 (E) | CR1250 | CR 15000 | Tech/3 | CR 1250 | CR 15000 |
| 2 | Leading SSM | — | CR 1750 | CR 21000 | LSSM (S) | LSSM (E) | CR 1750 | CR 21000 | Tech/2 | CR 1500 | CR 18000 |
| 3 | Chief SSM | — | CR 200 | CR 2400 | CSSM (S) | CSSM (5) | CR 200 | CR 2400 | Tech/I | CR 2000 | CR 21000 |
| 4 | 6th Officer | duty section | CR 2250 | CR 27000 | Sci./5 | Eng./5 | CR 2250 | CR 27000 | Tech Off./3 | CR 2250 | CR 24000 |
| 5 | 5th Officer | duty section | CR 250 | CR 3000 | Sci./4 | Eng./4 | CR 250 | CR 3000 | Tech Off./2 | CR 2500 | CR 27000 |
| 6 | 4th Officer | duty section | CR 2750 | CR 33000 | Sci./3 | Eng./3 | CR 2750 | CR 33000 | Tech Off/I | CR 2750 | CR 30000 |
| 7 | 3rd Officer | department | CR 350 | CR 4200 | Sci/2 | Eng./2 | CR 325 | CR 3900 | Chief Tech | CR 3250 | CR 39000 |
| 8 | 2nd Officer | department | CR 4000 | CR 48000 | Sci/1 | Eng./I | CR 3500 | CR 42000 | — | — | — |
| 9 | 1st Officer | executive of | CR 475 | CR 5700 | — | — | — | — | — | — | — |
| 10 | Captain | ship | CR 6000 | CR 72000 | — | — | — | — | — | — | — |

| Rank | Armsman Salary | | Scout |
|---|---|---|---|
| rade | rmsmen | Monthly | Yearly | onus |
| 0 | Armsman/3 | CR 1000 | CR 12000 | +10% |
| | rmsman/2 | CR 1000 | CR 12000 | 10% |
| 2 | Armsman/1 | CR 1250 | CR 15000 | +10% |
| | Master at Arms | CR 2000 | CR 21000 | 10% |
| 4 | Armament Off./3 | CR 2250 | CR 24000 | +10% |
| | rmament Off./2 | CR 2500 | CR 27000 | 15% |
| 6 | Armament Off/1 | CR 3000 | CR 36000 | +15% |
| | ommander | CR 3500 | CR 42000 | 15% |

Discovery Bonuses are based upon the nature of the planet and the value the explorers can obtain by auctioning off their

First Claim. Costs of the expedition are deducted from the bonus. The remainder is divided as follows:

50% to the owner of the exploration ship
10% to the captain of the exploration ship
40% to the crew in equal shares, regardless of rank

Discovery bonuses are computed on the following table. There is a 1d100 percentile dice roll to determine the exact nature of the planet, if the Starmaster is proceeding by a random method. He does not tell the players outright what the general conditions are, but rather feeds them the information piecemeal as they conduct their investigation.

| Id100 Result | Type of Planet | Class | Discovery Bonus |
|---|---|---|---|
| 01 | Type 1 Standard Terran Planet | A | CR 1,000,000 x 3d6 + CR 5,000,000 |
| 02 | Type 1 Terran Steppe Planet | A | CR 800,000 x 3d6 + CR 1 000,000 |
| 03 -04 | Type 1 Terran Arid Planet | B | CR 250,000 x 3d6 |
| 05 -06 | Type 1 Terran Desert Planet | C | CR 100,000 x 3d6 |
| 07 | Type 1 Terran Jungle Planet | B | CR 500,000 x 3d6 + CR 250,000 |
| 08-09 | Type 1 Terran Tundra Planet | C | CR 100,000 x 3d6 |
| 10 | Type 1 Terran Ocean Planet | B | CR 400,000 x 3d6 + CR 100,000 |
| 11 | Type 2 Terran, No Seasons | B | CR 600,000 x 3d6 + CR 300,000 |
| 12 - 13 | Type 3 Terran, Extreme Seasons | D | CR 100,000 x 2d6 |
| 14 | Type 4 Terran at Outer Ecosphere | C | CR 100,000 x 3d6 |
| 15 | Type 5 Terran, No Season, Outer Eco | B | CR 200,000 x 3d6 |
| 16 | Type 6 Terran, Extreme, Outer Eco. | C | CR 75,000 x 2d6 |
| 17 | Type 7 Terran Desert, Inner Eco. | C | CR 100,000 x 2d6 |
| 18 | Type 7 Terran Jungle, Inner Eco. | B | CR 500,000 x 2d6 |
| 19 | Type 8 Terran, No Season, Inner Eco. | B | CR 500,000 x 3d6 |
| 20 -23 | Type 9 Terran, Extreme, Inner Eco. | D | CR 50,000 x 2d6 |
| 24 - 25 | Type 10 Terran, Eccentric Orbit | DD | CR 10,000 x 2d6 |
| 26 -27 | Type 11 Terran, Eccentric Orbit | DD | CR 10,000 x 2d6 |
| 28 - 29 | Type 12 Terran, Eccentric Orbit | DD | CR 10,000 x 2d6 |
| 30-31 | Type 13/7 Desert Planet (Arrakis) | DD | CR 50,000 x 2d6 |
| 32 | Type 13/7 Jungle Planet | C | CR 200,000 x 2d6 |
| 33 | Type 13/8 No Season | C | CR 100,000 x 2d6 |
| 34 | Type 13/9 Extreme Season | DD | CR 10,000 x 2d6 |

| 35 -40 | Type 14 Terran, beyond Ecosphere | DD | CR 10,000 x 1d6 |
|--------|----------------------------------|-------|-----------------|
| 41 -42 | Type 13 Airless/Low Pressure | DL/DA | CR 10,000 x ld6 |
| 43 -44 | Type 14 Airless/Low Pressure | DDD | CR 10,000 |
| 45 -47 | Type 15 Airless/Low Pressure | EL/EA | CR 10,000 |
| 48 - 55 | Type 15 High Pressure | EE | — |
| 56+ | Types 16 - 19 | F | — |

The chance of there being planets around a star and the opportunity, therefore, to roll on the discovery table will be:

| Stellar Type | % Chance of Planets | Comments |
|--------------|---------------------|----------|
| WR | 5% | No planets inhabitable |
| O | 10% | 5% that planet will fall in 01-34 range |
| B | 15% | 8% that planet will fall in 01-34 range |
| A | 25% | 10% that planet will fall in 01.34 range |
| F | 50% | 20% that planet will fall in 01-35 range. |
| G | 75% | 25% that planet will fall in 01-35 range |
| K | 50% | 20% that planet will fall in 01-35 range |
| M | 50% | No planets of Types 1-9, 13, 15; only Types 10.12, 14, 16-19 |

If the star has planets, roll 2d6 for the number. Then roll 1d100 to find whether or not planets of the type indicated in the Comment section exist. If so, there is a 10% chance of two such planets and a 1% chance of three such planets.

The chance of sentient life on a planet is 5%. If so, refer to the Cultural Contact Tables for details. (See 16.3).

The planetary discovery system used here can also be used by the Survey Service or any other spacefaring personnel.

# 3.13   MERCHANT   MARINE:   CIVILIAN SERVICE

The Merchant Service is organised on a tight Guild structure. Normally, employment is maintained in one of the Guilds, but a general SpaceHand position may be obtained by any personnel unable to obtain employment in their Guild position.

Most large vessels are owned by large corporations as both the cost of the vessels and the cost of operations are far too high for many private citizens to manage. However. PCs may own ships of corvette and light merchantman displacement.

PCs do not have to have pre-requisites to enlist, but one's promotion chances are very much determined by personal characteristics:

Astronaut: 10+ on 2d6, with +1 DM for each complete 5-point block the sum of the following personal characteristics exceeds 113: Constitution, Dexterity, Agility, Intelligence, Intuition, Leadership, GTA.

Scientist: 10+ on 2d6, with +1 DM for each complete 5-point block the sum of the following personal characteristics exceeds 113: Con. situation, Dexterity, Agility, Intelligence, Intuition, Leadership, GTA.

Engineer: As Scientist, but MechA or ElecA can substitute for GTA. Further, if all three areas of Technical aptitude are 15+, an additional +1 DM can be added.

Tech: As engineer, but promotion on 9+ on 2d6.

Armsman: 10+ on 2d6, with +1 DM for each complete 5-point block the sum of the following personal characteristics exceeds 113: Strength, Constitution, Dexterity, Agility, Intelligence, Leadership, Bravery.

Multi: Any character with very strong expertise in General Skills may be ruled a Multi by the Starmaster. A Multi is a jack-of-all trades and generally fills positions aboard a Starship which require working with people, such as Purser. He should also be able to serve in several specialised areas other than his own speciality. A Multi-Astronaut, for instance, might have expertise in a number of Tech skills as well, and might sign on as a Tech if no positions were available for astronauts. The result is that the PC can have a rank grade rating in several categories of Starship personnel at the same time. His chance of promotion in any category is based on his personal characteristics, as outlined above for each of the character types.

There are a considerable number of different categories of Merchant Marine personnel. Each category is organised under a Guild structure, and no one may work in any category unless he is a Guild member in good standing. Initial Guild fees are CR 500 x number of rank grades in the personnel category. Annual fees are CR 100 x rank grade currently held. The Guild recognises military service rank grades but discounts them to 2/3 of military grade. An Astronaut1 10, for instance would be rated rank grade 6 in the Guild Astronauts and Astrogators.

Pay scales are given for the various positions Occupied aboard a commercial Starship. In some instances, the category may be filled by several PC types. The eligible PC types are listed below the                                    category                                    name.

| Guild of Astronauts & Astrogators: | | Guild Salary Scale | |
|---|---|---|---|
| Rank Grad | Astronauts Astrogators | Monthly | Yearly |
| 0 | Starshipman/2 | CR 850 | CR 10200 |
| 1 | Starshipman/ | CR 950 | CR 11400 |
| 2 | Leading SSM | CR 1400 | CR 14400 |
| 3 | Chief SSM | CR 1400 | CR 16800 |
| 4 | 6th Officer | CR 1750 | CR 21000 |
| 5 | 5th Officer | CR 2000 | CR 24000 |
| 6 | 4th Officer | CR 2250 | CR 27000 |
| 7 | 3rd Officer | CR 2750 | CR 33000 |
| 8 | 2nd Officer | CR 3250 | CR 39000 |
| 9 | 1st Officer | CR 3750 | CR 45000 |
| 10 | Captain/3 | CR 4500 | CR 54000 |
| 11 | Captain/2 | CR 6000 | CR 72000 |
| 12 | Captain/1 | CR 6000 | CR 72000 |
| Guild Entry Fee: | | CR 6000 | |
| Yearly Dues: | CR 100 x rank | | |

| Guild of Electronics Tech Guild | | Salary Scale | |
|---|---|---|---|
| Electronics Technician | | Monthly | Yearly |
| Elec-Tech/4 | | CR900 | CR 10800 |
| Elec-Tech/ | | CR 1100 | CR 13200 |
| Elec-Tech/2 | | CR 1300 | CR 15600 |
| Elec-Tech/ | | CR 1500 | CR 18000 |
| E-T Off./3 | | CR 1750 | CR 21000 |
| E-T Off./2 | | CR 2100 | CR 25200 |
| E-T Off./1 | | CR 2300 | CR 27600 |
| Chief Tech | | CR 2500 | CR 30000 |
| Guild Entry Fee: | | CR 3500 | |
| Yearly Dues: | CR 100 x rank | | |

| Guild of Pursers & Starship Stewards Guild | | Salary Scale | | Graft, Tips & Gratuitie |
|---|---|---|---|---|
| Pursers & Stewards | | Monthly | Yearly | |
| Steward/4 | | CR 600 | CR 7200 | CR 100.d10 |
| Steward/3 | | CR 750 | CR 9000 | CR 150.d10 |
| Steward/2 | | CR 900 | CR 10800 | CR 200.d10 |
| Steward/1 | | CR 1050 | CR 12600 | CR 300.d10 |
| Purser/4 | | CR 1200 | CR 14400 | CR 400.d20 |
| Purser/3 | | CR 1500 | CR 18000 | CR 500.d20 |
| Purser/2 | | CR 1750 | CR 21000 | CR 600.d20 |
| Purser/1 | | CR 2000 | CR 24000 | CR 1000.d20 |
| Chief Purser | | CR 2500 | CR 30000 | CR 2000.d20 |
| Guild Entry Fee: | | CR 5000 | | |
| Yearly Dues: | CR 100 x rank | | | |

| Guild of Armsman & Starship Gunner Guild | | Salary Scale | |
|---|---|---|---|
| Rank Grad | Armsmen & Gunners | Monthly | Yearly |
| 0 | Armsman/3 | CR 750 | CR 9000 |
| 1 | Armsman/2 | CR 850 | CR 10200 |
| 2 | Armsman/1 | CR 1000 | CR 12000 |
| 3 | Master at Arms | CR 1250 | CR 15000 |
| 4 | Gun. Off./3 | CR 1500 | CR 18000 |
| 5 | Gun. Off./2 | CR 1750 | CR 21000 |
| 6 | Gun. Off./1 | CR 2000 | CR 24000 |
| 7 | Master Gunner | CR 2500 | CR 30000 |
| 8 | | | |
| Guild Entry Fee: | | CR 3500 | |
| Yearly Dues: | CR 100 x rank | | |

| Guild of Starship Mechanical Tech Guild | | Salary Scale | |
|---|---|---|---|
| Mechanical Technician | | Monthly | Yearly |
| Mech-Tech/4 | | CR 850 | CR 10200 |
| Mech-Tech/ | | CR 1000 | CR 12000 |
| Mech-Tech/2 | | CR 1200 | CR 14400 |
| Mech-Tech/ | | CR 1400 | CR 16800 |
| M-T Off./3 | | CR 1600 | CR 19200 |
| M-T Off./2 | | CR 2000 | CR 24000 |
| M-T Off/1 | | CR 2250 | CR 27000 |
| Chief Tech | | CR 2500 | CR 30000 |
| Guild Entry Fee: | | CR 3500 | |
| Yearly Dues: | CR 100 x rank | | |

| Guild of Starship Scientists: | Guild of Starship Engineers: | Scientist & Engineer Guild Salary Scale | |
|---|---|---|---|
| | | Monthly | Yearly |
| SSM/2 (S) | SSM/2 (E) | CR800 | CR 9600 |
| SSM/1 (S) | SSM/1 (E) | CR 900 | CR 10800 |
| LSSM (S) | LSSM (E) | CR 1100 | CR 13200 |
| CSSM (S) | CSSM (E) | CR 1300 | CR 15600 |
| Scientist/5 | Engineer/5 | CR 1550 | CR 18600 |
| Scientist/4 | Engineer/4 | CR 1800 | CR 21600 |
| Scientist/3 | Engineer/3 | CR 2100 | CR 25200 |
| Scientist/2 | Engineer/2 | CR 2500 | CR 30000 |
| Scientist/1 | Engineer/1 | CR 3250 | CR 39000 |
| Guild Entry Fee: | | CR 4000 | |
| Yearly dues: | CR 100 x rank | | |

| Guild of Starship Physicians & M.Tech Guild | | Salary Scale | |
|---|---|---|---|
| Rank Grad | Physicians & MediTechs | Monthly | Yearly |
| 0 | Medi Tech/4 | CR 900 | CR 10800 |
| 1 | MediTech/3 | CR 1100 | CR 13200 |
| 2 | MediTech/2 | CR 1300 | CR 15600 |
| 3 | MediTech/1 | CR 1500 | CR 18000 |
| 4 | Sr. MediTech | CR 1750 | CR 21000 |
| 5 | Med. Officer/4 | CR 2000 | CR 24000 |
| 6 | Med. Officer/3 | CR 2250 | CR 27000 |
| 7 | Med. Officer/2 | CR 2500 | CR 30000 |
| 8 | Med. Officer/1 | CR 3000 | CR 36000 |
| Guild Entry Fee: | | CR 4000 | |
| Yearly Dues: | CR 100 x rank | | |

| Guild of Starship Cargo Handlers | | Salary Scale | | Pilferage & smuggling |
|---|---|---|---|---|
| | | Monthly | Yearly | |
| Ships Hand/4 | | CR 500 | CR 6000 | CR 100.d20 |
| Ships Hand/3 | | CR 600 | CR 7200 | CR 100.d20 |
| Ships Hand/2 | | CR 700 | CR 8400 | CR 150.d20 |
| Leading Hand | | CR 800 | CR 9600 | CR 200.d20 |
| Cargo Off./4 | | CR 1000 | CR 12000 | CR 500.d20 |
| Cargo Off/3 | | CR 1250 | CR 15000 | CR 750.d20 |
| Cargo Off./2 | | CR 1500 | CR 8000 | CR 1000.d20 |
| Cargo Off/1 | | CR 2500 | CR 3000 | CR 1500.d20 |
| Trading Off.** | | CR 4000 | CR 48000 | CR 2500.d20 |
| Guild Entry Fee | | CR 7500 | | |
| Yearly Dues: | CR 100 x rank | | | |

*With knowledge of Captain, who pockets an equal amount. Otherwise, 10% - 60% of amount.
**Trading Officer must be a Linguistic Scientist.

# 3.14 MERCENARY COMPANIES: CONTRACTED MILITARY SERVICE

The Mercenaries are fighting men who have, for the most part, been released from the regular forces. Mercenaries hire Out their services to the large interstellar corporations, to frontier planets that lack sufficient population to maintain a regular planetary defence force and need professional 'stiffening' for their Citizen militias, and to independent merchants requiring a heavy guard for voyages into pirate and enemy infested space.

The governments of most starcultures regard Mercenaries with mixed feelings. Totalitarian regimes are often quite hostile and repressive, as any armed force in its territory which is not directly answerable to State Authority can become a nucleus for rebellion. More liberal regimes often encourage Mercenary activity in the frontier regions to augment their own usually over-extended StarForces. Thus, depending upon where Mercenaries are operating, they may enjoy a greater or lesser degree of co-operation from the regular military. Since many Mercenaries are veterans, liberal military establishments often allow Mercenary commanders to purchase arms and war material as 'surplus' equipment at respectable discounts, so long as the particular commander's activities have met with tacit approval of the military authorities.

All Mercenary ranks, promotions, and pay are as given for the StarForce, StarFleet, Marine, and Commando organisations, but with rank grade/11 as the highest Mercenary rank. StarForce veterans are automatically qualified for enlistment if they were not dishonourably discharged. All other PCs must pass the enlistment requirements outlined in the Initial Enlistment section' (See 3.1). Basic pre-requisites are as given for the StarForce, but a PC will be able to qualify anyway if he can roll a '7' or '11' on 2d6 if he fails enlistment pre-requisites. (There is always a need

for 'cannon-fodder.') Add +1 DM per 2 years of previous service.

Depending on the type of duty contracted. Mercenaries are paid at a percentage of StarForce salary scale. Mercenaries are expected to provide their own weapons and equipment, as required, but ammunition and rations are provided by the contracting party:

Mercenary garrison duty: 100% of StarForce salary for rank/grade equivalent. Duties include routine guard and security work, training of native troops, etc.

Mercenary war service: 150% of StarForce salary for rank/grade equivalent. Duties include all phases of warfare. Any Mercenaries on garrison duty who are called upon to fight trained troops automatically go on war pay on a daily basis until the emergency is over. Quelling civil disturbances, etc., does not qualify as war service unless the rebellion exceeds 30 days' duration.

Personal bodyguard duty: 125% of StarForce salary for rank/grade equivalent.

Starship armsman duty: Merchant Marine Guild salary for rank/grade equivalent. Guild fees are automatically covered by the terms of the contract.

It is also possible to form Mercenary Companies up to battalion size (approximately 750 men). Players are referred to Specs Marines (FGU' 1980) for details on large scale battle, as Space Marines is a companion set of rules to Space Opera .

Mercenary Companies are hired at double the individual rates. All arms, equipment, and fighting vehicles are provided by the Mercenary unit, but any losses in heavy equipment are to be split equally between the Mercenary Company and the contracting party, based on retail prices. Since many Mercenaries can obtain equipment as 'surplus' at a discount, a fairly minimal expense is usually involved when losses occur and sometimes even a small profit is turned. Some Mercenary organisations even have warships (usually StarFighters, Corvettes, Destroyers, or Light Cruisers) for hire at 25% of cost per year, including salaries and operating expenses. Repairs to such vessels are borne by the contracting party if battle damage occurs, but actual loss is borne by the Mercenaries.

## 3.15 BENEFITS

When a PC leaves his initial service, he will receive a number of benefits. There are detailed below:

### SEVERANCE PAY

If a PC leaves his initial service in good standing (there are some instances in which he will be fired and loses severance pay), he will receive a lump sum equal to 5% of his final year's income times the number of years of service. This sum represents accumulated benefits and bonuses accruing during his term of service,

### SAVINGS

A PC will also have the opportunity of saving some of his salary during his initial service. Personal savings, plus interest on investments, is equal to 1% of the PC's final year's salary times his intelligence score times years of service,

### PENSION BENEFITS

A PC contributes a portion of his income to a pension plan, as does his employer. If a PC has served less than 20 years, accrued pension benefits are equal to 10% of his final year's salary times1/2 his years of service, This is paid out to the PC in a lump sum. However, if the PC has served 20 years or more, his pension plan has matured and will pay out a yearly sum equal to 2% of his final year's salary times years of service. The pension funds will be deposited to the account of the PC in any interstellar bank he stipulates. Note that the 2% maturity bonus is in addition to severance allowance, No pension 'will exceed 60% of final salary.

## MATERIAL BENEFITS

On leaving his initial service, a PC is entitled to keep his personal gear and small arms:

StarFleet: Personal MediKit; Shelter Tent; Wristwatch; backpack; Sleeping Bag; one complete Summer, Winter, and Combat Uniform; Communicator; Side Arm; VibroBlade. Officers also keep their MiniComp units. Astronauts keep their Vacuum Suits and Astrogation Manuals, Medical personnel may keep their field Medic Kits. Techs may keep their Tool Kits.

Space Marines & Commandos: as above, plus Respirator, Body Armour (to class 17), and Rifle or SMG (usually energy weapons.)

BOSS: PCs do not 'retire' from BOSS. Liberal regimes allow personnel to lapse into 'inactive' service,' but may require them to perform missions at need. Totalitarian regimes permit no retirement at all because the PC knows too much. In the latter case, retirement is unthinkable. A PC in a totalitarian BOSS organisation is assumed to have literally made a 'run' for it and will be a hunted man. In any event, a BOSS agent obtains CR 1000 x 1d10 x rank grade attained in equipment, whether by the beneficence of BOSS or by outright theft in the case of a PC who has deserted. Such equipment may be restricted or top secret, The PC will also be able to choose any three concealable small arms of his choice.

BRINT: as for StarForce personnel, plus three concealable small arms and CR 2000 x rank grade in specialised equipment.

IPA: as for StarForce personnel, plus StunPistol.

PDF' personal MediKits; Shelter Tent; Wristwatch; backpack; Sleeping Bag; one complete Summer, Winter, and Combat Uniform; communicator; Side Arm; Rifle; VibroBlade; Respirator.

Survey Service: as for StarFleet personnel.

Survey Scouts: As for Space Marines, except no body armour. The Scoot may also have a Spring Rifle and Express Carbine or Rifle (slugthrower),

Contact Service: CR 3000 x rank grade in specialised equipment plus PDF equipment and three concealed weapons.

Explorers: As for Survey Scouts.

Police: As for PDF, substituting a StunPistol for a Rifle.

Merchant Marine: Wristwatch; one complete Winter, and Summer Uniform; Side Arm; VibroBlade. Officers also keep their Mini-Comp units. Astronauts keep their Vacuum Suits and Astrogation Manuals. Medical personnel may keep their field Medic Kits. Techs may keep their Tool Kits.

Mercenaries: As for StarFleet or Space Marines. Captain/Rank Grade 9+ (colonel or commandant) will have a force of 50 x 1d10 men initially. In addition to normal savings, they have 1d20 x savings for each fifty men to use for equipment procurement for their unit.

## SURPLUS EQUIPMENT DISCOUNTS

In addition to the personal equipment allowed a PC on retirement, he may also purchase surplus equipment at special rates. Basically, A PC may purchase a number of surplus items equal to the number of years he has served plus 1d6.

No heavy combat vehicles or heavy weapons can be obtained at discount unless the PC is a military officer with a rank of grade/8+. General Officers (rank grade/11+) will be able to purchase up to 10 times the number of items normally allowed.

The retirement discount rate is -10% to -60% (roll ld6) on surplus equipment.

Military Officers (retired) enjoy a -10% to -60% discount for a period of 1d6 years after they have left their initial service. This discount rate applies to items purchased in bulk for a Mercenary Company, if such organisations are approved by the government. Purchases equal-to CR 10000 x rank grade of the Officer will be allowed each year, if of rank grade/ 5-8, and up to CR 25000 x rank grade if of rank grade/9+. Discounts become -5% to -30% thereafter.

Senior StarForce and PA officers may also have an opportunity to purchase surplus at a discount of -3% x 8d6 up to Light Cruiser displacement. To qualify, a PC must be of rank grade/7+ retired rank and either be a qualified Pilot/Astrogator or else have an associate who is. Such substantial purchases may be made by several PCs who have combined their assets to form an exploration or mercenary company. Such vessels will never by first-line craft.

Merchant Marine Captains may be able to purchase commercial spacecraft at a discount of .3% x 8d6, reflecting their knowledge of the used spacecraft' market and the condition of the vessels they are purchasing.

IPA and Police Officers will be able to obtain discounts of -5% to-30% on specialised equipment used in investigations, etc., from friends in the initial service who have charge of disposing of 'surplus' equipment. BRINT agents will also enjoy similar advantages when dealing with their initial service. Police and BRINT veterans may also be able to obtain very specialised equipment on loan for a short period of time, provided that they give the loaning agency a report of what they have learned about any criminal or subversive activities they have discovered through use of the equipment. Of course, if damaged or lost, loaned equipment must be paid for at the full cost of replacement.

It might be noted that some of the government agencies look after their own, and retired personnel may find that they have quite a bit of influence with their initial service so long as they remain citizens in good standing and do not commit any acts disapproved of by their fellows in the Service.

## SPECIAL RETIREMENT BENEFITS

When a character musters out of his initial service, he will receive a travel warrant back to the planet of his birth, The PC has the Options of using the warrant immediately or cashing it in for a warrant to another destination (with cash refunds if to a lesser distance or additional payment to a greater distance) or for a simple cash refund:

High Passage: All PCs with a rank grade/8+ receive a High Passage warrant worth CR 100 + CR 100 per LY to be travelled. Accommodations include a private stateroom of the first class, about 25 m³, with a I tonne baggage allowance. Service includes superb cuisine and full steward service. Merchant Marine Officers will be able to obtain a -20% discount on such accommodations, if paying.

Middle Passage: All PCs with a rank grade/5-7 receive a Middle Passage warrant worth CR 60 + CR 60 per LY to be travelled. Accommodations include a shared stateroom of respectable quality and a 250 kg baggage allowance. Service includes good cuisine and limited steward service. Merchant Marine Officers may obtain a -20% discount on such accommodations, if paying.

Low Passage: All PCs with a rank grade/0-4 receive a Low, Passage warrant CR 40 + CR 40 per LY to be travelled. Accommodate ions are equivalent to 'steerage' on an ocean-going vessel, with 4 passengers sharing 1 stateroom in rather cramped conditions. Baggage allowance is 100 kg. Service includes ship's rations and very limited or non-existent steward service. All Merchant Marine personnel may obtain a .20% discount on such accommodations, if paying. -

The value of a travel warrant depends upon the distance to be travelled. Roll 2.d100 to find the distance in Light Years or LY from the place where the PC mustered Out to his home planet. Then compute the value of the warrant. As noted, the PC may use the warrant, retain it against future need, cash it in, or exchange it for a ticket to some lesser or greater distance (with adjustment for distance costs).

Deadheading: Retired or unemployed Merchant Service Guild members may attempt to 'deadhead' their passage in crew quarters, in effect working their passage without wages. This practice is frowned upon by Starship owners, but the various Guilds unobtrusively encourage their members to extend a 'fraternal hand' to their colleagues in distress, The chance of a PC or group of PCs obtaining a berth is a flat 10%, unless they actually know someone of rank aboard the vessel (this can be arbitrarily determined by the Starmaster), at which point the probability is raised to 25%. If the PCs appear to be in desperate trouble (they are being pursued by a Starships are regarded as part of the territory of the planet of registry, and local authorities have no jurisdiction aboard them, Local action has to be taken through diplomatic or other channels, such as the IPA, BOSS, BRINT, or the StarForce

## 4.0 PC KNOWLEDGE & SKILLS

A new PC would be relatively incompetent and helpless in an advanced technological society if he did not have any specialised knowledge and skills to apply to the life of adventure he will undoubtedly lead. The following rules and skills provide the opportunity for PCs to acquire a level of expertise in chosen fields.

### Expertise

A PC will be able to acquire expertise in astronaut, scientific, military, paramilitary, technical, and general skill areas. Each skill is rated for a maximum level of expertise, thereby establishing a range of competence from 0 to the maximum rated level. The level of expertise attained by a PC will be entered on his record sheet by writing the name of the field or skill, followed by a diagonal 'slash,' and then the number of the skill level. For example, Laser/5 means that the PC has acquired level 5 expertise in the use of laser weapons, which will give him certain advantages in combat. Different fields of knowledge and practical skill will have different levels of expertise, most having maximum expertise of level/5 to level/10.

### Acquiring Initial Expertise

The pre-game career background of a PC represents his past experience in a chosen vocation. Both before he entered some government or civilian service and after enlistment, the PC would have acquired a fairly substantial level of expertise in a goodly range of fields and skills.

To reflect pre-service education and service training prior to a PC's entry into the game, he will be awarded a number of skill points or SP with which the player can make 'purchases' of desired skills. At this stage, there is no limitation placed upon the expertise that may be acquired in a given field or skill; if the PC desires to purchase maximum competency in any area, he may do so. However, players should remember that a well-rounded PC should have a range of skills. Over-concentration on a narrow area could result in a PC with maximum competence in some fields and a total ignorance of many other essential skills, the lack of which. he may feel during role-

play. Since PCs will be given a chance during role-play to develop additional expertise in skill areas already possessed or to learn new skills, there is no dire pressure to become the complete master of every skill chosen initially.

Each field of knowledge or skill area is described later, and the SP cost of acquiring one level of expertise is plainly noted at the beginning of each skill descriptions. PCs may purchase one level of expertise merely by expending the requisite skill point(s). As many levels of expertise as the player desires to purchase can be acquired in this manner.

All of the skill points assigned to a PC must be expended on skill development prior to entry in the role-play, Skill points are obtained as described below:

Armsman: PCs receive 1 SP x sum of Strength, Constitution, Dexterity, Agility, Intelligence, Leadership, and Bravery scores, This yields a range of 7-133 SP, With middle values likely. Half of this number of SPs must be spent on military and/or paramilitary skills appropriate to the PC's service career, along with an additional 5 SP x number of years of service before entry into the game, The remaining SPs can be spent to acquire any other desired skills.

Tech: PCs receive 1 SP x sum of Dexterity, Intelligence, Intuition, Leadership, GTA, MechA, and ElecA scores. This yields a range of 7-133 SP, with middle values likely. Half of this number of SPs must be spent on technical and/or scientific skills appropriate to the PC's service career, along with an additional 5 SP x number of years of service before entry into the game. The remaining SPs can be spent to acquire any other desired skills.

Research Scientist: PCs receive 1 SP x sum of Dexterity, 3x Intelligence, 2x Intuition, and any one of GTA, MechA, or ElecA scores, This yields a range of 7-133 SP, with middle to high values likely. Half of this number of SPs must be spent on scientific skills appropriate to the PC's service career, along with an additional 5 SP x number of years of service before entry into the game. The remaining SPs can be spent to acquire any other desired skills.

Medical Scientist: As for Research Scientist, Only with a strong emphasis on medical and biological science fields.

MediTech: A MediTech can be given SP as described for a Tech or he can be awarded I SP x sum of Dexterity, 2x Intelligence, Intuition, GTA, MechA, and ElecA, whichever is more advantageous to him. This yields a range of 7-133 SP. The MediTech may spend half of this total on Tech, scientific medical skills, and general science skills, along with an additional 5 SP x number of years of service before entry into the game. The remaining SPs can be spent to acquire any other desired skills.

Scientist-Engineer: As for Research Scientist, only specialisation may be split between general science, engineering science, and technical skills.

Astronaut: PCs receive I SP x sum of Dexterity, Agility, 2x Intelligence, Leadership, Bravery, and GTA. This yields a range of 7-133 SP. Half of this number of SPs must be spent on astronautic and related skills (like flying), along with 5 SP x number of years of service before entry into the game. The remaining SPs can be spent to acquire any other desired skills.

All PCs: In addition to the skill points as awarded above, each PC rolls 6d6 for skill points which can be applied to the purchase of General Skills only. This random determination is representative of the background in miscellaneous skills the PC managed to acquire in his life apart from the more obvious career-oriented choices made above.

It is possible, although very unlikely, that a PC could acquire as many as 319 SP through his having perfect characteristics, serving 30 years of -initial service, and rolling 24 for his General Skills bonus. While players might regard this as somewhat extreme, it should be noted that this represents 48 years of a PC's life, from 1/3 to (/2 of an advanced character's total lifespan. In a highly advanced culture, that time period represents an opportunity to acquire a lot of knowledge and expertise:

## 4.1 LEARNING SKILLS IN THE GAME

Life in a future setting will provide ample opportunities for PCs to exercise a variety of highly specialised areas of knowledge and technical skill which enhance their abilities to cope with equipment and problems requiring their attention.

Before entering the game, the PC will have acquired a background which gives him a good basic stock of knowledge and skills expertise. After entering the game, the PC will probably wish to continue improving his expertise beyond the areas and the levels acquired initially. Such 'self-improvement' will be vital to a PCs ultimate success in his chosen career(s). Study is required in most instances, Study involves the expenditure of time and the availability of appropriate facilities, learning equipment, materials, and Sometimes instruction by an expert in the chosen study area. A PC might take a formal course in an educational or training institution, on-the-job training from an instructor, or Simply a self-learning or private tuition program

The time required to master one level of expertise will vary according to the nature of the field or skill under study. Each skill has the basic learning period stated in weeks, months, or even years, depending on the degree of difficulty and the amount of material to be mastered to advance one expertise level.

After the appropriate learning time has passed, the PC rolls 1d100 percentile dice to see if he has learned the subject. His percentage chance of passing to the next level is expressed in the following formula:

$$\% \text{ to Learn} = \frac{40 + IS + PCA}{EL + 3}$$

40 = Constant value applied to all Learning chance computations.

IS = Instructor Skill. The basic skill of the instructor is equal to 10 x his expertise level in the field under instruction, when his class is at an Optimum teaching number. The optimum class size for any character attempting to teach others is equal to his Empathy score. For each student over his optimum class size, the IS is reduced by -10. For each student under his Optimum class size, the IS is increased by +3, For example, a PC is attempting to instruct a class in Blaster Weapons. The instructors skill expertise is Blaster/5. If he has Empathy/ 12, so he will be able to teach 12 students with IS 50. Each additional student will reduce his IS by .10 until he has a basic IS/10 bottom limit.

In this instance, when his class reaches 16+ students, his IS will be at base 10. On the other hand, for each student under 12, the instructor's will increase by +3, so that when he is down to 1 student in a face-to-face, person-on-person tuition situation, he will have IS/83, gaining +33 for the 11-student reduction from his Optimum class size.

PCs may acquire Education as a science skill field, if they have minimum Empathy/11. Each expertise level of Education will increase the optimum class size by +1. If the Instructor in our example had Education/10, his Optimum class size would be 22, and one-on-one tuition would give him a superb IS/113, enough to prepare even a moron for a competence exam,

PCA = Player Character Aptitude. The PCA is found by comparing the pre-requisite personal characteristic to learn a particular skill to the 'A' value in the following

table. The 'A' value is the PC's PCA or aptitude in that particular subject. When the PCA is 10 or less, the % chance of learning is never higher than 50%, no matter how good his instructor is or how low the level of expertise to be acquired may be,

| C= | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----|----|----|----|----|----|----|----|----|----|----|
| A= | 1 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 14 |
| C= | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | |
| A= | 17 | 20 | 23 | 26 | 30 | 35 | 40 | 45 | 50 | |

'C'=    is the pre-requisite personal characteristic called for to learn the given subject. 'A' is the Aptitude Factor arising from the personal characteristic score stated directly above. For example, if a skill called for Agility as a pre-requisite, an Agility 15 would yield an 'A' factor of 30, which is substituted into the learning equation.

EL =    Expertise Level to be acquired in the learning experience. The EL is always 1 expertise level above the PC's current expertise in the skill. A standard constant of +3 is added to the EL. For example, a PC is at Blaster/2 and wishes to attain Blaster/3. The learning period is 1 week. His friend is an instructor With Blaster/10, a master par excellence. The instructors Empathy is 13, and he has Education/4, giving him an IS' of 148. Blaster skill requires Dexterity and GTA, which are averaged. He has a Dexterity/14 and GTA/9, averaging to 11.5 12. His PCA is at 'C'/12, giving PCA/20. Substituting in the learning equation, we have:

Learning Percentage = $\frac{40 + 148 + 20}{3+3}$ =34.6% =35%

Each additional learning period will add 10% to the Learning %, until a maximum of +50% is obtained. If the PC continued his face-to-face instruction with his friend for 5 weeks above the 1 week minimum, he would obtain an 85% chance of acquiring an increase of 1 level of expertise in the use of Blaster weapons.

If the PC fails in his learning attempt, he can continue practising and studying for a period of time equal to 1/2 the initial time of instruction and study, then may try again at the same percentage. If he fails a second time, he will have to wait the maximum period before each subsequent attempt — signifying a slowness in his capacity to master that particular level of expertise.

Continuing with our example, if the PC failed in his initial attempt to learn at 85% in five weeks, he could try again in 2.5 weeks at 85%. If he failed again, he would have to wait 5 weeks for each subsequent attempt to learn the skill.

The number of different skills a PC may attempt to learn at the same time is a function of his time to learn and study. Any skill requires 12 hours of study, practice and tuition per week. If a PC is normally employed, he will have 4 hours per day free for study or 24 hours per week. If a PC is enrolled in an institution of learning Or is in training full time, he will have 12 hours available per day or 72 hours per week. In short:
PC is employed    2 skills may be studied simultaneously.
PC is a student    6 skills may be studied simultaneously.

If a PC is involved in a particularly active adventure which uses up much of his time, he will not be able to learn more than one skill at a time. PCs on active duty in wartime under combat conditions would likely be in such a situation.

It may happen that a PC has no instructor and is attempting to learn a skill by himself. In such an instance, use the following formula:

Percentage to Learn $\frac{40 + PCA + Intelligence + Intuition}{EL + 1}$

For example, using our PC who was attempting to learn Blaster/3, suppose that the PC had no instructor and was trying

to figure out the problem for himself with the aid of his Irttelligence/13 and intuition/16. Substituting in the equation, Percentage to Learn = $\frac{40 + 20 + 13 + 16}{3+1} = \frac{89}{4}$ = 22.25 = 22%

Each week of additional study will add a percentage equal to 'A intelligence, until +50% is reached. With Intelligence/13, the PC would obtain
+7% (round fractions up) per week of extra study. In 50/7 = 7 weeks he would obtain +49% for a maximum 71% chance of mastery. (The PC would probably not spend an additional week to acquire +1%.) The remainder of the procedure is as outlined previously.

Learning Tapes can be acquired to assist a PC in a self-learning process. A Learning Program is a computer chip suitable for a MiniComp unit (mini-computer) and contains the necessary instruction for 1 expertise level of mastery of a skill. The cost of a Learning Program is CR 25 x expertise level x number of weeks required to learn. A Blaster/3 Learning Program would therefore cost CR 75 (25 x 3 x 1). The Instructor' is rated at IS/100, as the tape will be prepared by a master Educator in conjunction with an expert in the skill area.

## 4.2 NON— PLAY SITUATIONS

There are moments when time should be taken from the vigorous action of role-playing to take care of PC learning and other 'non-playing' events which will underlie the capacities of the PCs as they pursue their individual goals. Non-play can be conducted even at the height of a vigorous action. For example, several of the PC's might be involved in a furious chase scene somewhere in the spaceport and are fleeing toward their ship where their companies are warming up the drives in preparation for a fast getaway from the aroused locals. The PCs on the ship have nothing to do at the moment and one of the players can easily 'witness' a learning roll made by another at such a moment.

Much by-play can also be elicited from 'non-play' events. A PC could be learning a skill from another PC, and the moment of truth has finally arrived after several brutal months of building the student up to the point where he feels he has a chance of passing his 'tests. It is his third attempt, for he does not have much aptitude in the area. His PC instructor/examiner talks up the situation, offhandedly commenting on a few supposed answers and 'solutions' to practical skills offered by the student. The whole idea is to build up the tension and then the PC instructor rolls the 1d100 dice, hiding the result from his 'student.' 'Uh, Gee, Gort — I don't know how to tell you this, you worked so hard and all, but...' There is a long, fatal pause….. I just can't understand how a dumb cluck like you passed!' Blasterman/3 Gort Sandemman probably fires his Blaster in the air with sheer joy at this, likely forgetting that he is sitting in the crew lounge of the spacecraft.

By putting some role-play into the routine operations of maintaining and developing their PCs, the players can avoid some of the boredom and irritation that a few of their action-prone fellows might feel if the whole thing was done in a matter-of-fact way. To be honest, there is a real pay-off waiting for a PC who succeeds at a learning test, and the dramatic potential should not be ignored.

## 4.3.SCIENTIFIC FIELDS AND SKILLS

The following scientific fields and skills are open to all PCs. Acquisition may be had initially through the skills purchase system outlined in 4.0. However, once a PC has entered into role play, the learning system given in 4.1 Learning New Skills will be used.

Each field of science has 10 expertise levels. The skill point cost for initial purchase also represents the time in months of study for a character to acquire one expertise level of mastery.

**PHYSICAL SCIENCES**

The following 'hard' sciences relate to the physical sciences area. Players will note that some sciences have been combined into a larger grouping for convenience of handling and because too great a diversity becomes impossible to handle in a playing situation. Aptitude = Intelligence.

GENERAL PHYSICS: 1 SP/1 Month, A broad-spectrum 'basic' program of study in a wide range of fields, such as Force & Motion, Energy & Thermodynamics, Atomic Structure, States of Matter, Basic Molecular Structure & Chemistry, Optics, Electromagnetic, Nuclear Physics and the new (to us) areas of Force Field Physics, Hyper-Dimensional Physics, and Temporal Physics. The entire program can be acquired by any PC as the foundation program taken in secondary and college education and is not subject to initial purchase limitations. Since Basic Physics is a pre-requisite held, expertise/10 is recommended for all science-oriented characters.

ADVANCED MATHEMATICS: 2 SP/2 Months. A high-powered program of study in the more esoteric forms of maths, beginning with simple Calculus and progressing to highly complex forms capable of dealing with just about any data a Scientist or Engineer has to analyse. Advanced Mathematics is a pre-requisite to any Physical Science marked with an asterix (*), and advancement cannot progress beyond one expertise level higher than the Advanced Math skill currently held, Astrogation is an Astronaut skill requiring expertise in this area.

CHEMISTRY: 2 SP/2 Months. An advanced program involving the study of the intricacies of molecular bonding and related subjects. It is essential to any complex chemical contemplated by a character.

GEOGRAPHY: 2 SP/2 Months. A comprehensive program involving the study of the principles by which planetary forces work (Vulcanism, Meteorology, Climate, etc.), Mineralogy (requiring chemistry skill for any detailed analysis), and general Geography (map-making, surveying, etc.)

PLANETOLOGY: 2 SP/2 Months. As advanced Geography field involving the analysis of planets other than one's native planet. Skills include planetological analysis from space and on the ground. Prerequisite: equivalent expertise in Geography.

ASTRONOMY*: 3 SP/2 Months. The study of celestial bodies and phenomena. An Astronomer can perform interplanetary and interstellar surveys or investigate any phenomenon or object in space with a variety of optical, radio, sensor, and other equipment. The field is a 'must' for any Astrogator.

NUCLEAR PHYSICS*: 3 SP/3 Months. A specialised field of study involving all forms of nuclear energy theory, atomic and sub-atomic particles, anti-matter, etc.

FORCE FIELD PHYSICS*: 4 SP/3 Months. A highly specialised field of study involving the theory of 'solid' force fields and force manipulation of matter. Pre-requisite: equivalent expertise in Nuclear Physics.

HYPE A—DIMENSIONAL PHYSICS": 4 SP/3 Months. A very complex and difficult field involving the theory of Hyper-Space, Tachyons, FTL travel, and Sensor Fields. Pre-requisite: equivalent expertise in Nuclear Physics and Force Field Physics. The field is a 'must' for Starship Engineers, Drive Engineers, and Weapons Engineers. Characters with Intelligence under 13 cannot comprehend the field.

TEMPORAL PHYSICS*: 5 SP/3 Months. An exceedingly exotic field of science which studies the theory of Alternate Universes and Matter Transmission. Pre-requisites: equivalent expertise in Nuclear Physics, Hyper-Dimensional Physics, and Force Field Physics. Characters with Intelligence under 17 cannot comprehend it.

ADVANCED METALLURGY": 2 SP/2 Months. A branch of Chemistry involving the processing of ores and the development of alloys. Pre-requisite: equivalent expertise in Chemistry. When combined with Nuclear Physics/5 and Force Field Physics/5, a Scientist with Metallurgy/10 can produce Collapsium, the most resistant matter known. Metallurgy is essential in Starship Engineering.

## LIFE SCIENCES

The following Life Sciences include a broad range of biochemistry, biology, zoology, and related fields. Aptitude = Intelligence

GENERAL BIOLOGY: 2 SP/2 Months. A broad-spectrum 'basic' program of study in a wide range of fields, such as Botany, Zoology, basic Biochemistry, the Cell, Micro-organisms, Viruses, Metabolism, etc. The field is a pre-requisite to all other Life Sciences, and progress in them cannot exceed the General Biology expertise level currently held by a PC'

BIOCHEMISTRY: 2 SP/ 3 Months. An advanced program in biochemical study. The Scientist gains skill in making biochemical analyses, producing biochemical substances, and using equipment. Pre-requisite: equivalent skill in Chemistry until expertise/5 is reached.

BOTANY: 2 SP/2 Months. As advanced program in the study of plants on one's native planet.

XENO—BOTANY: 3 SP/3 Months. The study of alien plant forms. Pre-requisite: equivalent levels of expertise in Biochemistry and Botany. The PC acquires to analyse and theorise about the structure and functions of alien plant forms.
ZOOLOGY: 2 SP/2 Months. An advanced program in the study of animal life on one's native planet.

XENO—ZOOLOGY: 3 SP/3 Months, The study of alien animal forms. Pre-requisites: equivalent levels of expertise in Biochemistry and Zoology. The PC acquires the ability to analyse and theorise about the structure and functions of alien animal forms.

ECOLOGY: 3 SP/3 Months. A broad-spectrum field involving the analysis of the Eco-systems in the native environment. Pre-requisites:
equivalent expertise in Geography, Biochemistry, Botany, and Zoology.

XENO—ECOLOGY: 4 SP/3 Months, The study of alien Eco-systems and the inter-relationships between life forms in 'off-planet' (native) environments. Pre-requisite: equivalent expertise in Ecology.

## SOCIAL SCIENCES

The following Social Sciences all deal with the social interactions of sentient life forms in their cultural settings, Aptitude = Intelligence & Empathy.

GENERAL SOCIAL SCIENCE: 2 SP/2 Months. A broad-spectrum 'basic' program in Psychology, Sociology, Political Science, Economics, etc., as a means to understanding the basic social behaviours and cultural patterns in one's native society, the field serves as a prerequisite upon which all advanced social science programs are based, and no advanced program can exceed the General Social Science expertise level currently held by the PC.

LINGUISTICS: 5 SP/4 Months. A social science making the study of languages its central focus. For each expertise level gained., a Linguistic Scientist acquires mastery over the language patterns of a racial group and can subject it to analysis for translation purposes. A Linguist requires Constitution 14+ to withstand the tremendous stresses placed on his system by the hypno-learning and RNA 'crash' education techniques required to compress the time factor required to cover such a massive field. An additional month of learning time is required for each point his Constitution is below 14, The Linguist will study his own

race's known Languages in the first expertise level. In the second and subsequent levels, he will be able to choose the language group he wishes to study next as, for example, Saurian tongues or Humanoid languages. Also, he will master 1 language!/dialect per expertise level plus 1 language/dialect x 1/4 of the sum of his Intelligence and Empathy scores (round to the nearest whole number). He may analyse a new language in a number of days equal to 100 divided by the sum of his Intelligence and expertise, and may speak it well enough to be intelligible on relatively simple matters. In 5 times that period, he will be able to speak quite fluently. (Analysis time is based on his having at least a Mk. V MultiComputer; increase analysis time by 50% for each computer Mk. below M.k V.) The field is essential to Contacts personnel and to any PC expecting to encounter a wide range of races.

HISTORICAL SCIENCES: 3 SP/3 Months. A comprehensive field involving the study of racial history in the first level, Archaeology in the second, Palaeontology in the third, and then Xeno-History from the fourth expertise level onward. The Historical Scientist is capable of reconstructing the past history of a race from artefacts and sometimes remarkably few clues. The field is utterly essential to tracking down the sites of Forerunner settlements, determining the worth of objects d'art of native and alien cultures (Comparative Aesthetics is part of the program of study), etc. Pre-requisites: equivalent expertise in Comparative Cultures & Xenology and in Linguistics.

COMPARATIVE CULTURES & XENOLOGY: 3 SP/3 Months. A field of very advanced anthropology and sociology which deals with the various similarities and differences of variant racial cultures and purely alien cultures. The field is essential if a Scientist is going to make sense of a strange cultural pattern and be able to make predictions about trends in social behaviours, codes of conduct, and many other factors which will enable him to deal with members of a new culture. His advice and instructions will often mean the difference between success and disaster in a first contact situation. His knowledge will often prevent crewmen from running afoul of local customs when 'ashore' and can greatly facilitate profitable trade or negotiations. Pre-requisite Linguistics at an equivalent expertise level.

PSYCHOLOGY & XENO—PSYCHOLOGY: 3 SP/3 Months. A field related to Medicine and often taken by Physicians, Psychology deals with the emotional health of people in much the same way as medical science deals with physical health. If the Psychologist has equivalent expertise with Linguistics and Comparative Cultures and Xenology, he acquires the skill and knowledge to deal with alien psychology as well. In such a case, he is able to predict the behaviour or individuals in a given situation with a high degree of accuracy.

## MEDICAL SCIENCES

The medical Scientist is a combination of pure researcher and practical healer. The following very comprehensive programs permit a Scientist to develop a high degree of very useful skill in the healing arts: Aptitude, Intelligence, Intuition, and Dexterity.

NATIVE MEDICINE: 3 SP/4 Months. The 'pure' medical sciences. See Medical Scientist later in this section for details. Pre-requisite: General Biology and biochemistry at equivalent expertise level.

XENO—MEDICINE: 3 SP/4 Months. The 'off-planet' companion to Native Medicine. Xeno-Medicine involves the study of off-planet (alien) life forms from the medical point of view. The field is essential to dealing with alien diseases and treating alien patients. Pre-requisite: Native Medicine and Xeno-Zoology at equivalent expertise levels.

MEDICAL PRACTICE: 3 SP/4 Months. The 'practical' medical sciences. See Physician later in this section. Pre-requisite: Native Medicine at equivalent expertise level to treat native patients

and Xeno-Medicine at equivalent expertise to treat alien patients.

## THE MEDICAL SCIENTIST

The 'pure' Medical Scientist is a combination of a research scientist and a medical engineer. If the PC obtains expertise/3 in Medical Science, Electronic Engineering, and Computer Engineering during his initial skills acquisition period, further advancement in all three fields will be made at a cost of 5 SP or in 6-month periods. A Medical Scientist with such training can perform repairs on medical equipment like a Tech (see 5.0H Equipment Maintenance) at expertise/I-5 beginning at expertise/6, he will be able to begin designing and constructing medical equipment.

Medical Scientists can carry out routine forms of medical research with a good chance of success; 75% + 3% x skill level to a maximum of 99% without unduly long time periods being involved. Routine research would include analysis of biological specimens to discover the presence of alien organisms and to determine their possible malignancy with regard to life. Simple diseases, hitherto unknown, could be discovered and a cure found in a matter of a few days.

More complex diseases can be subjected to the Scientific Research method outlined later in the Science section, with complexity levels varying from 1 to 10. The time factor, however, should be understood as being more variable than that proposed for other kinds of Scientific Research.

The standard equipment of a Medical Scientist includes a Medi-Computer (usually a Mk.V or better) and a totally self-contained, computerised biolab. which is sealed from the surrounding environment. Because of their Computer Engineering expertise, Medical Scientists can write programs for reference by Physicians or to direct the operations of medical equipment, so their findings will be of considerable value.

Diagnosis of known diseases is within the purview of the Medical Scientist, with diagnoses accurate at 40% + 5% x skill level, if no computer is available for consultation, and at 60% + 2% x Computer Mk. + 4% x skill level if a computer is available with a Medical Science program in it.

Medical Scientists require Xeno-Medicine to be expert at alien Medical Research. This field can be acquired at the usual cost in SP or study, and attached to the Medical Research field, as described in the first paragraph of this section.

## PHYSICIANS

The Physician is a practical scientist trained in the diagnosis and chemical/biochemical/radiological/surgical treatment of disease and injury. Pre-requisite: Medical Science and Dexterity 12+.

The Physician's facilities are amongst the most sophisticated to be found, even aboard a Starship, excepting perhaps the Bridge and the Power Deck. He has at his disposal a battery of fully or partially computerised data systems, life-support systems surgical equipment, and biological laboratory, utilising the latest in laser, radiation, chemical, and electronic technology.

For the first 5 skill levels a Physician will have the healing abilities of a Medi-Tech (see Tech Skills & Training), for he is still 'interning' and has not acquired an M.D.

At Medical Science/6, the Physician becomes a doctor in the full sense of the word. He can now treat wounds and other physical injuries with great skill, literally 'repairing' biological organisms in much the same way that an Engineer or Tech repairs a piece of damaged equipment.

When no more than 1/3 of a victim's damage factor has been lost, a Physician can restore the damage at the rate of 21

points/hour at L/6, 28 points/hour at L/7, 34 points/hour at L/8, 43 points/hour at L/9, 55 points/hour at L/10,. Of course, no more than 1/3 of the damage factor total can be restored to any one patient at this rate, but the Physician can spread his skill to a number of patients. Also, the Physician may work at this rate for a number of hours per day equal to his skill level. Such a procedure assumes Quicklime facilities are available.



If a patient has suffered more than 1/3 damage, the Physician may repair only 1/3, leaving the remaining damage to heal normally. However, the healing time will be speeded up by 5% x skill level of the attending Physician so long as the patient remains in Sick Bay or in a hospital.

Diagnoses may be made by a Physician at the percentages outlined for the Medical Scientists,

Physicians can make required drugs with a 30% chance of success + 3% x skill level + 3% x Mk. of the Medi-Computer (which also serves as a measure of the laboratory facilities which are available. The time required will vary from 1-6 hours for simple preparation, and from 1-6 days for complex drugs and chemicals, This skill is also possessed by Medical Scientists.

## 4.4 SCIENTIFIC RESEARCH

It is assumed that all Scientists have acquired the foundations needed to perform routine and original research in their fields of expertise. That is, all Scientists will have a firm grasp of statistical analysis, computer operation for purposes of setting up scientific research programs, and skill with the appropriate laboratory and field equipment needed to conduct observations and perform experiments.

Routine gathering and analysis of data is a simple matter. A Scientist has an 71% chance of making the correct observations plus 1% per Intelligence point and plus 1% per skill level in the major science involved (the science which has the most bearing on the problem, when several might be regarded as applicable). Most basic observations will be made, and conclusions drawn, within minutes or perhaps a few hours at most.

More extensive scientific research can be a relatively simple and direct procedure, or it can be complex and difficult. The StarMaster, usually in consultation with the players, can set the complexity level of the problem, typically on a scale of 1 to 12, although very difficult problems could be as high as complexity/16.

Also, the number of sciences coming to bear in the problem should be decided. In most routine situations, only one science will be involved. The same is true of a fair number of basic research situations. However, some problems will require the application of several sciences to obtain the maximum chance of success. One science will always be designated as 'major' or the most important, but up to six others might prove of value in improving the researcher's chances of solving the probe. The relation of these related sciences and the benefits to research chances they confer are summed up in the following table.

| Nature of the Scientific Problem | Level of Complexity | Success DM x Skill Level in Major Science Field | Success DM x Skill Level in Related Science Fields |
|---|---|---|---|
| Single Science | 1-10 | +9% x skill levels | --- |
| Two Sciences | 1-10 | +8% x skill levels | +1% x skill levels |
| Three Sciences | 1-11 | +7% x skill levels | +1% x skill levels |
| Four Sciences | 1-13 | +6% x skill levels | +1% x skill levels |
| Five Sciences | 1-14 | +5% x skill levels | +1% x skill levels |
| Six Sciences | 1-15 | +4% x skill levels | +1% x skill levels |
| Seven Sciences | 1-16 | +3% x skill levels | +1% x skill levels |

Each complexity level of the problem has a -5% DM on the success chances, and an additional -1% DM is charged for each problem grade above single-science problems. That is a seven-sciences problem with a complexity of 8 would have a penalty DM of -(5% + 6%) x 8 = 88%.

The chance of success is found by adding all of the success DMs and then subtracting the problem complexity DMs. In some instances, it will be found that a negative chance of success exists. This means that extra help is needed, and a Scientific Research Team may be formed.

Any time that a Scientist cannot obtain a 20% success rate with

a research problem, he may recruit a Research Team such that a 20% success rate can be achieved (but no higher.) This involves finding other scientists with the skills he lacks to bring the probabilities up to the 20% level. He may also defer to a more expert Scientist, who then becomes the main researcher.

The time factor involved in research is highly variable. Single-science problems will generally take 1 day x complexity level, but complex problems can take weeks or even months before there is a chance of an 'answer.' The following table gives the approximate time scales that will apply in most instances. The StarMaster has the discretion to modify the research time periods slightly upward or downward.

The time factor also assumes the use of at least a Mk. V Computer. Add + 10% to the time required for each class of computer used below Mk.V and +250% if no computer is used.

Subtract -10% from the time required for each class of computer used above Mk.V, A computer will also add +2% to success chances per computer Mk. above Mk.V.

| Level of Problem Complexity | Time Required for Research Problem as Compared to Science Expertise | | | | | | |
|---|---|---|---|---|---|---|---|
| | One Science | Two Sciences | Three Sciences | Four Sciences | Five Sciences | Six Sciences | Seven Sciences |
| 1 | 1-2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 3 | 4 | 5 | 6 | 8 | 10 | 12 | 15 |
| 4 | 5 | 6 | 8 | 10 | 12 | 15 | 20 |
| 5 | 6 | 7 | 10 | 15 | 15 | 20 | 25 |
| 6 | 8 | 8 | 12 | 20 | 20 | 25 | 30 |
| 7 | 10 | 10 | 15 | 25 | 25 | 30 | 35 |
| 8 | 12 | 12 | 18 | 30 | 30 | 35 | 40 |
| 9 | 14 | 15 | 20 | 35 | 35 | 40 | 45 |
| 10 | 16 | 18 | 25 | 40 | 40 | 45 | 50 |
| 11 | 18 | 20 | 30 | 45 | 45 | 55 | 60 |
| 12 | 20 | 25 | 35 | 50 | 50 | 60 | 70 |
| 13 | 22 | 30 | 40 | 55 | 55 | 70 | 80 |
| 14 | 24 | 35 | 45 | 60 | 60 | 80 | 90 |
| 15 | 26 | 40 | 50 | 65 | 65 | 90 | 100 |
| 16 | 30 | 45 | 55 | 70 | 70 | 100 | 110 |

The time period is stated in days required for the gathering of data and for analysis of the data.

Success probabilities are always computed on qualifications of the Chief Scientist in charge of the research, with only his deficiencies in the secondary fields being made up by the members of his research team. As noted above, a character may always hand over a research problem to a more expert Scientist in order to increase the success chance.

If a failure occurs in the research, the experimentation and inquiry may be repeated, with 11% x skill level in the major scientific field possessed by the Chief Scientist being applied to subsequent research. Scientists learn from their mistakes.

Success means that the problem is solved and the information is now understood in the light of a working scientific hypothesis.

To a degree, the knowledge and fairness of the Starmaster is essential to the proper use of the Scientific Research procedure.

Routine operations and procedures are almost always at a single science level, at complexity/1, with a maximum research and analysis period of 2 days. The time often is only a few minutes or hours. For instance, a Science Officer is making an atmospheric analysis, requiring Chemistry expertise. A complete read-out on the atmosphere is accomplished by the 'research' procedure, If the Scientist's Chemistry skill is expertise/7, he will have a 7 x 9% = 63% chance of success. A failure in such an instance will mean that most of the data is essentially correct. However, the Science Officer may have missed something which allows the Starmaster to introduce a few 'surprises to the personnel assigned to landing. The time required for such an analysis, using advanced technology, would be under an hour. Of course, no micro-organism data will be available such analysis would be a two-science problem at least, involving Biochemistry and Xeno-Zoology and perhaps Xeno-Botany. An Ecology expertise could reduce the analysis to a single-science problem, Such an analysis might require several days to as much as a week. Even then, without Xeno-Medicine, harmful organisms might not be detected. It could also be that such an analysis could be of higher complexity if an exhaustive survey was required.

An example of an advanced operation is the Linguistic Analysis of a 'dead' alien language. The Linguistic Scientist must have a knowledge of the dead race's language group. In addition, Comparative Cultures/Xenology, Historical Sciences, and General Social Sciences must be brought to bear. The Scientist has Linguistics/9, Comparative Cultures/7, Historical Sciences/7, and General Social Sciences/9. This is a 4 sciences problem. Worse, there is no observable race to watch in order to make deductions, so the Starmaster is perfectly correct in assigning a complexity level of 12 to the problem.

The Linguist has 9 x 6% = 54% for his Linguistics ability, plus 23 x 1% = 23% for his related Sciences. He is using a superb Mk. IX Starship computer to assist him, adding +8% to his chances. His total is therefore +85%, Against this is a very nasty 12 x -5% = -60% reduction because of the sheer complexity of the problem, leaving the Linguist with a mere 25% chance.

The Linguist will require a total of 50 days x 60%, as the Computer Mk.IX has reduced the time, factor by 40%. The Linguist has to wait 30 days for the answer, at which time 1d100 is rolled. Suppose that the result was 42, far above the 25% probability. The Scientist will simply have to try again, but with a +9% chance added to his probability because he has certainly learned something about the alien language even if he still can't 'crack' it yet. He punches in the new program, waits another 30 days, and then checks again at 34% chance. This will go on as long as it is necessary to crack the problem or cause the Scientist to give up in disgust.

It is clear that no problem will be closed to the determined scientist who has the skill to undertake the research and the patience to expend the time to do it, However, the Starmaster can set a 'multiple' complexity problem, particularly in the case of very advanced equipment or highly significant pure research, requiring a whole series of research steps to be successfully performed before any real 'answers' are forthcoming. For instance, if a character announced that he wanted to do pure research to develop a matter transmitter, it would not be untoward to call it a 7 science problem and assign it a complexity of 16 with 49 separate steps to be performed before the theoretical knowledge is available to be turned over to the Engineers, who would have their own problem set next, namely, how to build the damn thing?

From the foregoing, it is also clear that a bit of creative 'rule writing' will emerge in the course of a campaign. No set of rules can begin to lay out all of the possible kinds of scientific and engineering research or lay down fast and hard guidelines on how to interpret a given problem. The Starmaster and players will therefore have to work out some of the details together. The key is to touch all of the 'bases,' to force a Scientist or Engineer to really stretch himself and his colleagues when trying anything significantly out of the ordinary. Above all, any modifications to equipment which result in markedly improved performance or the development of new and wondrously fantastic devices should be rigidly circumscribed by high difficulty levels. Also, when the new equipment is finally introduced, the breakdown number could be much higher then expected. After all, prototype systems often fail in the field.

The secret, then, is plain common sense and an eye to play balance.

## 4.5 ENGINEERING

A Scientist-Engineer is a PC who chooses to branch off into the practical application of his scientific training, He will acquire the equivalent skills of a Tech in his chosen field(s) of specialisation, In addition, an Engineer can perform practical research on a technological problem and may design or improve equipment.

MECH ENGINEERING: 2 SP/2 Months. Mech Engineering involves the practical application of scientific expertise to the design and operation of mechanical systems and vehicles, before the field can be entered, the Mech Engineer must have pre-requisite of Physics/5, Math/3, Chemistry/2, and Metallurgy/2. Aptitude: MechA.

ELECTRONIC ENGINEERING: 2 SP/2 Months. Electronic Engineering involves the practical application of scientific expertise to the design and operation of electronic systems. Before the field can be entered, the Electronic Engineer must have pre-requisite of Physics/5, Math/3, Metallurgy/1, and Chemistry/1. Aptitude: ElecA.

COMPUTER ENGINEERING: 2 SP/2 Months, Computer Engineering is a highly specialised form of electronic engineering and involves the design and operation of computer systems. Before the field can be entered the Computer Engineer must have pre-requisite of Physics/6, Math/4, Chemistry/2, and Metallurgy/2. Aptitude: ElecA.

POWER ENGINEERING: 3 SP/3 Months. Power Engineering involves the practical application of a wide range of scientific expertise to the design and operation of power generation and delivery systems. Before the field can be entered, the Power Engineer must have pre-requisites of Physics/10, Math/5, Nuclear Physics/5, Hyper-Dimensional Physics/3, Chemistry/3, and Metallurgy/3, Aptitudes: MechA and ElecA.

STARDRIVE ENGINEERING: 3 SP/3 Months. Stardrive Engineering involves the practical application of a wide range of scientific expertise to the design and operation of spacecraft and Starship propulsion systems. Before the field can be entered, the Stardrive Engineer must have pre-requisites of Physics/10, Math/7, Nuclear Physics/7, HyperDimensional Physics/6, Chemistry/3, and Metallurgy/3. Aptitudes: GTA, MechA, and ElecA,

ARMAMENTS ENGINEERING: 2 SP/2 Months. Armaments Engineering involves the practical application of a wide range of scientific expertise to the design and modification of armaments and defence systems. Before the field can be entered, the Armaments Engineers must have pre-requisites of Physics/10, Math/5, Nuclear Physics/5, Force Fields/5, Hyper-Dimensional Physics/5, Chemistry/5, Biochemistry/3, and Metallurgy/5. Aptitudes: GTA, MechA, and ElecA.

## ENGINEERING RESEARCH

It will often happen that an Engineer will not have sufficient scientific expertise to solve a technological problem. In such instances, he will have to go to a pure research scientist for assistance. The specialised knowledge of the pure scientist can be used to replace a science skill possessed by the Engineer. For example, an Armaments Engineer has a problem with a new battlescreens design. He has Armaments Engineering/9, the major field applying to the problem, but only the pre-requisites in the other fields. A battlescreens is a phenomenon involving Nuclear Physics and Force Field Physics. He may go to one or two Scientists who have higher levels of expertise in these secondary sciences and they will provide the needed expertise to increase his success chances.

Engineering Research is conducted in the same manner as described for Scientific Research, as described previously.

## 4.6 ARMSMAN TRAINING & SKILLS

The following areas of specialised training and skills are essential if a character is to enjoy adequate levels of proficiency with weapons and combat tactics, Some of the skills are unique to military and paramilitary formations. They would not, in short, be acquired by civilians except under extraordinary circumstances. Non-military personnel will therefore pay twice the cost in SP or else will have to be taught by a trained Armsman after they enter the game play.

COMBAT TRAINING: 1 SP or 6 weeks training/expertise level to expertise/10. Aptitudes: average the sum of Strength, Constitution, Dexterity, and any two of Agility, Bravery, and Leadership. The average is the PC's personal characteristic 'C' score used to determine his learning PCA' Also, 1/2 the pre-requisites average + I = maximum Combat Training expertise that he can attain.

Combat Training is open to any PC, but civilians pay double the SP cost. Military and Police personnel pay the basic SP cost. Combat training is the difference between an Armed Force and an unruly mob. Personnel with such training have learned to mesh with the requirements of being a part of a disciplined combat team, submerging their individualism in the discipline of the Service and developing required combat skills until they are dependable reflexes.

For each level of Combat Training expertise, a PC acquires:

1 Expertise/1 with a chosen group of weapons, These form the nucleus of his subsequent arms specialisation's or, if he prefers, a basic knowledge of a variety of weapons in addition to those he develops to a high level of expertise.

2 Ability to instruct others to his level of expertise with any weapon or combat tactic he has learned himself.

3 A bonus of +1% per expertise level in all attacks and -1% per' expertise level from attacks directed against him. For example, a PC with CT/8 is attacking a PC with CT/4. The difference is 4, for the CT/8 character has a +4% advantage to hit. The CT/4 character, however, has a difference of 4 (he is 4 levels below expertise/8) and so suffers a -4% penalty when he is attacking the character with CT/8.

STREET COMBAT: 2 SP or 6 weeks training. Aptitudes: as given for Combat Training. The skill, if learned rather than purchased with SP, is tested as if at expertise level 5. The PC receives advanced training in house-to-house combat in urban areas and enjoys a +5% advantage to hit any adversary untrained in Street Combat 'tactics when involved in sniping, firefights, or house clearing actions. The skill applies in the interiors of buildings as well as in the streets. Hand. to-hand combat is not modified by the bonus.

PARACHUTE ASSAULT: 2 SP or 6 weeks training. Aptitudes: as given for Combat training. The skill, if learned rather than pur-chased with SP, is tested as if at expertise level 5, The PC receives training in the effective use of a parachute under combat conditions. When jumping, the Parachutist acquires a 2% chance per Dexterity and Agility point of landing within a 10-meter circle. For each 2% the 1d100 roll is above the PC's basic chance of hitting the target zone, he lands an extra 1d10 meters away from the edge of the 10-meter circle. For example, with a Dexterity/16 and Agility/15, a PC would have a basic Parachute CR of 2% x (16 + 15) = 62%. If he rolls 62 or less, he will land in the target circle. However, if he rolled a 90, some 28% higher than his CR, he would have a 14d10 error and could land 14 to 140 meters off target, If a low-level jump is made, the CR percentage can be increased +10%. If a delayed drop is made (5% chance of pulling the rip-cord too late), the CR percentage is increased +10%.

On landing in rough or forest terrain, the PC must make an Agility CR, rolling equal to or lower than his Agility score to avoid the chance of ld6 points of injury (sprained ankle, broken leg, etc.) or, if the Starmaster prefers, being hung up by the shrouds in a tree some 15 or 20 meters above the ground, etc.

The PC lands ready for combat, able to free himself from his chute in 6 seconds and to bring his weapons into action the following turn, unless a mishap occurs.

JUMP BELT: 2 SP or 9 weeks training: Aptitudes: Dexterity, Agility, and GTA. The skill, if learned rather than purchased with SP, is tested as if at expertise level 5. The PC acquires skill with a jet-powered jump pack under combat conditions. Space-Force, Marine, and Commando personnel also acquire skill in weight. less manoeuvring. Trained personnel can apply all combat bonuses when firing during a jump. Whenever a 'difficult' situation occurs, the PC rolls a Dexterity CR to see whether a mishap occurs, with some form of accident happening when a Id20 result higher than the Dexterity score has turned up.

CONTRAGRAVITY HARNESS: 2 SP or 9 weeks training: Pre-requisites: average of Dexterity, Agility, and GTA. The skill, if learned rather than purchased with SP, is tested as if at expertise level 6. The PC acquires skill with a contragravity belt under combat conditions. Trained personnel can apply all combat bonuses when firing during a flight. Whenever a 'difficult' situation occurs, the PC rolls a Dexterity CR, as described for Jump Belt.

AIRBORNE ASSAULT: 2 SP or 6 weeks training. Pre-requisites: Combat training/3 Aptitudes: as given for Combat Training. The skill, if learned rather than purchased with SP, is tested as if at expertise level 3. The PC receives training in the rapid embarkation and debarkation from helicopters, hovercraft, aircraft, and grounded spacecraft under combat conditions. Without such training, personnel will not be able to employ combat bonuses in the first 6-36 seconds after disembarking or in the last 6-36 seconds before embarking. The skill is therefore valuable when setting up a security perimeter, storming a position directly from the transport craft, or withdrawing under fire. Equally important, trained personnel can apply their combat bonuses when firing air to ground, while untrained personnel lose all such bonuses.

AIRCAV: 6 SP or 18 weeks training. Pre-requisites: Combat Training! 3 Aptitudes: as given for Combat Training. The skill, if learned rather than purchased with SP, is tested as if at expertise level 6. The PC receives training in the piloting of an AirCav Mount under combat conditions. Errors or emergencies are dealt with by rolling a Dexterity CR, as described for Jump Belt. The PC also receives an AirCav rating equal to the average of his pre-requisite characteristics * 1/2. This rating is applied to air combat situations. When firing air to ground, the trained AirCav pilot can apply his combat skills with the weapons.

COMBAT HELICOPTER PILOT: 4 SP or 12 weeks training: Pre-requisites: Combat Training/3 Aptitudes: Dexterity and GTA. The skill, if learned rather than purchased with SP, is tested as if at expertise level 5. The PC receives training in the piloting of a variety of Helicopters under combat conditions. He also acquires skill with heliborne weapon systems and can apply his combat bonuses with such weapons when firing air to ground. Errors or emergencies are dealt with by rolling a Dexterity CR or a GTA CR, depending upon whether a manoeuvring or mechanical problem has developed which requires special procedures.

COMBAT DRIVER: 1 SP or 6 weeks training per vehicle type. Pre-requisites: Combat Training/2 Aptitudes: Dexterity and GTA. The skill, if learned rather than purchased with SP, is tested as if at expertise level 5. The PC learns to drive a specific type of military vehicle:

| | |
|---|---|
| Combat Hovercraft | All-Terrain Vehicles |
| Armoured Cars (wheeled) | Wheeled Vehicles |
| Tracked Armoured Personnel Carriers | Tanks (tracked) |

A Dexterity CR is rolled whenever a situation arises which threatens an accident or requires particular driving skill.

ARMOURED FORCES: 4 SP or 12 weeks training. Pre-requisites: Combat Training/2 Aptitudes: as given for Combat Training. The skill, if learned rather than purchased with SP, is tested as if at expertise level 4. The PC receives training in the functions of a crewman in an armoured fighting vehicle and obtains expertise! 3 with the weapons on any three AFV of his choice.

Further training with such weapons must proceed independently.

COMBAT PILOT (ATMOSPHERE): 2 SP or 6 weeks training/expertise level to expertise/10. Aptitudes: Dexterity, Intelligence, and GTA. The PC learns to pilot one type of aircraft for each two expertise levels he attains. For each expertise level, he receives a Combat Pilot rating of +1, which he added to the air-combat rating of his aircraft and helps determine his capability of engaging in dog-fights and to fire his weapons air-to-air and air-to-ground. In emergencies, he rolls a Dexterity CR but adds +1 to the CR level for each 3 expertise levels possessed over expertise/1. The expertise level applies to all aircraft chosen for mastery. Note: each 2 levels a type of aircraft may be added to the list of those mastered, and at expertise level 10, 2 types may be added:

Single Engine: prop-driven, fixed wing
Single Engine Jet: subsonic
Multi-Engine: prop-driven, fixed wing*
Multi-Engine Jet: subsonic**
Helicopter
Supersonic Jet: Single & multiengine***

*Single Engine prop-driven aircraft expertise required as 'basic' training.
**single Engine Jet (subsonic) required as 'basic' training.
***Single Engine Jet (subsonic) required as 'basic' training for Multi-Engine Supersonic Jet.

ALIEN ENVIRONMENTS: 5 SP or 18 weeks training. Aptitudes: Intelligence and GTA. The skill, if learned rather than purchased with SP, is tested as if at expertise level 5. The PC receives extensive training in dealing with the conditions he will find on planets other than his own. He receives training in the use of special protective clothing, respirators, filter masks, and Vacuum Suits. Alien Environments permits the PC to employ his full combat bonuses on an alien planet. PCs lacking such training will lose 1/2 of all 'combat bonuses until they adjust to the alien conditions which might take anywhere from several days to several weeks, depending on the severity.

SURVIVAL: 2 SP or 8 weeks training per survival area. Aptitudes: Constitution, Strength, Dexterity, Agility and one of Intelligence or Intuition. The skill, if learned rather than purchased with SP, is tested as if at the expertise level indicated in brackets (-) for the given skill area. Each area provides expertise in meeting the environmental challenges and dangers unique to that environment. For example, Arctic Survival gives a PC comprehensive knowledge and skill in coping with frigid weather, frostbite, making a shelter, etc. He will also receive instruction on the use of specialised survival equipment, where to find game, and dealing with perils unique to an Arctic setting. Each survival area provides appropriate skills and knowledge's:

| | | |
|---|---|---|
| Arctic Survival (5) | Desert Survival (5) | Jungle Survival (4) |
| Marine Survival (4) | Forest Survival (3) | Steppe Survival (3) |

Whenever a situation arises which requires a PC to remember the needed technique, he rolls either an Intuition or an Intelligence CR. If the score on the 1d20 is equal to or lower than his personal characteristics score, he will be told the basic procedure required. Whether or not he can actually carry it out is another matter. The same method can be used to determine whether the PC recognises an environmental danger, etc. Alien Environments renders survival skills fully applicable to Terran planetary environments different from those of the PC.s home planet.

FIRST AID: 1 SP or 4 weeks training. Prerequisites: none. Testing: none. The PC acquires the ability to apply basic first aid to himself or to a comrade. This includes the bandaging of wounds, splinting of broken bones, giving injections of drugs and pain killers, etc. The procedures will improve survival chances when serious injuries are involved and will tend to prevent infection if treatments are given daily.

SPACECRAFT ORIENTATION & PROCEDURES: 2 SP or 7 weeks training. Pre-requisites: none. Testing: none. The PC receives training in the. routine, procedures, drills, and general lay-out of spacecraft in which he will serve. Troops having such training are able to apply full combat bonuses in combat aboard spacecraft. Personnel without this skill can apply only 1/2 of their combat bonuses.

SPACE COMBAT: 6 SP or 24 weeks training. Pre-requisites: Service aboard military Starships (SpaceForce, Space Marines, Commandos, IPA personnel only), Aptitudes: Dexterity, Agility, Intelligence, Bravery, and GTA. The skill, if learned rather than purchased with SP, is tested as if at expertise level 5. The trained PC obtains +5% when making attacks against untrained personnel and enjoys a -5% penalty applied to the attacks of untrained personnel against them. In weightless conditions, they enjoy full use of all combat bonuses, while untrained personnel lose all bonuses and have a -10% penalty as well.

MOBILE INFANTRY: 6 SP or 18 weeks training, Pre-requisites: Combat Infantry/5, Space Combat, Aptitudes: as given for Combat Infantry. The PC is trained in the use of Powered Armour, and must acquire Jump Belt or Contragravity Harness simultaneously. If learned rather than purchased with SP, the skill is tested as if at expertise level 6. No personnel can function efficiently or safely in Powered Armour without such training. Skill permits the application of all combat bonuses plus the benefits of powered Strength in hand-to-hand combat. PCs are also trained in planetary assault tactics, including drop capsule injections into a planetary atmosphere by high speed assault spacecraft. Any Space Marine or Commando personnel who serve more than 4 tours of duty are expected to have acquired this skill (mandatory acquisition during initial skills purchase), as the Mobile Infantry are the heart of the spaceborne forces and no long-service Trooper would have avoided such training.

COMBAT ENGINEERING: FIELD FORTIFICATIONS: 1/2 SP or 4 weeks training/expertise level to expertise/10 Aptitudes: Strength, GTA, and MechA. The Combat Engineer learns to construct field fortifications. Each expertise level decreases the time required to build bunkers, pillboxes, etc., by 5%. Expertise/10 signifies a fully trained Combat Engineer capable of erecting any type of fortification, with defences 25% more effective than those produced by less skilled troops. All military personnel in the Planetary Defence Forces, Space Marines, or Commandos will likely acquire at least expertise/1.

COMBAT ENGINEERING: MILITARY CONSTRUCTION: 1/2 SP or 4 weeks training/expertise level to expertise/10. Aptitudes: Strength, GTA, and MechA. The Combat Engineer learns to construct roads, bridges, shelters, and other structures (often prefabricated),-and acquires skill with one military vehicle. When erecting bridges (pontoon, etc.) under enemy fire, a -1% advantage is applied against the enemy's ability to hit the Combat Engineer per expertise level, in addition to any other factors reducing the enemy's hit probability, Each expertise level reduces the time required to build such structures by 5%.

COMBAT ENGINEERING: BOMB DISPOSAL 1/2 SP or 4 weeks training/expertise level to expertise/10. Aptitudes: Dexterity, Bravery, GTA, MechA, and ElecA. The Combat Engineer learns to disarm explosive devices successfully on a 22% + 4% x expertise level + 1% x sum of Dexterity and either GTA, MechA, or ElecA, Explosive devices will have countermeasures in them which may reduce the success chances by 1% per level of complexity of the device. The complexity level may be set by the Starmaster (0 - 10) or may be determined randomly by rolling 2d6. A Bomb Disposal expert over expertise/5 will always know the odds of accomplishing a successful disarming. If a failure to disarm occurs, there is a chance equal to 100% minus the success percentage that the firing mechanism has been activated. A second disarming attempt is then possible at -1% x 3d6 from the initial success percentage. Success will prevent detonation but does not disarm the device, and another disarming may have to be attempted. Alternatively, the Bomb

Expert can Simply attempt to get clear of the blast zone, with a chance equal to 3d6% x Agility minus 1d6% x bomb complexity level. (The same chance is accorded to other personnel in the area.) If it is a Nuclear Warhead his chances of escaping are nil unless he is wearing a Jump Belt or a Contragravity Harness and really knows how to use it! In such instances the standard escape chance applies.

Bomb Disposal also includes mine-sweeping, with a base chance of 35% at expertise/0, and adding 5% per expertise level. Success will result in a Bomb Expert sweeping an area of 100m$^2$ per hour plus an additional 20 m$^2$ per expertise level over expertise/5. A successful sweep means that a mine has been found, whereupon the Bomb Expert can remove it with a 30% chance + 2% x Dexterity + 3% x expertise level. If he fails a replacement will be sent up to the unit immediately. If the Bomb Expert is using electronic detectors, his sweeping rate is increased by 25 m$^2$ per level of expertise, in addition to any other rates, with no chance of missing a mine if a successful *sweep* is rolled. Mines may also be laid safely by a Bomb Expert/1.

Bomb Expert receive +25% danger pay when employed in that capacity in a military organisation or paramilitary police organisation.

COMBAT ENGINEER: DEMOLITIONS: 3 SP or 5 weeks. Aptitudes: Dexterity and GTA. The skill, if not purchased with SP, is tested as if at expertise level 5. The PC acquires the ability to correctly judge the amount of explosive necessary to destroy a structure and to successfully place it upon rolling a Dexterity or GTA CR on 1d20.

SPACE ENGINEERS: If a PC has expertise in Alien Environments, he can apply Combat Engineering skills at full expertise, If he lacks Alien Environments, he loses 3 skill levels from his expertise.

ARMOURER: An Armsman may apply his SP to become an Armour. or Tech, as described in 4.8 Tech Skills.

EVA: An Armsman may apply his SP to acquire EVA skills, as described in 4.7 Astronaut Skills, if he is enlisted in any military or civilian space service.

SPACECRAFT ARMAMENTS: An armsman may apply his SP to acquire expertise with the armament systems of spacecraft, as described in 4.7 Astronaut Skills, if he is enlisted in any military or civilian space service.

STREETWISE: Armsmen who are members of BOSS, BRINT, the IPA, or the Planetary Police may apply SPs for Armsman skills to acquire Streetwise Expertise (see 4.9 General Skills), as this is an essential feature of their training as espionage and enforcement agents.

ALIEN LANGUAGES & CUSTOMS: Armsmen who are members of BOSS, BRINT, or the IPA may apply SPs for Armsman skills to acquire skill with languages. So may Armsmen in the Merchant Service and the First in-Scouts of the Survey Service.

MERCHANTS: Armsmen in the Merchant Service may apply SPs for Armsman skills to acquire skills with Merchant activities (see 4.9 General Skills) as Pursers and Cargo Officers have considerable need of such talents. Any Armsman intending to be a Free Trader has to be somewhat of a Merchant.

ADMINISTRATION: Armsmen in the Merchant Service may apply SPs for Armsman skills to acquire skills in Administrative areas, as may any PCs in any other service who attain rank grade/7+ and must learn to deal with administrative and bureaucratic management at all levels (see 4.9 general Skills.)

PROJECTILE ARTILLERY: 1 SP or 4 weeks training/expertise level to expertise/10. Aptitudes: Strength, Dexterity, and GTA. Expertise confers +1% per expertise level to the probability of spotting and forward observer skills. The artillery types include field guns and armoured fighting vehicle guns, and mortars.

MISSILE ARTILLERY: I SP or 4 weeks training/expertise level to expertise/10. Aptitudes: Dexterity, Intelligence, and GTA. Expertise confers +1%, per expertise level to the probability of hitting a target with missile fire. The missile types include all tactical missile weapons fired from vehicular or fixed installation launchers.

HEAVY ENERGY PROJECTORS: I SP or 4 weeks training/expertise. level to expertise 10. Aptitudes: Dexterity, Intelligence, GTA, and ElecA. Expertise confers +1%, per expertise level to the probability of hitting a target with direct energy beam fire. The weapon types include heavy Laser Cannon and Heavy Blast Cannon mounted in fighting vehicles or fixed installations.

DIRECT FIRE; SMALL ARMS: There are a large number of direct fire weapons available for use by PCs. The weapons are grouped according to type, and a PC acquires skill with all weapons in the group simultaneously. The Cost of acquiring initial expertise or the time required to develop one expertise level is listed for each skill area. Each level of expertise adds 2% to the probability of hitting a target with any weapon in the skill group. Advantages may also be gained which extend the extreme range at which a target may be hit (see 7.2, Weapons Lists). Each level of expertise also adds +1 to a 1d20 roll to clear a jammed weapon, with the base score at 10 or less to clear the jam in a 6 second combat turn.

Archaic Direct Fire Weapon I:10 levels
Cost: I SP or 3 weeks study/expertise level
Aptitude: Dexterity

| | |
|---|---|
| Sling | Thrown Axe |
| Slingstaff | Javelin |
| Thrown Dagger | Atlatl |
| Making weapons in group | |

Archaic Direct Fire Weapons II: 10 levels
Cost: 1SP or 3 weeks study/expertise level
Aptitudes: Dexterity & Strength

| | |
|---|---|
| Blowgun. | Longbow |
| Short Bow | Light Crossbow |
| Compound Bow | Heavy Crossbow |
| Making weapons in group | |

Archaic Direct Fire Weapons III: 10 levels
Cost 1 SP or 3 weeks study/expertise level
Aptitude: Dexterity

| | |
|---|---|
| Heavy Musket | Musket Pistol |
| Musket | Duelling Pistol |
| Rifle Musket | Making Powder & Shot |

Shotguns: 10 levels
Cost: 1 SP or 2 weeks study/expertise level
Aptitudes: Dexterity & GTA
.410 standard & automatic
.16 standard & automatic
.12 standard & automatic
.10 standard & automatic

Tech/4 - 7 Sports Rifles: 10 levels
Cost: 1SP or 3 weeks study/expertise level
Aptitudes: Dexterity & GTA

| | |
|---|---|
| T/5 -6.22 Rifle | T/7 5mm Rifle |
| T/5 - 6 ,22 Carbine | T/7 5mm Carbine |
| T/5 .6 .30 Rifle | T/7 7mm Rifle |
| T/5 - 6 .30 Carbine | T/7 7 mm Carbine |
| T/5 -6.30+ HP Rifle | T/7 10mm Rifle |
| T/5 - 6 .30+ HP Carbine | T/7 10 mm Carbine |
| T/5 .6 .40+ HP Rifle | T/7 12mm Rifle |

Tech/5. 7 Machine Guns: 10 levels
Cost:1 SP or 3 weeks study/expertise level
Aptitudes: Dexterity & GTA

| | |
|---|---|
| T/5 .30 LMG | T/6 7.62 MMG |
| T/5 30 MMG | T/6 .50/12.7 HMG |

| | |
|---|---|
| T/5 50 HMG | T/6 20mm Gatling |
| T/5 20mm AutoCannon | T/7 AMG10 |
| T/6 7.62 LMG | |

Tech/5. 7 Military Small Arms:  levels
Cost: 1 SP or 4 weeks study/expertise level
Aptitudes: Dexterity & GTA

| | |
|---|---|
| T/5 .30 Rifle | T/6 7.62 SAR |
| T/5 .30 M1 | T/6 7.62 ACR AutoRifle |
| T/5 .30 Carbine M4 | T/6 7.62 AR Assault Rifle |
| T/5 9mm M.Pistol | T16 5.56 AC Assault Carbine |
| T/5 9mm SMG | T/6 9mm SMG |
| T/5 .45 SMG | T/7 7mm AR7 AutoRifle |

Tech/4. 7 Repeating Hand Guns: 10 levels
Cost: 1 SP or 4 weeks study/expertise level
Aptitudes: Dexterity & GTA

| | |
|---|---|
| T/4 .32 Hold-out | T/6 .357 AutoMag |
| T/4 .32 Revolver | T/6 .44 Magnum |
| T/4 .38 Revolver | T/6 44 AutoMag |
| T/4 .44 Revolver | T/5 .45 Revolver |
| T/5 .22 Target | T/5 45 Automatic |
| T15 .22 Automatic | T/7 5mm Sportsman |
| T/5 .32 Automatic | T/7 5mm Body Pistol |
| T/5 .38 Special | T/7 7mm Body Pistol |
| T/5 .38 Service | T/7 7mm Enforcer |
| T/5 9mm Automatic | T/7 10mm AutoMag |
| T/6 .357 Magnum | T/7 10mm Auto Fire |

Tech/7 Recoilless Small Arms: 10 levels
Cost: 1 SP or 3 weeks study/expertise level
Aptitudes: Dexterity & GTA.

| | |
|---|---|
| 5mm Cone Pistol | 10mm Cone Rifle |
| 5mm Cone Rifle | 10mm Infinite Repeater |
| 5mm Carbine | 20mm Infinite Repeater |
| 7mm Cone Rifle | |

Tech/9 Stat Small Arms: 10 levels
Cost: 1 SP or 3 weeks study/expertise level
Recoilless expertise = 50% for Stat expertise
Aptitudes: Dexterity & GTA
10mm Stat Pistol
15mm Stat Rifle
20mm Stat Penetrator

Tech/6- 9 Laser Weapons: 10 levels
Cost: 2 SP or 4 weeks study/expertise level
Aptitudes: Dexterity, Intelligence, GTA

| | |
|---|---|
| T/6 Laser | T/8 Laser Rifle |
| T/7 Laser Pistol | T/8 Laser MG |
| T/7 Laser Carbine | T/9 Body Pistol |
| T/7 Laser Rifle | T/9 Laser Pistol |
| T/7 Laser MG | T/9 Laser Carbine |
| T/8 Body Pistol | T/9 Laser Rifle |
| T/8 Laser Pistol | T/9 Laser MG |
| T/8 Laser Carbine | Heavy Laser |

Tech/1 - 8 Needle Guns: 10 levels
Cost:                        1SP or 3 weeks study/expertise level
Aptitudes: Dexterity

| | |
|---|---|
| MiniNeedler Pistol | Razor Carbine |
| NeedlePistol | NeedleRifle (also called SpringRifle) |

Tech/8 ARPOBDIF Projectors: 10 levels
Cost: 1 SP or 3 weeks study/expertise level
Aptitudes: Dexterity & GTA

| | |
|---|---|
| ARPO Pistol | Hv. ARPO Field Generator |
| ARPO Rifle | ARPO Hold-Out Body Pistol |
| Hv. ARPO Projector | |

Special Weapons: 10 levels
Cost: 2 SP or 4 weeks study/expertise level
Aptitudes: Dexterity, Intelligence, GTA

| | |
|---|---|
| T/7 'Slug Gun' | T/9 Nerve Pistol (needler) |
| T/7 Tangle Pistol | T/9 Nerve Rifle (needler) |

T/7 Tangle Rifle              T/7 Gas Pistol
T/6 Dart Pistol              T/7 Pill Grenade Launcher
T/6 Dart Rifle               T/10 Pacifier (needler)
T/7 Shock Dart

Tech/8 Gauss Weapons: 10 levels
Cost: 2 SP or 5 weeks study/expertise level
Aptitudes: Dexterity, Intelligence, & GTA
20mm Gauss Pistol
20mm Gauss Rifle

Tech/8. 10 Blaster Weapon: 10 levels
Cost:2 SP or 4 weeks study/expertise level
Aptitudes: Dexterity, Intelligence, & GTA
T/8 Blast Pistol             T/9 Blast Rifle
T/8 Blast Carbine            T/9 S. Blaster
T/8 Blast Rifle              T/10 Blast Pistol
T/8 Blaster MG               T/10 Blast Carbine
T/9 Blast Pistol             T/10 Blast Rifle
T/9 Blast Carbine            T/10 S.Hv. Blaster

Tech/9. 10 Fusion Guns: 10 levels
Cost: 2 SP or 4 weeks study/expertise level
Blaster expertise = 50% for Fusion expertise
Aptitudes: Dexterity, Intelligence, GTA
T/9 Fusion Rifle             T/10 Hv, Fusion Rifle
T/9 Fusion MG                T/l0 Fusion MG
T/10 Fusion Pistol           T/10 S.Hv.Fusar
T/10 Fusion Rifle

Tech/8 Stunner: 10 levels
Cost:1 SP or 3 weeks study/expertise level
Aptitudes: Dexterity & GTA
Hold-Out Stun Pistol         Police Carbine
Stun Pistol                  Stun Rifle
Colonial Carbine             Police Stun Rifle

Tech/8 - 9 Sonic & Energy Disruptors: 10 levels
Cost: 2 SP or 4 weeks study/expertise level
Aptitudes: Dexterity & GTA
Disrupter Pistol             Disrupter Rifle
Disrupter Carbine            MG Disrupter

Tech/7 Flamers: 10 levels
Cost: 1 SP or 3 weeks study/expertise level
Aptitude: Dexterity
Flame Pistol                 Napalm Projector
Flame Rifle                  Flare Gun
Heavy Flamer

Grenades & Grenade Launchers: 10 levels
Cost: 1SP or 3 weeks study/expertise level
Aptitudes: Dexterity & GTA
Regular Grenades             Grenade Pistol G
Demolition Grenades          Grenade Pistol H
Pill & Thimble Grenades      Grenade Pistol .J
Throwaway RGL                Combat Grenade Rifle
Throwaway TGL                Shock Grenade Rifle
Throwaway PGL                Assault Grenade Rifle
I & Y Rack Grenade LaunchAutoFire Grenade Rifles

Rocket Launchers & Advanced PMLs: 10 levels
Cost: 1 SP or 3 weeks study/expertise level
Aptitudes: Dexterity, Intelligence, GTA
Bazooka                      Medium PML
Light PML                    Heavy PML
Disposable Rocket Launcher

MELEE WEAPONS: There are a considerable number of melee weapons available for use by PCs (see 7.1 Weapons). Many are archaic weapons, but a few are advanced armaments. The weapons are grouped according to type and a PC acquires skill with all weapons in the group simultaneously. The cost of acquiring initial expertise or the time to develop one expertise level is listed for each skill area. Each level of expertise adds +2% to the probability of hitting a target with any weapon in the skill

group. Each level of expertise also provides a defensive value applied against enemy attacks, with .2% per expertise level when defending against a weapon with which the PC has expertise, and -1% per expertise level otherwise. Note: PCs will have limits to the expertise attainable.

Dagger, Throwing Knife, & Stabbing Sword:
10 levels Cost: 1 SP or 3 weeks study/expertise level
Aptitudes: Dexterity & Agility
Max. Expertise: 1/4 (Dex + Agil) + l

Foil
10 levels Cost: 1 SP or 5 weeks study/expertise level
Aptitudes: Dexterity, Agility & Constitution
Max. Expertise: 1/4(Dex + Agil) + 1

Spear, Javelin, Pike, Halberd, Bayonet:
10 levels Cost: 1 SP or 3 weeks study/expertise level
Aptitudes: Dexterity & Strength
Max. Expertise: 1/4 (Dex + Agil) + l

VibroBlade, Force Blade, Monofilament Blades:
10 levels Cost: 1 SP or 5 weeks study/expertise level
Aptitudes: Dexterity, Agility, & Strength
Sword Expertise = 50% of VibroBlade expertise
Max. Expertise: l/6 (Dex + Agil + Str) + l

Unarmed Combat
10 levels Cost: 2 SP or 7 weeks study/expertise level
Aptitudes: Dexterity, Agility, Strength. Constitution, Intelligence
Max. Expertise = 1/10 (Dex + Agil + Str + Con + Intell) + l

Sword, Broadsword, & Greatsword:
10 levels Cost: 1 SP or 4 weeks study/expertise level
Aptitudes: Dexterity, Agility, & Strength
Max. Expertise: 1/6 (Dex + Agil + Str) + l

Sabre:
10 levels Cost: 1 SP or 5 weeks study/expertise level
Aptitudes: Dexterity, Agility, & Strength
Max. Expertise: 1/4 (Dex + Agil) + l

Battle 4xe, Mace, Morningstar, & Flail:
10 levels Cost: 1 SP or 4 weeks study/expertise level
Aptitudes: Dexterity, Agility, & Strength
Max. Expertise: 1/6 (Dex + Agil + Str) + l

LaserSword, LightSword, & Katana:
12 levels. Must first learn katana to equivalent level.
Cost: 2 SP or 6 weeks study/expertise level
Aptitudes: Dexterity, Agility, & Constitution
Katana expertise = 50% of LaserSword/LightSword expertise.
Max. Expertise: 1/6 (Dex + Agil + Str) + 3

Coagulator, Neuronic Whip, Paralysis Rod:
10 levels Cost: 1 SP or 5 weeks study/expertise level
Aptitudes: Dexterity, Agility, & Constitution
Foil Expertise = 50% of Coagulator/Neuronic Whip expertise.
Max. Expertise: 1/6 (Dex + Agil + Str) + l

## 4.7 ASTRONAUT TRAINING & SKILLS

The following skills are essential if a PC is to acquire proficiency in the Operation of any spacecraft.

SHIPBOARD PROCEDURE & OPERATION: 5 SP or 12 weeks train- ing. Pre-requisites: None. Testing: None. Astronauts proceed through a comprehensive program of general training which accustoms them to shipboard routine, discipline, emergency drills, and basic spacecraft and Starship systems. SP & E is an ongoing program as well. An Astronaut will devote 4 weeks of study per year to keeping up to date on the latest equipment installed in any vessel in which he serves. Other Starship personnel will also acquire SP & E. The skill enables personnel to apply full combat bonuses in combat aboard spacecraft.

SPACE COMBAT: An Astronaut may apply his SP to acquire special combat skills, as described in 4.6 Armsman Skills for

Space Combat.

EXTRA—VEHICULAR ACTIVITY (EVA): 5 SP or 12 weeks training. Aptitudes: Dexterity, Agility, GTA. If learned rather than purchased with SP, the skill is tested as if at expertise level 5. EVA involves the use of space suits in vacuum and in low or null gravity conditions. It is a mandatory program for all Astronauts. Ability to perform a given manoeuvre or activity in null gravity conditions while wearing a space suit is related to Dexterity, Agility, and GTA. Add these three characteristics together and multiply by 1.7 to find the percentage chance of a trained PC accomplishing any difficult manoeuvre under rocket jet pack or any difficult manipulations, activities, etc. When major emergencies arise with respect to the operation or the integrity of a spacecraft, trained personnel have a chance equal to their EVA success percentage minus 1d10% of resolving the problem.

Failure to achieve the EVA success percentage or less on a 1d100 roll does not indicate that a disaster has occurred. Rather, the PC has merely experienced some difficulty which usually means extra time is required to accomplish the task or to perform the manoeuvre. The probabilities can even be adjusted slightly upward or downward at the Starmasters discretion to reflect easy or especially difficult tasks and manoeuvres. An emergency situation is something else, again, for this time a failure means that the PC has not been able to make the necessary adjustments or repairs, and matters aren't becoming serious or even critical.

Untrained personnel can also wear spacesuits. They have a probability of being able to perform manoeuvres of the simplest kind while under the supervision of a trained EVA Astronaut equal to the supervising Astronaut's own EVA success chance minus .15% However, when per. forming any kind of complex manoeuvres or when left on their own, untrained personnel have a 10% success chance +1% x sum of Dexterity, Agility, and GTA, If something goes wrong and a manoeuvre fails, the untrained man has a 100% chance minus the sum of his Intelligence, Bravery, and GTA of really doing something stupid, like panicking or pressing the wrong suit control. If the Starmaster prefers, panic itself may be made subject to failing a Bravery CR in which the PC must roll equal to or lower than his Bravery score on 1d20. Panic prevents any intelligent action for 1d6 turns, after which another Bravery CR may be made to see if the PC can regain control of himself.

ADVANCED EVA: 2 SP or 4 weeks training/expertise level to expertise/10 Pre-requisites: EVA, Aptitudes: Dexterity, Intelligence, and GTA. The PC obtains training with the EVA 'Scooter,' a short-range craft that is little more than a pair of low acceleration rocket engines, fuel tanks, a frame to which equipment and stores can be lashed, and several saddles for the pilot and a few passengers. Skill in manoeuvring the EVA Scooter is equal to that described for spacesuit skill in EVA (above). The PC also acquires a 5% chance per expertise level of making required repairs to the EVA Scooter if a malfunction occurs minus 5% per level of breakdown. (see 5.0 Breakdown).

ASTRONAUTIC SCIENCES: Astronauts may spend SP to acquire the following Sciences, which are very pertinent to their chosen specialisation: Advanced Mathematics, General Physics, Astronomy, Planetology, Nuclear Physics, Force-Field Physics, Mech Engineering, Electronic Engineering, Computer Engineering, Power Engineering, or Stardrive Engineering. (see 4.3 Scientific Skills, and 4.5 Engineering Skills).

STARSHIP TECHNOLOGY: Astronauts may expend SP to acquire the following technical skills, which are very pertinent to their chosen specialisation: Mech Tech: Starship Machinery; Electronics Tech: Starship Systems: EVA Systems: Communications Tech: ECM: Sub-Light Communication Systems: Computer Tech: Computers Mk.l-X, any Programming: Power Tech: Nuclear Generation Systems, Anti-Matter Generation Systems, Starship Power Systems: Stardrive Tech: all specialisation's, (see 4.8 Tech Skills).

ORBITAL PILOT: 3 SP or 6 weeks/expertise level to expertise/10. Pre-requisites: EVA, Advanced EVA, Aptitudes: Dexterity, Intelligence, Leadership, Bravery, GTA, Computer Programming/1 is required to enter all course programs and run the onboard Navigation Computer. The following areas of special skill will be developed as the PC advances in expertise:

ORBITAL PILOT, COURSE PLOTTING: An Orbital Pilot may plot his own course with an accuracy of 5% x expertise level plus 5% x Mk. of the Computer he is using. This accuracy is reduced by 1% per light-second (300,000 km) the destination st distant. Errors do not signify disaster, but rather add extra time spent on the flight. The added time of flight is equal to 200% of the time that would have been taken for a regular flight minus the Orbital Pilot's success percentage, For example, a Pilot with expertise/7 is using a Mk, VI Computer to plot a course for a 29 LS run. He has an accuracy of 5% x 7 plus 5% x 6 minus -16% = 39%. If he failed his 1d100 roll and had a result over 39%. he would require 200% . 39% 161% of the time normally to make the flight. No flight program which would result in more than 200% of the normal time can be plotted.

ORBITAL PILOT: ATMOSPHERIC MANOEUVRING: An Orbital Pilot obtains the same skill in manoeuvring a small spacecraft in atmosphere as that possessed by the Pilot of an atmospheric supersonic jet. The Orbital Pilot's training also qualifies him for piloting of all jet aircraft.

ORBITAL PILOT: SPACE MANOEUVRING: An Orbital Pilot can perform all manoeuvres in space with 80% accuracy plus 1% x sum of expertise plus Computer Mk. It is therefore possible to be 99% accurate with expertise/10 and a Mk.X computer. A failure is not a disaster, however, Rather, it will signify that some Corrective measure had to be applied. The correction is made by rolling the Manoeuvre CR a second time. If a failure occurs again, there is a possibility that a mishap may occur, if the circumstances warrant it, The only time that an emergency arises is in the case' of a breakdown of some ship's system which affects manoeuvring capacity. In such instances, the StarMaster must exercise his discretion to introduce a -1% to -20%. penalty, depending on the situation. In Breakdown emergencies, manoeuvring accuracy could be the difference between a safe flight and a possible disaster. For example, the Pilot might have to evade a swarm of asteroids. Failure could represent a hit.

ORBITAL PILOT: AIRLESS LANDINGS & ROCKET TOUCHDOWNS: For a safe landing under rocket power by balancing the ship on her jets and bringing her straight in without attempting to 'fly' her like an aircraft, the Orbital Pilot has a chance equal to his Space Manoeuvring CR. Failure in such a Landing CR brings a chance of an Outright crash equal to 100% minus the Orbital Pilot's safe landing percentage. The severity of the crash depends upon the reactions of the Pilot; in this instance, roll a Dexterity CR. If the CR is a success, various forms of minor damage occur. If the CR fails, a major crash occurs.

ORBITAL PILOT: CONTRAGRAVITY & GLIDE LANDINGS: When making a landing under contragravity field or by atmospheric gliding (often with rocket assist), and Orbital Pilot has a 99% chance of making a completely safe landing. However, if his Computer is shut down, a -1d10% chance of error will exist. A 'crash' signifies that a heavy-handed landing occurred, with a chance that some ship's system was damaged or put out of operation for a time. No major damage will occur, however.

COMBAT ORBITAL PILOT; 1 SP or 3 weeks/expertise level to expertise/10. Pre-requisites: Orbital Pilot skill of equivalent level equivalent Orbital Pilot expertise. Combat training is merely the battle manoeuvres and tactics which may be added to existing Orbital Pilot skills. In atmosphere, the Combat Orbital Pilot has the same skills as a Combat Pilot of atmospheric craft. In, space his skills are applied as a straight-forward attack/evasion DM based upon his skill level. For each expertise level, he obtains a +1%/-1% DM. Other factors like range, the Mk. of the BattleComputer aboard his and the enemy ship, speed of his vessel (if a target) or the enemy (if a target), and perhaps a special rating for space dogfights will also be applied. These factors will be detailed in the Starship Battle rules. In dogfights, Dexterity may also be a factor.

INTERPLANETARY PILOT: 3 SP or 5 weeks training/expertise level to expertise/10. Pre-requisites: Pilot training to an equivalent expertise level. Interplanetary Pilot prepares a character for the manoeuvring of vessels of corvette displacement or larger under Sub-light drive. The following areas of special skill will be developed as the PC increases his expertise.

INTERPLANETARY PILOT: ORBITAL PILOT SKILLS: All skills associated with the Orbital Pilot are performed at the Interplanetary Pilot's equivalent Orbital Pilot expertise. However, several skills will be replaced by superior proficiency, as noted below.

INTERPLANETARY COMBAT PILOT: If a Pilot has Orbital Combat Pilot expertise, he will apply the same level of expertise to manoeuvring a larger vessel. He must have Interplanetary Pilot skill of equal level,

INTERPLANETARY PILOT, SHORT—RANGE COURSES: Once a Pilot reaches expertise/5. he can literally 'eyeball' destinations up to 10 light-seconds away and can set a course for them unerringly, with or without computer assist. All he needs to know is the position of the destination (electronic scanning and sensorscan equipment provides the co-ordinates) to hit it with 100% accuracy.

INTERPLANETARY PILOT, STAR SYSTEM NAVIGATION. Once a Pilot reaches expertise/5. he is able to compute courses to planets or system co-ordinates. Without computer assist, he is limited to 10 LS ranges. With computer assist, he can compute a 25 LS course x expertise level, plus 25 LS. 500 LS (150 000 000 km or the distance from Sol to Terra). This program can be computed and programmed in 1 minute per 100 LS. If a longer course is plotted, a +1% error is introduced per additional 25 LS. and errors die treated as Outlined for Orbital Pilot Course Plotting errors.

INTERPLANETARY PILOT, TROUBLE SHOOTING: The Interplanetary Pilot must be a spacecraft technician of sorts because some vessels carry very small crews. Thus, part of his training involves being able to make repairs like a Tech/1. For each expertise level of Interplanetary Pilot, the PC may trouble shoot one spacecraft technical area as if he had Tech/1 expertise For example, a PC may Choose Sub-Light Communications Systems in his first level, Nuclear Power Generation Systems in his second level, and so on. He thus becomes a 'jack-of-all-trades,' master of none but somewhat skilled in many. He may also expend further SP or study time to increase such skill.

FTL PILOT: 5 SP or 8 weeks/expertise level to expertise/10. Pre-requisites: Interplanetary Pilot/10, Mathematics/3.

FTL PILOT: 1 - 6: Watchkeeping qualification only. Solo FTL flights will be taken at one's peril. The chance of error in hyperDrive Conversion is 100% minus 15% x FTL skill level, if unsupervised by a qualified FTL Pilot. If supervised, the error is equal to that of the observing FTL Pilot, If an error occurs in the FTL injection to hyper-light speeds, the Starship will emerge from HyperSpace either on a random course or at a distance greater than or lesser than the plotted distance Roll 1d6 and 1d100. The 1d6 signifies the direction taken, with 1 = 'up', 2 = 'down', 3=90° to starboard (right) of course, 4=90° to port (left) of course, 5= on assigned course, and 6= on reciprocal (reverse) of assigned course, The 1d100 result signifies the percentage over or under the plotted distance, with 1 - 2=1 - 25% under the distance, 26 - 75=plotted distance, and 76 - 100= 25 - 1% over the plotted distance. When the ship emerges, the Astrogation Section will have the determine its galactic co-ordinates, as everyone will realise immediately that they are 'lost.'

FTL PILOT: 7 - 9: Qualified HyperDrive Pilot, The chance of error in HyperDrive Conversion is 10% minus 1% per expertise level.

FTL PILOT/10: Master Pilot. The Pilot has become so skilled at controlling FTL vessels making a run up to Light Speed and FTL conversion into the Tachyon Universe of HyperSpace that no error will occur unless a major malfunction results in a key Starship system. The moment that a ship is passing the boundary between Einsteinian Space and the alternate continuum of HyperSpace is fraught with peril. Master Pilot status eliminates this risk, so that the Starship 'converts to FTL mode at precisely the co-ordinates and angle-of-attack required to carry it straight to its intended destination.

ASTROGATOR: 3 SP or 8 weeks/expertise level to expertise/10.
          Pre-requisite: Mathematics/5, Astronomy/5, Computer Programming/3, Aptitude: Intelligence.

ASTROGATOR' INTERPLANETARY NAVIGATION: An Astrogator may plot an interplanetary course with 100% 'accuracy to a distance of 500 LS per level of Astrogation expertise plus levels of Mathematics expertise plus Mk. of Computer used. The time required is 1 minute per 500 LS. An Astrogator/10 with Math/10 and a Mk.X computer could therefore plot a course of 15000 LS without error (some 4.5 million km or the distance from Sol to Neptune). There is a 1% chance of an error for every 500 LS over the limit. Errors are dealt with as described in Orbital Pilots.

ASTROGATOR, FTL NAVIGATION: An Astrogator may set an interstellar course with 100% accuracy, subject to the following modifiers:

-1% per Astrogation expertise level under expertise/5
-1% per Mathematics expertise level under expertise/5
-1% per Astronomy expertise level under expertise/5
-1% per Light Year to be travelled over Astrogator expertise level

+20% if correct course tape is available
+1% per 3% extra time taken for calculations
+3% per Astrogation expertise level if at expertise/5+
+3% per Mathematics expertise level if at expertise level if at expertise 5+
+3% per Astronomy expertise level if at expertise/5+
+5% per Mk, of Computer used in computations
+5% per point of Intelligence score if Intelligence/13+
+100% if Astrogator/9
+200% if Astrogator/10

It will be seen that not only the accuracy but also the distance of the course is determined by an Astrogator's skill. The better the Astrogator, the longer the Hyperjump he can compute with accuracy. His total qualifications have a significant bearing on his skill. If the course is accurate, only the FTL Pilot's skill in effecting a successful FTL Conversion will matter. But if there is a chance of a course error, this chance is added to the FTL Pilot's chance of making an error in his FTL Conversion. -

For example, an Astrogator/7 has Math/8, Astronomy/6, Intelligence/19, and a Mk.VII Computer to set a course of 190 Light Years. His accuracy is 100% basic plus 21% (Astrogation/7) + 24% (Math/8) + 18% (Astronomy/6) + 95% (Intelligence/l9) + 35% (Computer Mk.VII)b = 272%. Subtract 183% (190 LY . 7 for Astrogation skill). His chance of setting an accurate course is 89%, so there is an 11% error probability which will be added to the FTL Pilot's chance of making an error. The Astrogator could make up this -11% by putting in 33% more time in calculating the course.

The time factor in computing an interstellar course is 60 minutes per Light Year to be travelled. This time period can be reduced by the following factors:

-2 minutes per Astrogator expertise level
-2 minutes per Math expertise level
-1 minute per Astronomy expertise level

The resultant time can be further reduced by 10% per Mk. of Computer used and by 10% if a course tape is available which plots the run between the two co-ordinates.

The course set by our Astrogator/7 would take him 60 minutes x 190= 11400 minutes minus 190 x 42 minutes=3420 minutes or 57 hours if he had to do it by 'hand'. With his Mk.VII computer, the time is reduced by 70% to 17.1 hours. To eliminate the -11% error, he could increase the time by 33% to 22.75 hours. While this may seem like a long time to spend plotting a course, consider the sheer distance involved. When very long journeys are contemplated, a good Astrogator will spend his time preparing the entire course in a series of hyperjumps to eliminate in-course delays while he computes the next leg of the flight.

ASTROGATOR, 'LOST IN SPACE': If a Starship becomes 'lost' as a result of an error in the course or a Pilot error, it becomes the job of the Astrogator to find Out just where they are, This is done as a three-sciences research problem, using the Scientific Research procedure outlined in the Scientist Skills section (see 4.3). The complexity of the problem is related to the course distance, with one complexity level per 50 Light Years travelled, Returning to our Astrogator/7, if an error occurred in his 190 LY course, he would be facing a coinplexity/4 problem and a long time ahead of him to solve it.

STARSHIP BATTLE: 2 SP or 6 weeks/expertise level to expertise/10. Aptitudes: Intelligence, Leadership, and GTA. The PC becomes expert in the command of a spacecraft in a battle situation and may add his expertise to the combat probabilities in attack and subtract it from enemy combat probabilities, The PC in 'command' is, of course, the Starship Captain. Any PC who achieves 'command' rank such that he is qualified to be a Starship Captain must purchase at least expertise/4 with his SP.

SPACECRAFT ARMAMENTS: 2 SP or 6 weeks training/expertise level to expertise/10. Aptitudes: Intelligence, Dexterity, and GTA. Any PC is commanding a gun or missile turret or who is acting as Gunnery Officer is able to apply his expertise when firing at an enemy vessel.

STREETWISE: Astronauts who are members of BOSS, BRINT, the IPA, or the Merchant Service may apply SPs for Streetwise skills (see 4.9 General Skills), as this is an essential feature of their training or experience.

ALIEN LANGUAGES & CUSTOMS: Astronauts who are members of BOSS, BRINT, the IPA, or the Merchant Service may apply SPs for Alien Languages & Customs skills (see 4.9 General Skills), as they are often in contact with alien races.

MERCHANT: Astronauts who are in the Merchant Service may apply SPs for Merchant skills (see 4.9 General Skills), as they are often involved in interstellar trade activities as the chief officers of commercial vessels..

ADMINISTRATION: Astronauts attaining rank grade/7+ must learn to deal with bureaucratic management at all levels, and thus they can apply SPs to acquiring Administrative skill (see 4.9 General Skills).

## 4.8 TECH SKILLS & TRAINING

Techs are highly skilled specialists capable of operating and repairing equipment. The procedure to be followed for repairing breakdowns are described in the 5.0 Equipment Maintainance section, while skills with specific types of equipment will be described in the 7.0, 8.0 Equipment Lists. Starship repair is covered in 12.0.

### MECH TECH
The Mechanical Technician or Mech Tech is a specialist in the repair and maintainance of a wide range of mechanical devices. He may operate or repair any machinery within a specialist area in which he has acquired expertise. The following specialist areas are available at a cost of 1 SP or 3 weeks' study per expertise level, to maximum expertise/10. Aptitude: MechA'

| | |
|---|---|
| Ground Vehicles | Military Ground Vehicles |
| Aircraft | Military Aircraft |
| Marine Craft | Military Marine Craft |
| Starship Machiner | Alien Environment Vehicles |
| General Mechanical Equipment | |

A Mech Tech can use his expertise at maximum effect only to repair those mechanical systems within his training. For example, many systems in military vehicles will differ from civilian vehicles, and a Tech, with a civilian skills has only 1/2 expertise with military vehicles and vice versa. The Starmaster may also rule that some systems are similar enough to permit full expertise.

### ELECTRONICS/COMMUNICATIONS TECH
Electronics Techs (often called ComTechs because many of their skills are in the operation and maintainance of communications equipment) are specialists in a wide range of electronic equipment A CornTech may operate or repair any equipment within a specialist area in which he has acquired expertise. The following specialist areas are available at a cost of 1 SP or 3 weeks' study per expertise level, to maximum expertise/10. Aptitude: ElecA.

| | |
|---|---|
| Electrical Systems | Communication Systems |
| Vehicular Systems | Detection Systems |
| Aircraft Systems | Electronic Counter-Measures (ECM) |
| EVA Systems | Starship Electrical Systems |
| Sub-Light Communication Systerns* | |

*Requires equivalent skill with Communication Systems.

### COMPUTER TECH
The Computer Tech is a specialist in the repair and rnaintainance of a computer system. He can also prepare programs for computers in which he has expertise. The following specialist areas are available at a cost of 1 SP or 3 weeks' study per expertise level, to maximum expertise/10. Aptitude: ElecA.

| | |
|---|---|
| MiniComputers | Civilian Programming |
| Computer Mk. I-II* | Military Programming |
| Computer Mk III-IV* | Scientific Programming |
| Computer Mk. V-VI* | Cybernetic 'Brains' |
| Computer Mk. VII-VIII* | Cybernetic Systems |
| Computer Mk. IX-X* | Alien Computers** |

*Expertise in the lower Mks. must be equal or higher than expertise in higher Mks.
**Applicable only if expertise is possessed in the Mk. of computer.

Many PCs who are not Computer Techs will obtain expertise/1 in the various Mks. of computer in order to operate them. Programming involves being able to translate data into computer language and to set up operational programs which can be used by others (in chips, etc).

Programming expertise involves the ability to write a computer program. A Computer Tech can set up a very simple program in minutes. More complex programs will require longer periods of time and involve possibility of failure. Depending on the scope of the program, which the Starmaster decides, the task can take from 1 day to some weeks. A Computer Tech has a probability of 25% plus 6% x skill level of being successful, checked at the end of the programming period. If the program proves to be in error, a reprogramming may be accomplished with +10% on all subsequent attempts until success is achieved. Astronauts and Scientists will likely acquire expertise in Scientific Programming.

All Routine programs may be entered without error by any personnel having Computer Programming/1, with a time period of a few seconds to several minutes being typical, depending on the complexity of the program and whether it is in chip/tape/card form or must be manually entered. Errors in programming refer only to the writing or original programs to be entered as permanent data records and reference tapes.

### POWER TECH
The Power Tech is a specialist in the repair and maintainance of all power generation and high-voltage switching and delivery systems. The following specialist areas are available at a Cost of 1 SP or 3 weeks' study per expertise level, to maximum expertise/10. Aptitudes: ElecA and GTA.

| | |
|---|---|
| Thermal Generation Systems | Nuclear Generation Systems* |
| Portable Power Systems | Anti-Matter Generation Systems* |
| Vehicular Power Systems | Ground Power Transmission |
| Starship Power Systems | Beamed Power Transmission |

*Acquired at 2 SP or 4 weeks of study per expertise level.

### STARDRIVE TECH
The Stardrive Tech is a specialist in the repair and maintainance of all propulsion systems associated with sub-light spacecraft and Starships. The following propulsion systems may be acquired at a cost of 1-3 SP or 1-3 months of study, as indicated in brackets ( ) per expertise level to expertise/10. Aptitudes: GTA, MechA, ElecA.

| | |
|---|---|
| Rocket & Reaction Enginees (1) | HyperDrive Enginees (to 10 LY)(1) |
| Anti-Gray Systems (1) | HyperDrive Enginees (11-20 LV)(1) |
| Sub-Light Drive (1) | HyperDrive Enginees (21+ LV)(1) |
| JumpDrive Enginees (2) | Alien StarDrive (3) |

HyperDrive Engines expertise enables the Tech to operate and repair engines at the rated speeds. Alien Stardrive expertise enables the Tech to operate and repair alien units corresponding to his expertise in HyperDrive and JumpDrive Engines of equivalent type. Expertise in a lower rating of

HyperDrive must be equal to or higher than the expertise acquired with a higher rating.

## ARMOURER

The Armourer or Arms Tech is a highly skilled weapon systems technician. The following areas of specialization may be acquired at a cost of 1 SP or weeks of study as indicated in brackets ( ) per expertise level: Aptitudes: GTA, MechA, ElecA. Each 2 levels of expertise above expertise/4 also gives the Armourer +1 expertise level in the use of such weapons (see 4.6 Armsman Skills). Each skill has 10 levels of expertise.

| | |
|---|---|
| Armour (2) | Advanced Slugthrowers (3) |
| Power Armour (4) | Laser Small Arms (4) |
| Archaic Melee Weapons (2) | Blaster Small Arms (5) |
| Modern Melee Weapons (2) | Fusion Small Arms (5) |
| Firearms (3) | Other Energy Small Arms (4) |
| Portable Missile Weapons (3) | Projectile Artillery (4) |
| Heavy Missile Weapons (5) | Heavy Energy Weapons (5) |
| Starship Weapon Systems *(5) | BattleScreens (5) |
| BattleField Explosive Devices (2) | Bomb Disposal/Booby Traps(2) |

*Assumes expertise in Heavy Missile and Heavy Energy Weapons.

## CRIME TECH

The Crime Tech is a specialist in the placement and detection of all manner of electronic bugging devices, the operation of communication and jamming equipment, the discovery and analysis of evidence, and the detection of forged or altered documents, counterfeit currency, etc. In short, he is a Policeman or Security Services specialist. He can repair and maintain equipment as well. The following areas of specialisation may be acquired at a cost of 1 SP or 3 weeks of study per expertise level. Aptitudes: GTA, ElecA, and Intuition. Each skill has 10 levels of expertise.

| | |
|---|---|
| Communication Systems | Personal Identification Systems |
| ECM Systems | Crime Analysis Systems |
| Detection Systems | Forged/Counterfeit Documents |
| Computers (See Computer Tech) | Small Arms (See Weapons List & Skills for costs) |

## MEDITECH

The MediTech is the equivalent of a Registered Nurse. He can repair and maintain all equipment involving the practise of Medicine. He can also perform first-aid and limited medical treatment. Each expertise level is acquired at a cost of 4 SP or 2 months of study to maximum expertise/10. The MediTech must have Intelligence! 12+, Intuition/10+, and Dexterity/13+ to qualify, Aptitudes: Intelligence, Dexterity, GTA, ElecA.

Diagnosis of known diseases can be made at 20% + 5% x skill level. Once a correct diagnosis is made, the Medi-Tech can administer the correct treatment with an 80% chance of full recovery plus 1% x skill level. Note: this involves 'serious' cases: minor ailments and diseases have a 99% chance for full recovery, without complications. However, this also assumes that the Medi-Tech has adequate medical tapes in his computer. Reduce the chances of successful diagnosis by 2% for every Mk. the Medi-Comp. is below Mk.X.

The MediTech can perform surgical 'repairs' if no more than 1/3 of the victim's damage factor has been lost. A Medi-Tech can restore one point or damage x skill level per hour to a maximum of a third of a victim's damage factor. He may not restore more than 1 hour of damage per day for each skill level he possesses. A Medi-Tech/1, than could restore only 1 damage point for 1 hour of work in 24. A Medi-Tech/9 could restore 9 points per hour over a 9-hour period. It should be noted that the number of damage points that can be restored may be spread amongst more than 1 patient. Quicklime facilities are required for such a procedure to be used. Natural healing must be relied on otherwise. If the damage is more than 1/3 of the victim's damage factor, all the Medi-Tech can do is keep the patient alive and let him mend naturally.

## 4.9 GENERAL SKILLS

General Skills are available to all character classes. The only restriction is the appropriateness of acquiring some skills. For example, Driver skills would be rather difficult to obtain if a character spent all of his time in space. Some time would have to be spent on the ground actually driving a vehicle to obtain expertise.

DRIVER: 1 SP or 3 weeks training per vehicle type. Aptitude: Dexterity. The skill, if learned rather than purchased with SP, is tested as if at expertise/5. A Dexterity CR is rolled whenever a situation arises which threatens an accident or requires particular driving skill. The following vehicle types are available for driving expertise:

| | |
|---|---|
| Motorcycle or equivalent | Single-body truck |
| Groundcar: internal combustion or turbo | Semi-trailer truck |
| All-terrain vehicle: 4-wheel drive type | Hovercraft |
| All-terrain vehicle: tracked | Construction Unit bulldozer, etc. |

ATMOSPHERIC PILOT: 2 SP or 4 weeks training/expertise level to expertise/10. Pilot Aptitudes: Dexterity, Intelligence, and GTA. The PC learns to pilot one type of aircraft for each two levels of expertise he attains, and at expertise level10, 2 types may be added. The skill does not confer combat expertise, but the pilot may use 1/2 of his expertise when attempting to evade attacks. A trained pilot will also receive 1/2 his expertise as credit toward Combat Pilot (see 4.6 Armsman Skills) upon completing his first expertise level of Combat Pilot training because he is already skilled in the operation of the aircraft. Aircraft available for piloting expertise are:

| | |
|---|---|
| Single Engine: prop-driven, fixed wing | Single Engine Jet: subsonic* |
| Multi-Engine: prop-driven, fixed wing* | Multi-Engine Jet: subsonic** |
| Helicopter | Supersonic Jet: single and Multi-engine*** |

*Single Engine prop-driven aircraft expertise required as 'basic' training.
**single Engine Jet (subsonic) required as 'basic' training.
***single Engine Jet (subsonic) required as 'basic' training for Single Engine Supersonic Jet while Multi-Engine Jet (subsonic) required as 'basic' training for Multi-Engine Supersonic Jet.

In emergencies, a 1d20 is rolled, with Dexterity determining the CR level. A +1 is added to the CR level for each 3 levels of expertise possessed over expertise/1. A successful CR (result equal to or lower than Dexterity plus modifiers) means the threatened peril has been averted. A failure could signify that the situation has reached serious or crisis proportions.

PARACHUTE: 1 SP or 6 weeks training. Aptitudes: Dexterity and Agility. The skill, if learned rather than purchased with SP, is tested as if at expertise level 5. The PC receives instruction and experience in using a parachute under emergency conditions, If the PC possesses this skill and subsequently attempts to acquire Parachute Assault (see 4.6 Armsman Skills) he enjoys a +10% advantage to his learning chances.

JUMP BELT: The skill is as described in 4.6 Armsman Skills. Non - Armsmen do not have any combat bonuses when firing during a jump and must take Armsman Jump Belt in addition if they Wish combat proficiency.

CONTRAGRAVITY HARNESS: The skill is as described in 4.6 Arms-man Skills. Non—Armsmen do not have any combat bonuses when firing during a jump and must take Armsman Contragravity Harness in addition if they wish combat proficiency.

ALIEN ENVIRONMENTS: The skill is as described in 4.6 Armsman Skills.

SURVIVAL: The Skill is described in 4.6, Armsman Skills.

FIRST AID: The skill is described in 4.6, Armsman Skills,

MARINE CRAFT: 2 SP or 6 weeks training/expertise level to expertise/10. Marine Pilot Aptitudes: Dexterity, Intelligence, and GTA. The PC learns to navigate a specific class of water-borne craft

for each 2 levels of expertise attained, The vessels must be learned in the order given as follows:
Small Boat: motor and sail
Small Boat: Jetboat and hydrofoil
Surface Effects Boat: marine hovercraft
Surface Effects Ships: large prop-driven, hydrofoil, and hovercraft
marine vessels
Submersibles

In emergencies, a CR is rolled on 1d20, with a base CR level of 9, Each skill level adds +1 to the CR level. A successful result averts the emergency, while a failure can cause some form of mishap. When expertise/8 is reached, the emergency CR is always at 19 or less.

Marine Craft expertise also permits a PC to navigate his vessel. Beginning at expertise/3, he has a 75% chance of determining his position by various navigational techniques, and adds 4% to his probability of obtaining a precise co-ordinate per expertise level gained thereafter.

SWIMMING: 2 SP or 6 weeks training. Aptitudes: Constitution and Agility. The skill, if learned rather than purchased with SP, is tested at expertise level 5. There is a 50% chance that any PC coming from a Terran world with abundant water has learned how to swim. If he comes from a relatively dry planet, the chance is 10%. If he comes from an Ocean planet, the chance is 80%. If he has learned swimming, no SP cost is required. If not, SP or learning must be expended to acquire the skill. The distance a PC can swim is equal to 50 meters x the sum of his Agility and Constitution scores (range of 100m to 1900 meters). The distance can be increased by 1000m per additional SP expended or by each additional 3 weeks spent training until the PC reaches his natural limit of 1000m x sum of Constitution and Agility (maximum of 38 km or 23.5 miles). Swimming fatigues a PC like walking, with the speed being about the same, given good swimming conditions. If he is carrying a load over 5% of his body weight and no less than 10% of his body weight, his speed is cut to 2/3 and fatigue is 150% of normal. Note: some gear is designed to provide little or no encumbrance in water (SCUBA gear, etc.) or had flotation attached, so a rather heavy load may in effect be of zero weight.

SCUBA: 2 SP or 6 weeks training. Aptitudes: Constitution and Agility Pre-requisite the ability to Swim at least 2000m. The skill, if learned rather than purchased with SP, is tested at expertise level 5. The PC learns to use standard compressed air SCUBA equipment, as well as Oxy-Helium deep diving gear and the Aqua-Gill oxygen exchanger system. The PC learns to dive to depths up to 100m. Note: deep dives will greatly reduce the working time at depth because the PC must spend a fair amount of time 'decompressing' on the way up to avoid the bends if he remains deep for any significant length of time.

STREETFIGHTING & BRAWLING: 2 SP or 7 weeks study/expertise level to expertise/5. Streetfighting and brawling involves the skills of hand-to-hand fighting found in general society, including the use of hands, feet, claws, teeth, pincers, mandibles, or whatever, along with clubs, bottles, and the like to inflict injury on one's opponents. PCs are limited in the expertise they can attain because the methods are not 'scientific' and, therefore, any additional expertise can be acquired only by studying Unarmed Combat (see 4.6 Armsman Skills, Melee Combat). Unarmed Combat continues on where StreetFighting & Brawling leaves off. so any character with such expertise is given full credit for Unarmed Combat expertise up to expertise/. Aptitudes: for testing are Dexterity, Agility, Strength, and Constitution. The Maximum expertise attainable in StreetFighting and Brawling = 1/15 (Dex + Agil + Str + Con), Any opponent who has Unarmed Combat and is of equal expertise always has a +2%/-2% advantage over the Brawler.

STREETWISE: 2 SP or 7 weeks study/expertise level to expertise/10. Streetwise is knowledge of the values and manners of local sub-cultures. Aptitudes: Intelligence, Intuition, and Empathy.

Streetwise is very important if a PC has to deal with people a lot, for most subcultures (trade groups, the underworld, parts of the lower class, etc.) will likely reject close contact with anyone who is unable to 'talk their language' or show that .he relates to their interests, beliefs, and ways of doing things, The Streetwise character therefore acquires expertise in making those contacts so necessary to obtaining information on who to talk to about purchasing or selling contraband or weapons, obtaining needed documents (through less than official channels) finding out who is bribable in the official bureaucracy, hiring subordinates who may be on the other side of the law, obtaining a hiding place when the authorities are putting out a police dragnet, and so forth. Law Enforcement Officers and Intelligence Agents also need the skill so that they can understand what is going on in the subcultures around them, and so that they can win the confidence of people to obtain information.

A PC with Streetwise/0 can apply 1/2 of the sum of his Intelligence, Intuition, and Empathy, expressed as a percentage, to determine his chance of receiving at least a willingness to hear him out and perhaps extend help. Each expertise level of streetwise increases this probability by 5%. Success with a 1d100 percentage roll equal to or lower than a PC's Streetwise percentage means that an NPC (non-player character run by the Starmaster) will be receptive and either is willing to talk or else to 'pass the message along' to someone who 'might be interested.' He might simply agree to 'keep his ears open' and let you know if 'something comes up.' The Streetwise CR merely acts as an enabling determination which opens the possibility that an NPC will be of assistance. A large degree of the outcome should revolve around the actual role-play, the interaction of the PCs with the NPC in conversation, etc.

A failure with the Streetwise CR can mean just about anything, depending on the circumstances, The NPC might be unreceptive or perhaps really doesn't know the information sought. If a failure occurs, the Starmaster could choose to make a second CR to see if it was a 'serious' failure. A second failure could signify that the PC had contacted the wrong person. The Local authorities might then get the word from a stoolie' that the PC is up to no good, or the local Underworld might decide to muscle in on the outsiders trying to operate on their turf, etc. It might mean simply that the NPC will have nothing to do with the Streetwise PC.

The StarMaster might apply DMs or percentage bonuses or penalties to reflect the ease or the difficulty of obtaining particular kinds of information, assistance, goods, etc. The local conditions will be very important. In a Police State, for instance, not even the subcultures will be eager to help a Streetwise stranger. One can never tell just who is working for the Thought Police or KGB or BOSS. Such DMs could range from +20% to -20%, depending on the circumstances and the Starmaster's discretion.

It should also- be noted that Streetwise is race and culture oriented. 'Birds of a feather flock together,' and expertise acquired in dealing with humans will be relatively ineffective when dealing with nonhuman Saurians. Streetwise characters will therefore have to acquire Alien Languages & Customs (see below) in an appropriate area if they wish to apply more than their Streetwise/C probabilities.

ALIEN LANGUAGES & CUSTOMS: 1 SP or 2 weeks/language and customs. No pro-requisites, No testing. Alien Languages & Customs is a field which involves the use of deep-learning RNA/DNA Imprint and Psycho-Hypnotic techniques to provide a 'crash' course in the local language and customs. The appropriate learning tapes have to be available. If they are not available, a Linguistic Scientist will have to develop the appropriate learning package. The PC is required to expend 4 hours per day in training, At the end of the training period, roll

1d100, and add the PC scores for Intelligence and Empathy, comparing the result to the table below:

1d100 Result          Effect on Contact and Communication Skills

01-30      Character can make himself understood only haltingly and vice-versa. Streetwise is at 1/5 normal percentages for success.

31-50      Character can converse and understand accurately, but his accents are clearly alien, and many words are lacking in his vocabulary. He also understands some of the more obvious customs, but the fine nuances often escape him. Streetwise is at 3/5 normal percentages for success.

51-70      Character is reasonably fluent and can understand and convey meanings quite accurately. His grasp of Customs is reasonably sophisticated. Streetwise is at 3/5 normal percentages for success.

71-90      Character is very fluent and has an understanding of local customs sufficient to avoid most faux pas. Streetwise is at 4/5 normal percentages for success.

91-00      Character speaks and acts like a 'native.' Streetwise is a full percentages for success.

The ALC skills represent a general 'mental set' which makes a PC receptive to 'crash learning' techniques and, in themselves, do not constitute a total knowledge of all the languages and the customs of all variants on a racial type. By using various equipment and learning materials, a PC can learn a particular language and customs pattern. If a PC has Linguistics skill with a racial language and cultural pattern (see 4.3 Science Skills), he will reduce the time required to learn a particular language pattern by 2% x sum of his Intelligence and Empathy scores, plus 1% x Linguistics expertise level.

If players desire, the language skill can also be pro-rated. That is, suppose a 92 was rolled, with modifiers added. The PC would attain very fluent status in 2 weeks. However, he might need to communicate now. In that case, divide 92 by 14 to obtain the daily language proficiency increase. One day would give 6.57%. In 4.5 days or 5 days (round fractions up), the PC would progress from the 01-30 category to the 31-50 category. After 8 days, he would be in the 51-70 category, and so on, until the full 14 days had been expended and he had attained his maximum level of 71-90 proficiency.

A PC might be dissatisfied with his proficiency with a language and can attempt to 'relearn' it. However, if he does attempt 'relearning,' he must accept that score for 2 years before he can try to 'relearn' again. Linguists are exempted from this rule and may attempt relearning as often as required to develop mastery. (They have very specialised training in crash learning techniques.) Linguists may also learn a language 'normally' in remarkably fast time. See 4.3 Science Skills, Linguistics, for details.

Only one language/customs package can be learned at a time, but learning may be accomplished during inactive moments aboard ship, etc. The process is invaluable to Contacts Service personnel and Merchants.

FORGERY: 2 SP or 8 weeks/expertise level to expertise/10. Forgery is the fine (but often unappreciated) art of counterfeiting documents necessary for personal identification, cargo transfers, bank transactions, etc. Aptitudes: Dexterity, Intelligence, GTA.

Forged documents are as good as the skill and the knowledge of the person who made them. The quality of the documents is determined by adding or subtracting the following DMs:

| | |
|---|---|
| Forger's expertise level | +4% x expertise |
| Forger's Intelligence | +1% x Intelligence |
| Forger's Dexterity | +2% x Dexterity |
| Forger's Scientific Knowledge | +1% x sum of skill levels in Chemistry, Physics, Linguistics |
| Subjected to Crime Tech Scrutiny | -3% x expertise in Forged/Counterfeit Documents |
| Suspicion | -2% x 1d6 (2d6 in Police States)and x3d6 in wartime. |

| | |
|---|---|
| Military Installation | -10% |
| Technological Level of Culture | -2% x Tech Level |

The Forger will require good models to work from. If he has authentic documents that he can copy, add +1% x 1d10 to his DMs, If he has to improvise, subtract -1% x 1d10 from his DMs.

Despite all of the above, the Starmaster will have to judge the circumstances and the nature of the documents, adding or subtracting DMs to reflect the reality of the situation. For instance, if a Forger drew a bank draft for CR 100 000 and presented it at a local financial institution, the concern of the bank officials with cashing a large bill of exchange would lead to far closer scrutiny and checking than would a draft for CR 250. Or again, a forged identification card would probably be given a cursory check at a hotel, If a PC was stopped for routine questioning, the normal chances Would apply. But if the PC was attempting to gain access to a Naval Shipyard. his identity papers might be subjected to at least the -10%DM noted above, and likely far more if his appearance and accents were not perfect, and if the player controlling the PC did not himself act in an 'innocent' manner, In short, role-playing skill itself will affect the degree of suspicion that an official might have, If there is a strong suspicion (the NPC could roll an Intuition CR, as might a PC), the identity card would be subjected to a computer check with Central Records, retinal and fingerprint analysis would be made, and routine questioning would ensue. That could result in a -25% to -50% DM in highly developed cultures. And if the player himself makes a real slip in role-play, the PC could simply be held 'on suspicion' or else turned away, even if the forged papers passed the check.

As a general guide, the Forger's expertise can itself be used as a measure of the negative DMs to be imposed in especially adverse conditions, with a 1d6 x (10% - expertise) DM as a rough guide. For example, a Forger/7 would be able to produce papers which would have a -3% x 1d6 or -3% to - 18% chance of discovery in adverse conditions.

COUNTERFEITING: 2 SP or 8 weeks/expertise level to expertise/10. Aptitudes: Dexterity, Intelligence, GTA. Counterfeiting is conducted in the same manner as that outlined for Forgery, above. However, subtract -5% DM for each CR 10 on the face of the bank note. A CR 20 bill, for example, would have a -10% chance of passing, along with any other factors. People who deal with money a lot (bankers, shopkeepers, etc.) will have a 2d6-2 expertise level rolled for the equivalent of CrimeTech Scrutiny of Counterfeiters. However, they will have to be suspicious (roll an Intuition CR, with base 10 or less on 1d20 signifying suspicion, adding +1 per CR 10 on the note over a face value of CR 10) before they examine the bill closely.

As with forgery. Counterfeiting will have to be played by ear to a fair degree. One thing is quite certain; as long as local suspicions are not aroused or large bills passed, anyone using counterfeit money can pass a few bills in relative safety. However, if the bills are, poorly made or are of suspiciously high denomination or a lot of 'funny money' is in circulation, the risks are going to be high.

Counterfeiting will be impossible on some worlds, where coins of precious metal are used. These might be gold, silver, platinum, iridium, etc. Simple weighing, etc., can often show that a coin has been 'shaved' or has been diluted with base metals. The trick in such cases is to acquire precious metals from elsewhere at a lower cost and then simply to sell the bullion honestly at a profit.

Federation currency and other interstellar currencies of exchange, as opposed to local currencies are very difficult to counterfeit because of the ultra-high technologies used to produce it in the first place. Chances of discovery are therefore increased by a DM of -1% x 3d6, in addition to any other factors.

GAMBLING: 2 SP or 4 weeks training/expertise level to expertise! 10. Aptitudes: Dexterity, Intelligence, and Intuition. Maximum expertise attainable is equal to 1 + 1/6 x sum of the Aptitudes.

Gambling is the passion of many races, and the individual who takes up this rather intriguing sport will become well informed on games of chance. The Gambler has advantages over non-experts and is quite capable of arranging matters so that he wins far more than he loses once he has developed real expertise.

First of all, a Gambler has a CR of base 10, rolled on 1d20, of recognising and being able to capitalise on the manner in which any unfamiliar game is played. This probability is increased by +1 for each expertise level he has acquired. If he succeeds, he will have a +1 DM on all gambling dice determinations. If he fails, he will have a -l DM.

Gamblers have a similar CR to detect dishonest games. Dishonest games occur whenever there is a result of 5 or less on a StarMaster's roll of 1d20. In such instances, the StarMaster will stack the odds by -1d6. If the Gambler detects the trick with his CR, he can roll 1d6 + I to counter the dishonest play.

Gambling games can be invented by the players in as many variations as they wish, The idea is to 'arrange' the odds and the potential winnings so that desired results occur,
EVEN ODDS WIN/LOSE GAMBLING: The gambler pits his expertise against that of an NPC with an expertise of 2d6-2. Both the Gambler and the StarMaster roll 1d10, adding their respective expertise levels to the result. The highest result wins. Winnings equal the amount bet. Most wagers will be low, usually CR 1-20. The Gambler may cheat' and add +1d6, If detected by the NPC, the cheating can be countered by +1d6+1 added to the N PC's dice result.

HIGH ODDS WIN/LOSE GAMBLING: For games in which the Gambler stands to win more than wagered, a +1 DM is added to the NPCs gambling dice roll for each 25% above the wager that can be won, a 250% return, for example, is 150% over the wager and yields a +6 DM added to the NPC's dice. The Gambler may 'cheat' and add +1d6. If detected by the NPC, the cheating can be countered by +1d6 + I added to the NPC's dice result.

Psionics with PK or Psycho-Kenesis talent can add +1d6 to their dice rolls and are undetectable unless another Psionic is present.

If two players are gambling against each other, use 1d20. The round of gambling continues until one or the other fails to make his CR, whereupon he loses. If both lose simultaneously, the wager is increased 100% or someone 'folds' and allows the other to collect the winnings.

Organised games at casinos and the like will accept bets of CR 1000 x 1d10 as an upper limit. This random ceiling can be modified upward or downward to reflect the appropriateness of the surroundings. Small establishments, for instance, might have ceilings of CR 100 x 1d10. Very posh establishments might have ceilings of CR 10,000 x 1d10. 'Floating' games would have wagers with upper limits of CR10 x 1d100.

BRIBERY: 2 SP or 6 weeks study/expertise level to expertise/10. Aptitudes: Intelligence, Intuition, and Empathy.

Bribery is considered to be quite acceptable and, if correctly and artistically done, a 'normal' part of doing business. In other cultures it might be violently rejected.

The Bribery CR is made on l1d20. The CR level is equal to 1/8 x the sum of the Briber's Intelligence, Intuition, and Empathy plus +1 per expertise level attained. Round fractional values to the nearest whole number.

The willingness of an official to accept a bribe will vary. In cultures where bribery is part of the system, no resistance is made and a failure to succeed in a bribery attempt will likely go unreported. In cultures where bribery is frowned upon, NPC officials will roll 1d6 and subtract the result as a penalty DM from the CR level, A failed bribe is subjected to a second CR roll, and if that fails too, the bribery attempt is reported. If the official is empowered to apprehend the Briber, he will make an arrest. In cultures where bribery is strictly forbidden, the penalty DM is 3 + 1d6 subtracted from the CR level.

Several other modifiers may influence Bribery and Evasion of Report/ Arrest CRs. Only one of the following modifiers may be used, depending on the situation and the player's choice:

If a Briber has Administration skills and is dealing with government officials, he may add +1 DM x 1/3 of his Administration expertise, rounding to the nearest whole number. This DM may be applied either to the Bribery CR or to the Evasion CR.

If a Briber has Streetwise, he may employ it to influence low-placed clerks, bartenders, hotel employees, etc., in the same manner as an Administrator can influence government officials.

If a Briber has Empathy over 15, he can apply a +2 DM to a Bribery or Evasion CR.

The Starmaster should make sure that the amount offered for the bribe is reasonable for the service requested. This can often be done by telling the player the 'going rate' is for such a service. The StarMaster is also free to initiate a bribery sequence through a venial NPC or a 'plant' working for the authorities in an entrapment operation. On planets known for the sheer corruptibility of officials, many bribes will be commonplace and carry little or no risk unless they are really out of the ordinary, like selling top military secrets or the plans to the local bank. On others, bribes will be resisted and often reported with disappointing regularity. These conditions could be simulated by positive and negative DMs which the StarMaster determines and applies at his discretion.

It should also be noted that a bribed official may not carry through as expected, or perhaps not at all. He might be under surveillance himself and 'afraid of acting, or it simply might be impossible to deliver as promised. He might be an outright 'crook' who pockets bribes With the intention of doing nothing or else extracting further bribes to get the task done. Of course, the PCs will not be able to count on anything. They pay their money and take their chances. Whether or not action occurs can thus be made subject to a second Bribery CR--the Action CR.

MERCHANT: 5 SP or 12 weeks/expertise level to expertise/10. Aptitudes: Intelligence, Intuition, and Empathy. The Merchant skills are applied in the Trade and Commerce section of the rules (see 0.5). Merchandising should be regarded as a form of economic 'warfare' in which both buyers and sellers attempt to get the best price from their point of view. A PC with Merchant skills will tend to do significantly better in the commercial field than one who has no skills. Only PCs in the Merchant Service can qualify for this expertise. Veterans of other Services thus have to join the Merchant Marine and work their way up slowly.

ADMINISTRATION: 2 SP or 6 weeks study/expertise level to exper-tise/10. Aptitudes: Intelligence, Intuition, and Leadership. Admin-istration provides a character with expertise and training with bureaucratic procedures in business and government. He understands what is required to deal with company and government officials and clerks in order to obtain what he wants, He also understands management principles and procedures.

Administrative CRs are made on 1d20, with the CR level equal to 1/8 x the sum of Leadership, Intelligence and Intuition, plus +1 DM per level of expertise obtained.

When contact with bureaucracy is involved and the situation is 'routine,' a successful Admin CR insures co-operative action. Administrative experts understand the motives and needs of officials and can put forward the appropriate approach designed to get action. Because the Administrator 'speaks the language' of bureaucrats, he has the bureaucratic version of Streetwise and can often find out information and obtain

advice or assistance where ,an outsider would be rebuffed by petty officialdom. Thus the Administrator can often avoid police harassment, delays in the issuing of the appropriate documents, clearances, permits, and other forms of red tape. Indeed, he tends to experience prompt customs inspections and clearances (often with minimal searches), cursory inspection of papers (+2% DM to forged personal documents in normal circumstances, and +1% DM to all other documents, for each expertise level in Administration). Police officers ask questions more 'politely' and may issue 'warnings' when others could be arrested and interrogated.

More extraordinary circumstances might call for bribes, as outlined in Bribery . above. In such a case, and Administrator enjoys advantages when attempting to bribe an official.

The maximum Administrative expertise attainable is equal to 1/2 Leadership +1.

SCOUT: 2 SP or 6 weeks/expertise level to expertise/10. Aptitudes: Constitution, Dexterity, Agility, and Intuition. Scouting begins at experience/2, and continues where the various Survival Skills (see 4.6 Armsman Skills) leave off. Each of the Survival Skills serves as a basis for advanced Scouting skills in the type of environment covered by the basic Survival training.

Survival/1 or Scout/1 gives the trained PC a 50% chance per day of finding enough food and water for himself, with appropriate bonus or penalty DMs being applied by the Starmaster for terrain, scanty or plenitude of game, water, etc. He may roll 1d6 if successful to see how many days of food and/or water was found. Each level of expertise adds 10% chance of finding food and water, and increases the 1d6 roll by +1. By experience/6, a Scout will always find enough food and water for himself if there is any to be had in the region. If there is nothing, he can usually work out where some might be found.

If a Scout has Alien Environments (see 4.6 Armsman Skills), he will adjust to conditions on another planet in 14 days minus his skill level, and will do so immediately once he reaches expertise/10.

A scout is able to track by sight at a 9% chance x expertise level. This probability assumes no attempt has been made to hide tracks and that there are good ground and weather conditions. A DM can be set to modify his chances at success. A Scout tracking another Scout, for example, will have his chances reduced by -5% per expertise level of the other Scout, if the 'prey' is attempting to conceal his trail. In environments in which the Scout has no basic Survival Skill in a given environment, his tracking and concealment advantages are cut by 1/2.

The Starmaster will assign bonus and penalty DMs as seem appropriate when tracking situations arise.

A Scout will also recognise dangerous plants and animals at 80% +2% per expertise level if he is familiar with the environmental type (has appropriate Survival Skill) and at 1/2 that level if he is unfamiliar. When landing on a new planet for exploration purposes, he is considered as unfamiliar until he makes his adjustment.

A Scout can move undetected through woods, brush, or any other terrain offering good cover at a 9% chance x expertise level, unless he is being watched for by a Scout of equal or higher skill. He can detect untrained personnel at a flat 90%. When pitting against another Scout, the Chance of not being detected is reduced by -3% x expertise of the other Scout. The distance at which detection occurs will vary according to the terrain.

Finally, when firing from ambush, a Scout will enjoy a +5% advantage to hit an enemy, in addition to all other combat bonuses.

## 4.10 PSIONIC TALENTS

Psionics is a highly specialised field of advanced science which deals with those abilities of the mind which enable an Adept to affect the physical universe without physical manipulation of any kind, creating effects which appear to have no material cause. Psionics is thus referred to as a 'non-causative' science.

In Space Opera , Psionics cannot affect the physical universe directly on a large scale. The amount of energy available to even the most psionically active mind is limited. Since the Law of Conservation of Energy applies, psionic talents would seem to be limited to such talents as telepathy, and clairvoyance, with highly restricted forms of telekinesis and teleportation perhaps available to the most powerful minds.

However, the Forerunners had developed a very high level Science of Mind, and one of the outgrowths of that science was the PsychoKenetic Crystal. The PK Crystal or StarStone was discovered in the last days of the Forerunner civilisations, immediately before the Final War which tore the vast interstellar empires apart and brought destruction to scores of thousands of planets. While the exact operation of the PK Crystal is not presently understood, it is believed to be able to tap the energy fields of a parallel, high-energy universe, perhaps those of Tachyon HyperSpace itself. This means that enormous amounts of energy can become available to the psionic Adept, and some rather spectacular applications of mental power can be contemplated when a PK Crystal is employed to focus psionic talents and to boost their natural energy levels.

## 4.11 PSIONIC 'AWAKENING'

Not all PCs and NPCs will be psionically active. Indeed, some will be psionically 'dead' and will not Only be unable to exercise psionic talents but also will be immune or unreceptive to some forms of psionic talents directed at them.

Psionically 'Dead' Characters: Any character with a Psionics (PSI) score of 10 or less will be psionically 'inactive' or 'dead.' That is, he will be unable to exercise psionic talents himself. He will also be unable to receive telepathic messages, etc., unless these are delivered in the form of a Mental Attack. Such characters will also have a form of natural resistance to psionic eavesdropping,' as their minds cannot be read if they roll equal to or higher than their PSI scores on 1d20. Characters with PSI/1 are therefore 'unreadable' with telepathic powers because they will always roll 1 or higher on 1d20. Such characters have the capacity for ShuttleThought, their minds thinking on several levels at once in such a fashion that any Telepath attempting to read them receives only a confusing blur of mental images.

Psionically 'Open' Characters: Any character with a Psionics (PSI) score of 11 or greater will be psionically 'open' and may be able to receive telepathic messages, etc., without being subjected to Mental Attack. He may also 'awaken' psionically and be able to exercise mental powers.

Psionic 'Awakening': Characters with a Psionic (PSI) score of 11 or greater have a chance of becoming active users of psionic powers. That chance is equal to their PSI scores minus 10. For example, a character with PSI/14 has a 14-10=4 or less chance, rolled on 1d10, of mentally 'awakening' to his psionic potential. That chance also represents the upper level of psionic development he may attain as a psionic Adept.

No character will enter the game psionically 'awakened.' Awakening occurs Only under the following conditions:

1   The psionically 'open' mind must be directly exposed to some form of psionic attack, some attempt to control, injure, or kill, which 'awakens' the PC's latent psionic capacities so that he discovers the possibilities of exercising PSI Forces within himself. If the PC has successfully resisted such an attack, he has a chance equal to his 'PSI Awakening' score of becoming psionically active himself. If he fails to resist the attack and succumbs, that chance is halved. For example, a PC has a PSI/16, giving him a chance of 6 or less rolled on 1d10 of 'awakening' when exposed to a Mental Attack and able to successfully resist it. If he succumbs to the attack (and survives it). he has only half the usual chance of 'awakening,' or 3 or less rolled on 1d10. Within 5d6 days after the attack, the psionically awakened mind will acquire its first psionic talent.

2.  The psionically 'open' mind may be exposed to an un-sensitised PK Crystal which has come into the PC's possession. The PK Crystal is a luminescent disk about 40mm in diameter and 10mm thick. The PC in possession of an un-

sensitised PK Crystal has an immediate chance equal to his PSI score or less, rolled on 1d20, of 'awakening.' If he fails to psionically 'awaken' the moment he touches the PK Crystal, he will roll a Shock CR (see 2.8 Shock Resistance), with a failure draining him of all stamina points and causing a coma lasting 21 days minus his Constitution score. Characters failing to 'awaken' the first time they touch a PK Crystal will continue to have a chance of 'awakening' equal to half their PSI scores, again rolled on 1d20, checked every 30 days minus their PSI scores, so long as they retain possession of the PK Crystal. Every check made for such an 'awakening' carries the risk of Shock and coma upon a failure to attain awareness of one's psionic potentials.

3. Characters with PSI scores of 18 or 19 may be 'contacted.' The PC simply disappears while on leave, etc., for a period of 3 + 1d6 weeks. When he reappears, he is psionically 'a-wakened' and has a PK Crystal in his possession. The reason why he was contacted, the persons who had contacted him, the motive for their training him mentally, these and many other questions remain unanswered because none of those so contacted can or will divulge the information, Usually some story is told about finding the PK Crystal, and the account tends to square with known tales about such discoveries and subsequent 'awakenings.' The chance of such a contact is equal to the PC's PSI score minus 2d6, and is checked once per year. In this case, each year of a PC's career life can be used to make the check. For instance, if he had 14 years of service before entering the game, he could check (4 times for a 'contact.' Such characters, unlike all others, will emerge in the game with active psionic talents. One talent will be given for each year remaining in his career service before he enters the game. Using our previous example, suppose that a PC is 'contacted' in the sixth year of his 14 years of service. He would obtain 14 - 6 = 8 psionic talents by the time he enters the action.

## TYPES OF PSIONIC TALENTS

There are a -great many psionic talents, but only PSI/19 Adepts will be able to acquire mastery of them all. The limits on the number of psionic fields and the levels of power which an Adept can attain are:

Psionic Score 11: level 1 power in 1 psionic field
Psionic Score 12: level 2 power in 1 psionic field
Psionic Score 13: level 3 power in 1 psionic field
Psionic Score 14: level 4 power in 2 psionic fields
Psionic Score 15: level 5 power in 2 psionic fields
Psionic Score 16: level 6 power in 2 psionic fields
Psionic Score 17: level 7 power in 3 psionic fields
Psionic Score 18: level 9 power in 3 psionic fields
Psionic Score 19: level 10 power in all psionic fields

There are 5 fields of Psionics which can be mastered: Telepathy, Telekinesis, Teleportation, Clairvoyance, and Telurgy and Self--Awareness. Only a PSI/19 can attempt Telurgy and self-awareness. When a PC 'awakens,' he rolls 1d6 for each of the fields of psionic talent, and obtains those fields in which he obtained the highest roll(s). For instance, a PSI/15 has the opportunity to attain level 5 power in 2 fields. He rolls 1d6 for each field (except Telurgy and self-awareness). Suppose the rolls were 5 for Telepathy, 6 for Telekinesis, 2 for Teleportation, and 5 for Clairvoyance. He would have Telepathy and has to roll again to see whether he receives Telekinesis or Clairvoyance.

## 4.12.ACQUISITION OF PSIONIC TALENTS

Upon 'psionic awakening,' an Adept acquires the first talent in the appropriate list of talents for his psionic field. For instance, a Telepath will acquire Life Sense as his first level 1 psionic talent. If he has several psionic fields available, the Adept will choose the first talent in one of his fields of Power.

All subsequent talents are acquired by learning, and the same procedure is used as given in 4.1 Learning Skills. Each level of power is equal to an expertise level and requires 2 weeks of study x level of power to be attained. Study deducts 1 stamina point per day x level of power to be studied for each talent the Adept is attempting to master. For example, the level 5 Telepathic power of Presence requires 10 weeks of study and exhausts 5 stamina points per day.

The talents in any given field must be learned in the order in which they are set out in the description lists. For instance, in Telepathy Life Sense is before Empathic Contact, and thus it must be acquired before Empathic Contact can be acquired. Only one talent can be studied in any given field at a time. However, if an Adept has powers in several fields, he can study one talent in each field simultaneously.

The same limitations apply to study of psionic talents as outlined for other skills. This includes both psionic and career skills. If a full-time student, he can study a maximum of 6 skills. In this instance, he can study 2 psionic skills in the same field simultaneously, or a maximum of 6 psionic skills in 3 separate areas. Of course, he can also choose to study career skills as well, but these will affect the number of psionic talents that can be learned.

If the PC is a 'contacted' Adept, he will require only half normal learning time. His basic mental training has already opened up large sections of his mind, and he has been taught how to develop his mental powers more rapidly than other Psionics.

The psionic fields and their talents are:

### Telepathy
| | |
|---|---|
| 1. Life Sense/1 | 16. Locate/5 |
| 2. Empathic Contact/1 | 17 Communicate/5 |
| 3. Mind Shield/1 | 18. DeathBolt/6 |
| 4. Suggestion I/1 | 19. Delusion/6 |
| 5. Mind Touch/2 | 20. Control/6 |
| 6. TruthTell/2 | 21. StarSpeak/7 |
| 7. Mental Attack/2 | 22. Personality Transfer/7 |
| 8. Stun/2 | 23. Dominate/7 |
| 9. Telepathy/3 | 24. SaneMind/8 |
| 10. Illusion/3 | 25. MindSlay/8 |
| 11. MindProbe/4 | 26. Suggestion II/8 |
| 12. Coma/4 | 27. Elemental Force/9 |
| 13. PajnBlast/4 | 28. Great Command/9 |
| 14. Presence/5 | 29. Living Matrix/10 |
| 15. Psychic Force/5 | |

### Telekinesis
| | |
|---|---|
| 1. Mass Movement/1-10 | 14. Cryo PSI/5 |
| 2. Manipulation/1 | 15. Morass/6 |
| 3. Sound/1 | 16. Mind Touch/6 |
| 4. SoftSpeak/2 | 17. Life Sense/6 |
| 5. Telek Blow/2 | 18. Psychic Force/7 |
| 6. Telek Bullet/3 | 19. Energize/7 |
| 7. Telek Shield/3 | 20. MagnetoScreen/8 |
| 8. Mind Shield/3 | 21. NegaField/8 |
| 9. Levitate/3 | 22. RadShield/8 |
| 10. Stress/4 | 23. BattleScreen/9 |
| 11. Flight/4 | 24. Power/9 |
| 12, Grenade/4 | 25. ManeuverDrive/9 |
| 13. Pyro PSI/5 | |

### Teleportation
| | |
|---|---|
| 1. Teleportation/1-10 | 3. Dematerialize/6 |
| 2. MindShield/3 | 4. Living Matrix/10 |

### Clairvoyance
| | |
|---|---|
| 1. Sense Danger/1 | 9. MindShield/3 |
| 2. Locate Danger/1 | 10. TrueSight/4 |
| 3. FarSee/2 | 11. PathFind,'4 |
| 4. Detect PSI/2 | 12. Precognition,5 |
| 5. Sense Poison/2 | 13. Perception 5-10 |
| 6. TruthTell/3 | 14. Psychic Force,6 |
| 7. Storytell/3 | 15. Living Matrix/10 |
| 8. Clairaudience/3 | |

### Telurgy & Self-awareness
| | |
|---|---|
| 1. MindShield/2-10 | 7. Intuition/2-10 |
| 2. Strength/2-10 | 8. Leadership/2-10 |

3. Constitution/2-10        9. Bravery/2-10
4. Agility/2-10            10. Empathy/2-10
5. Dexterity/2-10          11. Awareness/2-10
6. Intelligence/2-10       12. Living Matrix/10

The Force
1. Self Heal/5             7. DeathTouch/6
2. Heal/5                  8. Self Cure/6
3. PainStop/5              9. Cure/9
4. Mental Attack/5         10. Regenerate Self/9
5. PainTouch/5             11. Revivify/10
6. SensoryBlock/5

## 4.13 THE PK CRYSTAL

The PK Crystal or StarStone is a luminescent disk about 40mm in diameter and 10mm thick in the centre, tapering at the edge to about 1mm thickness. It thus has a characteristic lens shape. The PK Crystal has the power to focus an Adept's mental faculties and to tap the vast energies of the 'Force,' the mysterious source of power avail. able to psionic Adepts which permits them to perform truly impressive feats of mental power.

Most characters will have to discover PK Crystals; they cannot be manufactured by the technologies of current civilisations. Such crystals will likely be 'dormant,' meaning that they have not been keyed to the mental patterns of any living, sentient creature with psionic 'openness.' These Forerunner devices will instantly arrange their molecular structures to mirror the mental pattern and aura of the first psionically 'open' character to touch them. Once it is so 'keyed,' the PK Crystal will become starkly antithetical to any other life form which handles it when it is not in contact with the owner, acting as the most virulent poison possible so long as it is in contact with the un-insulated flesh of the being handling it. However, if a StarStone is removed from an owner and allowed to sit for 2d6 months (only the StarMaster knows for sure), it may be able to survive the absence from its owner and become receptive to the mental patterns of another. The chance of this happening is equal to 20 minus the PSI score of the previous owner. If the PK Crystal does not meet these conditions, it will sublimate away.

The effect of a PK Crystal on psionic 'awakening' have already been outlined (see 4.11, above).

A PK Crystal will also greatly augment the magnitude and range of psionic talents. Exact effects will be given in the descriptions of the various talents which follow. Some psionic talents will be possible only with the acquisition of a PK Crystal; these are marked in the descriptions;

'Contacted' Adepts receive a PK Crystal from their mysterious mentors, unlike lower level PC's. Also, whenever they lose their PK Crystals, a replacement seems to arrive within a reasonably short period of time, again from the same mysterious source. It is not known why such Adepts have been singled out for such treatment, but it is believed that they have some part to play in the working out of a great plan to restore the Forerunner levels of civilisation and culture.

## 4.14 ATTITUDES TOWARDS PSIONICS

Depending upon the place that players and Starmasters wish to accord psionic talents in their game, the attitudes possessed by most people and cultures may vary considerably.

The designers recommend the following attitudinal pattern. In the Terran Union of Federated Planets, Psionics are officially tolerated and, if in government service, are actively supported and encouraged. The Adept occupies much the same place as the Lensman in 'Doc' Smith's epic science fiction series, the .Jedi Knights from StarWars, etc. The average citizen of the UFP is perhaps a bit mystified by psionic talents, but he is prepared to accept that adepts are not intrinsically 'bad' or 'dangerous' if they are conducting themselves properly or in the service of

'Civilisation.' Even so, many will be suspicious or fearful of persons with such power.

However, the attitude of other starcultures towards psionically gifted individuals may prove to be far less tolerant than in the UFP. Superstitious 'primitives' will regard psionic Adepts as sorcerers or witches, and the violence of their fear may result in persecution or even outright lynching. More advanced societies with totalitarian political systems will regard Psionics as a direct threat to the continued authority of the dominant party or group, and Adepts will be subjected to rigid control and probably A state approved campaign of distrust and persecution carried out by the fearful citizenry. Psionic Adepts possess, in short, far too much power to be trusted, Adepts operating in such areas should therefore be careful not to reveal their capabilities unless it is really needful to do so.

## 4.15 TELEPATHY

Telepathy is that psionic field in which the Adept acquires the power to enter into various kinds of direct, mind-to-mind contact with other living beings. In its more primitive forms, telepathy is essentially a passive' talent which amounts to little more than awareness of the presence of other sentient life forms through the proximity of their psychic auras. In its advanced forms, telepathy is one of the most powerful of all the mental sciences, for the Adept can enter into such close communication with other minds that a 'fusion' results, allowing several minds to think and act as one.

Telepathic contact is generally not possible if an Electro-mechanical Thought Screen is used to shield the mind. See Thought Screens in the equipment lists.

LIFE SENSE, Level 1 Telepathy: The adept can detect the presence of living beings through their mental auras, The probability is equal to PSI score minus 1d6 (no penalty with a PK Crystal), rolled on 1d20. The same probability also applies to his being able to determine (1) the nature of the creature(s), (2) the number of creatures, and (3) the general direction and approximate distance of the creatures if life has been sensed. Range =10 meters x PSI (tripled with a PK Crystal). Cost = 5 stamina points (2 stamina points with PK Crystal) for a 5 minute duration.

EMPATHIC CONTACT, Level 1 Telepathy: The adept has the ability to project his Empathic levels into another mind, Roll an Empathy CR, with a result equal to or less than the Adept's Empathy score on 1d20 allowing him to send a one-word 'message' to the chosen recipient. The message may be open to some misinterpretation, but it will tend to be regarded in a favourable light. Generally, the impression created is one related to the 'openness' or 'trustworthiness' of the Adept. The Adept can also sense the mood of his subject upon rolling equal to or lower than his PSI score on 1d20. Range = 10 meters + l meter x PSI (tripled with a PK Crystal). Cost =3 stamina points (1 stamina point with PK Crystal) for a one-word 'message' or to 'read' another's mood.

MIND SHIELD, Level 1 Telepathy: The Adept develops a natural barrier to protect his own mind and thoughts against any unwanted telepathic interference or prying. This barrier becomes a permanent part of his mind from now on. The Mind Shield has several facets:
l.        If touched by another's mind, the Adept has a chance to his PSI score of instantly detecting that touch and erecting a 'rigid' mental defence screen. A 'rigid' screen is totally impervious to telepathic interference or prying short of outright Mental Attack, However, if the Adept is not alerted, the other Telepath has a chance of exerting a degree of influence over him or of extracting some surface information.
2.        If the Adept is not alerted to another's mental probing for information, that attempt to obtain knowledge of his surface thoughts will be equal to 1/2 PSI score of the prober, rolled on 1D20. The answer to the prober's question need not be longer

than 5 words, and the information will deal with current thoughts or intentions. The PC or NPC probed while Mind Shielded has to give truthful information, and his subsequent thoughts and actions will be subject to what he said he was thinking. In short, it's a matter of maintaining game consistency, and lying is strictly forbidden here. However, if a deep Probe is made for 'hard' information on a specific subject of vital interest to the Mind Shielded Adept, he can snap to full alert status if he rolls his PSI score on 1d20.

3.        If an Adept is subjected to a sudden Mental Attack, and he is not holding a rigid Mind Shield, he must expend 1d6 stamina points resisting the attack while he prepares his defences and firms up his Mind Shield.

4.        When holding a 'rigid' shield, the Adept must expend 3 stamina points per hour (1 with a PK Crystal). To send a message out of a 'rigid' shield or to receive a message while remaining protected from psionic effects of an unwanted nature costs 5 stamina points (3 with a PK Crystal) in addition to any other expenditures required. Such Costs do not apply to Mental Attacks launched from behind the protection of a Mind Shield.

5.        When Mind Shield, an Adept can expend 1 stamina point x PSI in defence (double with a PK Crystal), when subjected to a Mental Attack. Each stamina point so expended gives the defender +1 DM, applied against the attack success die. Also, the defender will know the exact strength of the Mental Attack because he can gauge precisely the degree of pressure on his defences, and so can resist accordingly. This means that he knows just how many stamina points are required to beat off the assault. If he succeeds in resisting, he gains back 1d6 stamina points (+4 if he has a PK Crystal). If he fails, his Mind Shield goes down and his inner mind is exposed to close scrutiny, assault, etc.

6.        When Mind Shielded, an Adept can launch a Mental Attack while warding off an assault at the same time. If his own attack is successful, he expends only 3 stamina points in defence. If his attack fails, he expends the full amount of stamina points required for the defence plus his attack expenditures. In other words, winning a mental contest is less exhausting than merely attaining a stand-off.

7.        A Mind Shield is effective only against telepathic talents, not other forms of psionic ability.

SUGGESTION' Level 1 Telepathy: The adept can acquire the power of Suggestion once he has Empathic Contact. The Adept can project what appears to be his own emotional state Onto an animal or being so that he seems 'friendly,' etc., whatever his real feelings might be. He can also impress some emotions Onto the recipient as if the emotions were the recipient's own feelings. This talent therefore 'influences' the responses of the recipient to the Adept. It will not, of itself, be able to override any strong emotions that the recipient is feeling at the time of the Suggestion, nor will it cause the recipient to act in a manner which opposes its nature or seriously threatens its interests and security. Starmaster discretion and sensitivity is vital to the successful use of this talent. The Suggestion is passed in the form of a two word message, Precise phrasing is needed to avoid multiple interpretations. For example, 'Mark liesl' could raise doubts in the mind of the recipient about the honesty or good intentions of 'Mark.' Range =10 meters + 1 meter x PSI score (tripled with a PK Crystal). Cost = 3 stamina points (1stamina point with a PK Crystal). Duration = two-word message to one animal/being.

MIND TOUCH' Level 2 Telepathy: Be physically touching the subject he wishes to contact, either in a one-way or a two-way contact, the Adept can enter into a surface mind-link with the subject so that a conversation' level of communication becomes possible. The other party can resist any form of communication by expending 1 stamina point. To maintain contact when resisted, the Adept must roll his PSI score and expend 1 stamina point. A one-way contact permits the Adept to send a message or to read the surface thoughts of another. In the latter case, his success chances are equal to his PSI score minus 1d6, rolled on 1d20, The StarMaster can assign further penalties if the Adept is requiring somewhat specific

information, representing the difficulty of a limited probe beneath the surface. Range = 0 meters. Cost = 2 stamina points. Time = 1 'real' minute of two-way conversation or 5 words of one-way surface 'probing.' A PK Crystal can produce very limited telepathic projection of the Adept's own thoughts 2 meters x PSI score, eliminating the need for touch when he is simply sending a message. Note: if a non-psionic is unconscious his mind will be open to a deep, probing examination under Mind Touch, but an active psionic can 'resist' by expending 1 stamina point. A 'rigid' Mind Shield blocks out Mind Touch entirely if another psionic does not wish communication, necessitating a Mental Attack.

TRUTHTELL Level 2 Telepathy: The adept can develop TruthTell once he has Mind Touch. The Adept has a 4% chance x PSI score of detecting any lies told by an unshielded being upon whom he is concentrating his attention. TruthTell is ineffective if the subject actually believes what he is saying or thinking, even if it is factually untrue. The talent thus permits the mental analysis of the subject aura of belief, nothing more. PCs may attempt to 'talk around' the question, but NPCs will be caught dead to rights if they are lying. Cost 3 stamina points (1 with PK Crystal) for the first 'question' as to the truth of a statement, and 1 stamina point thereafter each time the Adept checks the truth of a statement. He does not have to ask the subject whether he is being truthful, nor does he even have to ask a question as such. He merely rolls 1d100 whenever he wishes to check the truth of a statement he has heard. Range=2 meters x PSI (5 meters x PSI with PK Crystal). Duration 1 minute + 1 minute x PSI, during which the truth of any statement can be determined. A level 6+ Telepath merely pays the basic stamina cost and every statement made which is untrue will be checked without additional cost. Such an Adept has acquired a thorough knowledge of non-verbal clues (gestures, expression, muscle tension, etc.) which tip him off whenever a lie is being told, and he uses his talent merely to check what seems to be very apparent.

MENTAL ATTACK, Level 2 Telepathy: A Mental Attack is defined as the exercise of any Telepathic talent which meets with psychic resistance. The Adept with Mental Attack capability then has the option of seeing his telepathic efforts 'bounce off' a hard mind shield or escalating the power of his efforts. That escalation is a Mental Attack. Unless otherwise limited by the range of a particular talent, all Mental Attack ranges = 10 meters x PSI (tripled by a PK Crystal).

1.        The basic chance of a successful Mental Attack is 5 or less, rolled on 1d20.

2.        The Attacker has a -1 DM for each PSI point he is higher than the Defender's PSI score.

3.        The Attacker can raise the intensity of his Mental Attack by -l DM for each stamina point he expends in addition to the basic cost to use the given psionic talent. He may expend 1 stamina point per PSI point he possesses (double with a PK Crystal).

4.        If a Mental Attack is successful, the Adept regains 1/2 of the stamina points he was prepared to expend. If the Mental Attack fails, the full amount of stamina points is expended.

See Mind Shield for the defender's capabilities to resist Mental Attack. The attacker chooses the level of intensity he desires, up to his limits, whereupon the defender can choose the level of defence with which he will resist.

Non-Psionics (PSI/1-10) obtain a +1 DM per PSI point under PSI/10, and an attacker can apply only the DMs obtained form Stamina point expenditure to intensify an attack. The degree to which a target is psionically 'dead' can thus be an excellent defence against all but the strongest of Mental Attacks.

A Thought Screen will completely block a Mental Attack.

STUN, Level 2 Telepathy: A Mental Attack aimed at a specific target, Stun has the same effects as a StunPistol beam but is

unaffected by personal armour class. Cost = 3 stamina points (1 stamina point with PK Crystal). Range = Mental Attack ranges.

TELEPATHY, Level 3-10 Telepathy: The Adept acquires the power to communicate with other sentient (intelligent and aware) minds over a considerable distance. The effect is the same as a face-to-face conversation. If there are differences in language, the Adept rolls either an Empathy CR or an Intelligence CR minus 1d6. If he rolls equal to or lower than his corrected CR level on 1d20, he can make himself understood and vice versa. Cost = 1 stamina point per 10 meters of range, with a maximum range of 50 meters x PSI score, Duration = 1 minute of telepathic 'conversation.' With a PK Crystal, the range levels increase dramatically, with range determined by the Telepathy level learned by the Adept who opens the telepathic 'link':

Telepathy Level    Range    Cost with PK Crystal

| | | |
|---|---|---|
| L/3 | 10 km | 2 stamina points |
| L/4 | 25 km | 3 stamina points |
| L/5 | 50km | 4 stamina points |
| L/6 | 100 km | 5 stamina points |
| L/7 | 500 km | 5 stamina points |
| L/8 | 1000 km | 5 stamina points |
| L/9 | 5000 km | 5 stamina points |
| L/l0 | 10 000 km | 5 stamina points |

if communicating at shorter ranges, the appropriate stamina expenditure applies.

All communications that are not face-to-face require that the Adept know the mental pattern or aura of the person/being with whom he wishes to communicate. Such 'knowledge' requires that the receiver be either an Adept with Telepathy who can respond to his psychic 'call sign' or else a non-Telepath who has been in telepathic contact with the Adept on a previous occasion. A 'general call' also be made, which any Telepath can tune into, but the range is 25% of stated values. A communication to non-Telepaths can reach 10% of given ranges. The time of communication can be extended at 1/2 the normal stamina expenditures per minute once contact has been made. Also, once contact is established, both Telepaths can share stamina expenditures for extended communications. The chance of making contact is 5% x PSI score of the Adept initiating the communication.

Each Telepathy level must be learned in consecutive order. Level 4 may not be learned until all level 3 telepathic talents have been acquired, etc.

ILLUSION, Level 3 Telepathy: The Adept can create a believable illusion around an inanimate or unmoving object (the latter can include living creatures that remain motionless). The effect is a form of Mental Attack which requires Telepathy as a pre-requisite talent. The effect is based on an alteration in the belief structure of the subject(s) such that the illusory nature of the object is accepted as 'real'. The effect will last for 1200 minutes (20 hours) divided by either the Intelligence or the Intuition of the Victim (whichever is higher). When the time period has ended, the subject has an hourly chance of realising that he is not seeing what is really there. An Intelligence or Intuition CR is rolled on 1d20, with the illusion broken on a result equal to or lower than the pre-requisite characteristic score. Cost = 5 stamina points plus Mental Attack expenditures. When an Adept attains Telepathic level/6+, he can target a number of non-Psionics equal to his Telepathic level (doubled if using a PK Crystal) at the cost of attacking the highest NPC/non-psionic character in the group. The subject(s) must be in sight of the Adept or must be located psionically. Range = Mental Attack ranges.

MINDPROBES, Level 4 Telepathy: The MindProbe is a powerful Mental Attack which requires that the Adept first break through all resistance put up by a subject with a standard Mental Attack. When the subject's defences have been reduced, the Adept expends 10 stamina points (5 stamina points with a PK Crystal) to enter the mind of the Victim and subject it to close

scrutiny. He may ask one very pointed question which the subjugated mind must answer truthfully. For each 2 stamina points expended thereafter (1 stamina point with a PK Crystal), an additional question may be asked. The number of questions that may be asked is equal to the Telepathic level of the Adept: a level/4 can ask 4 questions, a level/ 5 can ask 5 questions, etc. Range = Mental Attack ranges.

COMA, Level 4 Telepathy: A Mental Attack which is an extension of Stun. However, the victim cannot be revived by any means for a period equal to 5 minutes x PSI score of the Adept. After that time, the victim may roll a Shock CR every 5 minutes to revive. Each failure to regain consciousness reduces the Shock CR level by -1. When the CR reaches zero (0), the victim is completely comatose and will not regain consciousness for a period of 60 days minus his Constitution score. If reviving drugs are administered before the CR reaches zero level, the CR level is raised +5 on the next 3 checks. Revival will occur 10 minutes after a successful Shock CR is rolled.

The special advantages of Coma is the likelihood that a victim will suffer partial amnesia. If amnesia is part of the scenario, the victim must roll an Intelligence CR minus 1d6 in order to remember the events surrounding his being placed in a comatose condition. If the CR fails, he will have no conscious memory of the previous 4d6 hours leading up to the coma. The facts may be learned by a Telepath with MindProbe and with Psychology/5+ expertise (see Science Skills), but the effort of finding out involves sifting through deep subconscious memories. Once such MindProbe may be attempted as a full Mental Attack in each day the examination is conducted. The subconscious mind will resist the intrusion, making an attack mode essential even if the victim consciously desires to co-operate. The examining Adept has a 3% chance x PSI score + 2% per Telepathic level or 2% x Psychology Skill level. Success opens the memory block. Coma costs 5 Stamina points plus Mental Attack expenditures. Range = Mental Attack ranges.

PAINBLAST, Level 4 Telepathy: A savage mental attack which inflicts a violent shock to the nervous system of the victims, PainBlast requires a Shock CR reduced by -6 levels below normal if the attack is successful. Failure of the CR incapacitates the victim for 2 full minutes. The pain is so terrible that the threat of another treatment occasions a Bravery CR for 'Personal Heroism' under suicidal conditions. A victim failing that Bravery CR will attempt to flee or, if flight is impossible, he will answer questions or co-operate freely with the Adept. Each PainBlast reduces the victim's stamina levels by 2d6 points, in addition to any stamina points lost through resisting the attack. If delivered by an Adept of Telepathic level/8+ to a victim of lower psionic or non-psionic capability, 2d6 points of physical damage (or any portion of the inflicted damage the Adept desires) will be delivered in addition to the stamina loss. NPCs with Bravery scores under 8 can be literally reduced to abject slaves by a number of treatments equal to their Bravery scores, The talent is widely regarded with fear and loathing, and its use is often forbidden by law as amounting to outright torture, which it is. Cost +10 stamina points (5 with a PK Crystal) plus Mental Attack expenditures, Range = 1/2 Mental Attack ranges.

PRESENCE, Level 5 Telepathy: This unusual talent enhances the aura surrounding the Adept and affects the perception of all who meet him face-to-face. The effect is somewhat insidious, as even if the beholder is a Telepath and recognises the source of the Presence, he must accept the reality of it. Presence is related to the great Force itself and marks the psychic power of the Adept. It is a manifestation of charisma, of personal appeal and competence. Thus the Adept's Leadership score is enhanced by +3, with a maximum Leadership/19 possible. He also enjoys a +1 DM advantage in all dealings with non-psionic NPCs which involve the rolling of CRs. Whatever his actual looks, he has a 'striking' appeal to members of the opposite sex who are non-psionic and can cause one to fall in love with him on a 4% chance x PSI score minus the Intelligence or Intuition of the intended lover. Only one attempt can be made per non-psionic victim. A failure means that the intended lover is

immune to the effect. A success causes an infatuation' with a duration of 1d6 days x PSI of the Adept. It may be prolonged by a further daily expenditure of 1 stamina point per NPC so affected (no expenditure with a PK Crystal). After the passage of 120 days, the effect has a 75% chance of becoming permanent. The cost of an initial application of such charm is zero, but only one person can be made to feel an infatuation in a given day.

Presence is therefore a talent which casts an 'influence' about the Adept. Everyone exposed to him will be affected in some way, although awakened Psionics can resist the Worst effects and will not fall under the spell of an Adept with Presence.

PSYCHIC FORCE, Level 5 Telepathy: The Adept learns how to tap the vast Force which can be keyed by a PK Crystal. He has a chance equal to his PSI score, rolled on 1d20, of being able to achieve a daily boost in his stamina levels by 10% x Telepathic level plus 1 stamina point x PSI score, This technique must be learned at each Telepathic level attained hereafter to gain the benefit of an increase in Telepathic power level. During the learning period, the Telepath must remain in solitude, undisturbed by any activity which will break the intense meditation required to 'commune' with the Force through the PK Crystal (but personal defence is quite possible). Once the talent has been learned, the Adept may boost his stamina level once per day by rolling his PSI score or lower on 1d20. A level/5 can this attain 150% of normal stamina levels plus his PSI bonus, a level/6 150%, and so on. At level/10, the stamina boost becomes permanent and need not be rolled.

LOCATE, Level 5 Telepathy: The Adept acquires the capacity to locate the position of any mental aura within his Mental Attack range, and can obtain a bearing and approximate range on any psionic power aimed at him or at anyone in his vicinity. Locate is a high-level refinement of that primitive 'sixth sense' which gives warning of the presence of an unseen watcher. If the Adept is being watched, he will be told by the StarMaster that he is under observation by someone within his Mental Attack range. He may then exercise his talent to fix the position of the person(s) observing him. The talent will be accurate to within 5 meters of the exact position of a hidden watcher, etc. Cost = 5 stamina points (2 stamina points with a PK Crystal).

COMMUNICATE, Level 5 Telepathy: The Adept develops the ability to project his thought over vast distances with the aid of a PK Crystal. Only Telepaths may be contacted, with a chance equal to 3% x PSI of the receiver + 2% x PSI of the sender. Once the link is established, it can be maintained as long as stamina points are expended by both Telepaths. The effect is similar to Telepathy, with a duration of 1 minute of 'real time' during which conversation is possible. The ranges and stamina costs are:

| Telepathic Level Attained | Range | Cost with PK Crystal |
|---|---|---|
| L/5 | 10 light-seconds | 7 stamina points |
| L/6 | 100 light-seconds | 10 stamina points |
| L/7 | 500 light-seconds | 12 stamina points |
| L/8 | 1000 light-seconds | 15 stamina points |
| L/9 | 5000 light-seconds | 18 stamina points |
| L/10 | 10 000 light-seconds | 20 stamina points |

if at shorter range, the reduced stamina expenditure applies. A Telepath/6 who opens a 'link' at 7 LS range would expend 7 stamina point for communication as the range is in the 1-10 LS area.

To maintain contact beyond 1 minute, both Telepaths will expend 1/2 the required stamina points for each additional minute of contact.

DEATHBOLT, Level 6 Telepathy: A Mental Attack which delivers 6d6 points of damage plus 1 damage point x Telepathic level of the Adept. Cost = 10 stamina points per DeathBolt (7 with a PK Crystal). If the victim survives the DeathBolt, he must pass a Shock CR to remain conscious. Range = Mental Attack ranges.

The target must be in line-of-sight unless located by psionic means, Note: Mental Attack costs are additional to the cost of firing a DeathBolt.

DELUSION, Level 6 Telepathy: A mental Attack which is a refinement of Illusion, a Delusion will create a belief structure in the mind of the victim which will affect his decisions and attitudes any time he fails an Intelligence CR minus 1/2 the Telepathic level of the Adept who created the Delusion. The Victim will believe the essence of a 4-word message and will act accordingly when involved in any situation on which that belief has a bearing. For example, the delusory message 'You are best leader' can cause a victim to begin questioning the decisions of his leader, and perhaps even to undermine his leader's authority in the belief that he is better suited to lead. The duration of the effect is equal to the PSI + Telepathic level of the Adept x 1000 minutes divided by the Intelligence of the victim. Cost = 10 stamina points plus Mental Attack costs. The effect can be delivered only through a PK Crystal or its equivalent.

CONTROL, Level 6 Telepathy: A Mental Attack which permits the Adept to dominate completely the will of an animal, Control creates a potentially permanent loyalty of a creature to the Adept. The chance of such a bond existing is 4% x Telepathic level + 1% x PSI level of the Adept. If the Bond is formed, the Telepath will be able to see and hear and sense what the animal knows, while the animal will sense the Adept's thoughts of command. The range is equal to the Telepathy range of the Adept (see level 3 talent). A Bond, once forged, can be dissolved only if the Adept launches a second Mental Attack against the creature to release it. Cost of Control = 10 stamina points (If the Mental Attack fails, the creature will attack the Adept if at all possible. If the Mental Attack succeeds but a Bond is not formed, the Adept can Control the creatures for 10 minutes x Telepathic level. Each additional 5 minutes costs 5 stamina points (2 with a PK Crystal). The creature will be utterly fearless and will do whatever it is commanded, Attack range = Mental Attack ranges. One such creature may be controlled per 2 Telepathic levels possessed by the Adept.

STARSPEAK, Level 7 Telepathy: A very few Telepaths achieve the almost unthinkable talent of being able to communicate over interstellar distances. Such communication is possible only with Telepaths of level/7 and above. The effect is similar to Telepathy, with a duration of 1 minute of 'real' time during which conversation is possible. The chance of establishing communication is 3% x PSI + 5% x Telepathic level of the sender minus 1% x distance in light years. The ranges and stamina costs are:

| Telepathic Level Attained | Range | Cost with PK Crystal |
|---|---|---|
| L/7 | 10 light years | 5 stamina points/light year |
| L/8 | 20 light years | 4 stamina points/light year |
| L/9 | 30 light years | 3 stamina points/light year |
| L/10 | 50 light years | 2 stamina points/light year |

The stamina points expended will always be at the rate of the highest Telepath in the StarSpeak link plus the cost for 1 light year at the Telepathic levels of the respective Telepaths. For instance, a Telepath/ 7 can initiate a contact at a cost of 5 stamina points. If the receiver is a Telepath/10, he will answer at 2 stamina points cost. The link, once formed, will cost 2 stamina points per light year, the expenditure level of the Telepath/10. The Telepath/7 will also expend 2 stamina points per light year because he is in contact with a high-power mind and is not as hard-pressed to maintain the contact. The range of the example communication would be 20 LY or less, as the Telepath/7 initiated the link. If it had been the Telepath/10 who initiated the link, the range could be up to 50 LY.

StarSpeak is very exhausting. Thus the cost of an interstellar communication can be very high, Credit-wise, if a PC hires a Telepath to send a message across the stars Rates vary, but they usually start at about CR 100 per light year for each minute. Starships will try to hire such personnel and pay 250% of

the standard salary schedule for 'FTL Communicators.' The same is true of most government services.

TRANSFER PERSONALITY, Level 7 Telepathy: A Mental Attack in which the Adept can transfer his personality to another body. In doing so, Only the Intelligence, PSI, Empathy, Leadership Bravery, and skill levels of the Adept are transferred. All physical abilities are derived from the new body. Similarly, the other personality is transferred to the Adept's old body. The technique is not without its dangers. If the transfer fails, the Adept will lose all of his stamina points and also suffers 5d6 points of damage if he does not pass a Shock CR. The chance of a successful transfer is 5% x Telepathic level plus 2% x PSI of the Adept. The transfer must be attempted under conditions which do not allow interruption or interference, as the procedure requires. about 1 hour after the Mental Attack successfully breaks down the resistance of the subject. Cost = 25 stamina points plus Mental Attack expenditures. Range = point blank, within 5 meters of the subject for actual transfer, although the Mental Attack may have been delivered at standard ranges. A subject so attacked will be rendered unconscious for about 1 hour, and if the transfer during that time he will remain unconscious for another hour following the completion of the transfer. Note: the procedure has a -10% chance of being reversible. If a failure occurs in an attempt to regain a body or to acquire a new body, a second attempt is impossible.

Transfer Personality usually has a sinister aspect about it, as 'honest' citizens have no need of such a procedure. Unauthorised transfer is punishable by death in the disintegration chambers. However, government agents will sometimes use the procedure, with or without the agreement of the subject, especially in the case of Police undercover agents or espionage agents of BOSS and BRINT. In such instances, no penalties are involved as far as the government agent's own government and legal authorities are concerned if accepted procedures and regulations are followed.

DOMINATE, Level 7 Telepathy: A Mental Attack in which the Adept can dominate the will of the selected subject. The potential victim must be sentient (intelligent and aware), not an animal, which is subject to Control. If the attack is successful, the dominated party will carry out any instructions given by the Adept. However, orders to commit totally suicidal acts will meet with active resistance and can be sufficient to occasion a saving throw 1d20, with a result of 18 or less completely releasing the subject from compulsion. Such a release will make the subject so resistant to further Domination by the Adept that even if another Mental Attack succeeds, the subject has a saving throw of 15 or less on 1d20 of breaking that compulsion whenever ordered to do anything not in accord with his nature or personal belief structure. Dominate will gain compliance in all other matters, including the performance of normally 'heroic' acts in which some chance of survival can be contemplated.

An Adept can Dominate one psionic subject at a time or else a number of non-Psionics equal to his PSI + Telepathic level, Only one person may be subjected to Mental Attack at a time, but once control is achieved, the influence of the Adept over his mental 'vassal' is complete until the saving throw is made. Note: Psionics have a chance equal to 1/2 PSI + Telepathic level, rolled on 1d20, of breaking the compulsion every time an order is issued after the first 24 hours of Domination. Also, any other Telepath with Dominate or more powerful capacities may break the compulsion with a successful Domination, followed by a 'release' order freeing the subject.

SANEMIND, Level 8 Telepathy: A curative procedure which allows the Adept to 'operate' telepathically on the mind of anyone under any form of suggestion, illusion, control, domination, or mental aberration like insanity. It is conducted as a Mental Attack but a 1/2 the normal cost if the patient is unconscious. The SaneMind operation allows the Adept to re-channel the thought matrix of the patient so that all effects of a compulsion or mental aberration have been eliminated. The procedure requires 20 hours minus the PSI level of the Adept plus 1d6 hours, at a cost of 5 stamina points per hour (3 with PK Crystal), in addition to Mental Attack expenditures to prepare the patient for SaneMind treatment.

MINDSLAY, Level 8 Telepathy: A devastating Mental Attack in which the Adept acquires the power to do 10.d6 points of damage to any victim he vanquishes in mental battle. Any NPC non-psionic so defeated is automatically slain. Cost 15 stamina points per Mind-Slay assault (10 stamina points with PK Crystal). If the victim survives the MindSlay attack, he must pass a Shock CR. Range Mental Attack cost are in addition to MindSlay expenditures.

SUGGESTION II, Level 8 Telepathy: A highly specialised, deep-level 'compulsion' which can be placed in the subconscious mind of a subject and triggered up to 1 month x PSI of the Adept in the future by a key word or phrase, either spoken or telepathically communicated. Such a Suggestion must be phrased in 10 words or less, including the 'trigger' word or phrase. It may order any conduct covered by a Dominate, except that totally suicidal acts are now possible to compel, with compliance on rolling a CR based on the subject's Bravery score, with a 1d20 result equal to or lower than Bravery compelling suicide. A Telepath/10 can make such a suicide occur through total failure of the autonomic nervous system. The procedure and costs are as given for SaneMind, as Suggestion II is also a 'mental operation.' A SaneMind operation has a chance of uncovering a Suggestion II equal to 10% x (PSI + Telepathic level) of the Adept minus 8% x (PSI + Telepathic level) of the Adept who placed the Suggestion II command. If discovered, it may be removed by a second SaneMind procedure.

ELEMENTAL FORCE, Level 9 Telepathy: A truly awesome Mental Attack mode which permits the Adept to tap the deepest levels of his psyche to direct a blast of mental force against a number of NPCs equal to the result rolled on 3d6. The indicated number is only the number of victims that may be attacked simultaneously, not the number that must be attacked. Non-psionic NPCs will be slain outright if unprotected by Thought Screens. Each Thought-Screened or Mind-Screened target counts as two screened targets. The stamina cost of such a Force Bolt is twice the maximum normally required for an all-out Mental Attack (4 x PSI because a PK Crystal must be used). All PCs defend against a MindSlay assault. If directed against one target, 15.d6 points of damage will be done if the attack is successful. When multiple targets are attacked, the range is 50 meters all around the Adept. A single target can be attacked at standard Mind Attack ranges.

Using the Force in such a manner can prove more costly than one might wish. There is also a 50% chance that an additional 3.d10 stamina points will be expended. For each stamina point expended above the PSI level of the Adept, there is a 1/20 chance that he will be struck unconscious by the blast of Force rushing through his mind. A +7 stamina point expenditure, for instance, brings unconsciousness if 1-7 is rolled on 1d20.

GREAT COMMAND, Level 9 Telepathy: With the acquisition of Elemental Force, the Adept begins to develop a psychic aura so powerful that lesser men pale before it. He can then acquire the power of Great Command, a stature so impressive that he usually has to shield it from others because of the crushing effect it can have on their egos. Great Command gives the Adept the 'Look of Eagles,' and those under his personal command in the field never check morale while he is in their midst. At an expenditure of 5 stamina points, the Adept can send such a scathing (and menacing) look at a non-psionic NPC who 'crosses' him that a Bravery CR for 'Personal Heroism' in a suicidal situation is required if the NPC is to continue opposing him. (Face-to-face contact is necessary, usually under 10 meters range.)

Great Command earns the respect and admiration of all associates and followers, if the Adept is of 'good' character. It

earns abject fear and respect if the Adept is of a violent and cruel nature. One thing is clear: the moment that anyone is exposed to an exercise of Great Command, a lasting impression will be created.



Great Command is 'charismatic' in the full sense of the word. The Adept can sway audiences of 'normal people' with his oratory and Presence. All he needs is time to do his work. For each minute he can speak (roll 2d10 for the time allotted), he will sway 1% x 1d6 of his audience. In ten minutes, for instance, he could sway 10% x 1d6 or 10% to 60% of his listeners. The effect is not necessarily lasting over a period of time, but NPCs will definitely take his words to heart. If he speaks out against the government, convinced listeners will grow hot with anger over personal injustices they have suffered or imagine they have suffered. If he is selling a product, those won over are likely to line up, clamouring to buy. If he is exhorting a unit of fighting men to stand firm in the face of fearsome opposition, they likely will. Cost = 10 stamina points plus 1 stamina point per 10 NPCs within hearing. Range = within sight and vision. A 100-point expenditure can sway 1000 x 1d10 listeners. Note: The Adept is not going to be elected Dictator over night; he simply will be listened to and his words will strike real chords in the minds of NPCs who hear him. StarMaster discretion is required here.

If the Adept chooses to use his power as described in Presence to cause a member of the opposite sex to fall in love with him, he has a flat 95% chance with NPCs. The effect is permanent if the lover is allowed to remain close to him for one year.

If the Adept uses Great Command in a conflict situation and can be clearly seen by a NPC opponent, he always has the Initiative. Cost 5 stamina points. Range = face-to-face, with a maximum of 50 meters.

Psionics with Telepathic powers are 'immune' to Great Command unless defeated by Mental Attack. If a Mental Attack succeeds, the NPC is considered under Domination, with a deep-planted Suggestion II. Cost 25 stamina points plus Mental Combat expenditures. Range as for Mental Attack. All PCs are treated as if they are Telepathic Psionics, whether they fit the category or not, and can escape Domination on rolling 1-15 on 1d20. No deep Suggestion II will be planted. A PK Crystal is essential to exercise Great Command.

LIVING MATRIX, Level 10 Telepathy: Only a PC who has lived an exemplary life can attain Oneness with the Force. This PSI status is equivalent to the levels attained by the Lensmen like Kinneson, Worsel, Trigonsee, etc., in 'Doc' Smith's Second Stage Lensmen, and simply is beyond the capacity of personalities that are not so integrated that they become Champions of Civilisation and all that it stands for. Possession of this talent enables an Adept to have a 3 DM advantage in all Mental Attacks, whether attacking or defending, in addition to DMs accruing from other sources. The mind of such an Adept cannot be Dominated permanently; within 1 hour, the Adept has a 50% chance of breaking any compulsion, checked hourly thereafter, because he can 'compartmentalise' his mind and block off the essence of his psyche from all outside tampering and interference. If he resists a Mental Attack successfully or else delivers a successful Mental Attack, he expends only 1/2 the stamina factors called for.

Finally, in addition to the 200% of normal stamina levels he will possess, the Adept Telepath/10 has a chance equal to 3% x PSI of momentarily attaining Third Stage development. In such a heightened mode he can exercise any psionic talent he possesses without a PK Crystal but as if he had a PK Crystal.

## 4.16 TELEKINESIS

Telekinesis is the psionic talent which enables an Adept to move and manipulate objects Without physically touching them. The basic talent simply permits him to move or otherwise manipulate an object of a given mass. High level Adepts will acquire more refined and specialised talents based on Telekinesis.

MASS MOVEMENT, Telekinetic Levels/1-10: The Adept acquires the capacity to move objects of the mass indicated for 1 meter at the stamina Costs given in the table below. If a PK Crystal is used, a distance up to 1 meter x PSI can be traversed by the object for the same stamina cost as a 1 meter distance without a PK Crystal. The rate of movement is at a standard walking pace. For faster movement, the Adept must have more specialised talents.

| TELEKINETIC LEVEL/STAMINA COST TO MOVE MASS ONE METER WITHOUT PK CRYSTAL | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Mass Moved | L/1 | L/2 | L/3 | L/4 | L/5 | L/6 | L/7 | L/8 | L/9 | L/10 |
| to1gm | 5 | 4 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 1 |
| tol0gm | 15 | 13 | 11 | 9 | 7 | 5 | 3 | 1 | 1 | 1 |
| to1kg | 25 | 22 | 17 | 16 | 13 | 9 | 6 | 3 | 1 | 1 |
| tol0kg | 35 | 31 | 25 | 23 | 18 | 13 | 9 | 6 | 3 | 1 |
| to25kg | NA | 40 | 33 | 30 | 25 | 17 | 12 | 9 | 6 | 3 |
| to50kg | NA | NA | 41 | 37 | 31 | 21 | 15 | 12 | 9 | 6 |
| to75kg | NA | NA | NA | 42 | 37 | 25 | 18 | 15 | 12 | 9 |
| tol0okg | NA | NA | NA | NA | 43 | 29 | 21 | 18 | 15 | 12 |
| tol25kg | NA | NA | NA | NA | NA | 33 | 24 | 21 | 18 | 15 |
| tol50kg | NA | NA | NA | NA | NA | NA | 27 | 24 | 21 | 18 |
| tol75kg | NA | NA | NA | NA | NA | NA | 33 | 27 | 24 | 21 |
| to200kg | NA | NA | NA | NA | NA | NA | 39 | 30 | 27 | 24 |
| to250kg | NA | NA | NA | NA | NA | NA | NA | 36 | 30 | 27 |
| to300kg | NA | NA | NA | NA | NA | NA | NA | NA | 26 | 30 |
| to500kg | NA | NA | NA | NA | NA | NA | NA | NA | 60 | 36 |
| tol000kg | NA | NA | NA | NA | NA | NA | NA | NA | NA | 60 |

For example, L/7 with PSI/16 wishes to move a 100 kg object. The Stamina cost to move it 1 meter is 21 points, but with a PK Crystal it is 21 points to move the object 16 meters. The Cost to move it 1 meter is 21/16 = about 1.3 stamina points, Assuming that he had 92 stamina points, the Adept could therefore move the object about 4 meters without a PK Crystal and about 70 meters with a PK Crystal. He would be virtually exhausted after such an effort.

MANIPULATION, Level 1 Telekinesis: The Adept has the capacity to manipulate small objects, knobs, switches, etc., up to 1 kg mass as if he were using his fingers. Cost = stamina points required to move the mass 1 meter plus 5 stamina points. Range 5 meters x (PSI + Telekinetic level), with the range tripled by a PK Crystal. To successfully perform a manipulation, a Dexterity CR is required and the Adept must be able to see the object he is manipulating, either through eyeballing' it or through some vision device, Perception, or other psionic means. One manipulation may be performed. Note: There is a chance equal to an Intelligence CR that any device being tended by a sentient being will be seen to be acting in a 'strange' manner, and a Successful Intelligence CR by that being will result in action that prevents the manipulation.

SOUND, Level 1 Telekinesis: The Adept has the capacity to vibrate a section of air, a thin piece of metal, etc., so that some sound is created by the vibration. The effect is used to distract others or to catch their attention. Cost = stamina required to move a 1 kg mass for 1 meter plus 5 stamina points. Range = 10 meters x (PSI + Telekinetic level), with the range tripled by a PK Crystal. To successfully perform the Sound, the Adept must be able to see the area to be vibrated, as described for Manipulation.

SOFTSPEAK, Level 2 Telekinesis: The Adept has the capacity to apply Sound so that a 1 word message can be whispered in the ear of an intended subject. An additional word may be added to the message for every Telekinetic level added above level 2, The talent is otherwise the same as Sound, with all costs and conditions applying.

TELEKINETIC BLOW, Level 2 Telekinesis: The Adept acquires the ability to hurl any 1 kg object so that it strikes a target with the force and penetration power of an archaic Mace. Cost = stamina required to move a 1 kg object 1 meter, A PK Crystal is required to accelerate the object. Range =1 meter x Telekinetic Level. The hit probability is 3% x PSI of the Adept, minus 2% per meter of range. Treat the landed blow as a Mace blow, rolling for the hit location to see where the strike occurred. Armour, of course, will have an effect on the result;

TELEKINETIC BULLET, Level 3 Telekinesis: The Adept acquires the ability to fire any 10 gm object so that it strikes a target with the same effect as if the Adept had discharged a .44 Magnum revolver, All handgun combat rules apply to determine the hit probability, location of a hit, armour penetration, and resulting damage. The ROF may also be at ,44 Magnum values. The Adept's Telekinetic level is substituted for handgun expertise when determining hit bonuses and extreme ranges. Cost = stamina required to move a 10 gm object 2 meters. A PK Crystal is required to accelerate the object.

TELEKINETIC SHIELD, Level 3 Telekinesis: The Adept acquires the ability to erect a psionic defence screen around himself such that it acts as class B personal armour whenever he is struck by any solid missile or slug, or is struck by a solid melee weapon. Cost = 5 stamina points per minute (3 with PK Crystal), plus 11-Telekinetic level for each missile strike turned by the Telekinetic Shield. The Shield is ineffective against any type of energy weapon.

MIND SHIELD, Level 3 Telekinesis: The Adept acquires a Mind Shield, as described in Telepathy.

LEVITATE, Level 3 Telekinesis: The Adept acquires the ability to Levitate as if he massed only 25 kg. He may also Levitate 10 kg of equipment or a living being for each Telekinetic level he has attained without additional cost. The operation is handled as outlined in Mass Movement, with all stamina costs and ranges applying as given for movement of a mass with or without a PK Crystal. The effect can be maintained for 6 seconds x Telekinetic level for each stamina point expenditure required to move 25% kg. Horizontal (lateral) movement is not possible unless the Adept Uses some physical means to pull or otherwise propel himself. For example, he may be in contact with the face of a wall and can push himself along horizontal to the ground Also, once the Adept acquires Flight, the mass equivalent is reduced to 1 kg, with a duration of 1 minute x Telekinetic level for each stamina point expenditure required to move 1 kg.

STRESS, Level 4 Telekinesis: The Adept acquires the capacity to perceive stress points in an inanimate object or else to get them up himself by an exercise of Telekinetic power. Cost = 10 stamina points (7 with PK Crystal). Range = 5 meters x (PSI + Telekinetic level). The effect will increase an armour penetration level by +1 per 2 levels of Telekinesis attained, beginning with Telekenesis/5, Thus level/5-6, causes a+1, level/7-8 a +2, and a level/9-10 a +3 added onto the score which must be rolled equal to or lower on 1d20 to effect a penetration. Only solid missiles and melee weapons will enjoy this enhanced penetration capacity, and only one shot or blow will have the advantage (designated by the Telekinetic Adept). The shot or blow must be delivered by the Adept setting up the stress field.. A PK Crystal will triple the range and allows 2 shots/blows at the advantage bestowed. The target must be seen by the Adept, either through vision or psionic means.

Stress may also be used to break ropes and other bonds with which the Adept has been constrained. He has a chance equal to a Stress CR, rolled on 1d20, with his Breaking Stress level at 1/3 the sum of his Strength, PSI, and Telekinetic level. If he rolls equal to or lower than his Breaking Stress, the bonds will be snapped. The same technique can be used to snap the bonds of comrades with his bare hands. Even TangleWebs are not immune to this power, but they reduce the CR level by -5.

FLIGHT, Level 4 Telekinesis: The Adept acquires the ability to fly as if he had a Tech/10 contragravity harness or jump belt. He has an apparent mass of only 1 kg, and may also carry 10 kg of

equipment with him for each Telekinetic level he has attained without additional cost. The operation is handled as outlined in Mass Movement to determine stamina costs. The effect can be maintained for 1 minute x Telekinetic level for each stamina point expenditure required to move 1 kg. The distance covered is as given for contragravity harness/jump belts in PC Movement. Note also, the effect this talent has on Levitate (see above). Flight requires reasonably open spaces, as some lateral movement is required to maintain a flying mode. Thus Levitate will be used for cramped regions (pits, etc.,) but a bit of lateral movement will be possible at a further expenditure of 5 stamina points (10 meters + 1 meter x PSI). A PK Crystal will triple the flight time.

GRENADE, Level 4 Telekinesis: The Adept can cause an inanimate object to explode like a grenade at a cost of 50 stamina points. The warhead strength is type G. The object cannot be more than 1 kg in mass and cannot be in contact with a living being. Range = 10 meters x sum of PSI and Telekinesis level (tripled with PK Crystal). The Adept must be able to see the object he is exploding, whether by vision or psionic means.

PYRO PSI, Level 5 Telekinesis: The Adept's command of kinetic forces enables him to produce effects like a Flame Pistol. All combat rules for Flame Pistols apply, with the Adept's Telekinetic level substituted for expertise with Flame Pistols. The effect can also be used to make spot welds, etc. Cost = 20 stamina points (12 with a PK Crystal). The technique can also be used on a very low setting to warm the Adept in a frigid environment, with 1 stamina point providing full protection for 1 minute x sum of PSI and Telekinetic level. A 3 stamina point expenditure will start a fire in flammable materials which the Adept touches with his fingers, etc., in case a lighter or matches are absent.

CYRO PSI, Level 5 Telekinesis: The Adept can reduce the kinetic energy levels in living or inanimate matter by touching it. For each 10 stamina points expended, he can reduce the temperature of an inanimate mass by -l00° C, with the mass so affected equal to the maximum mass that he can move telekinetically (see Mass Movement). If he touches living matter, any being or animal must roll a Shock CR minus the number of stamina points the Adept expends divided by 10. For example, a CR level of 14 would be reduced by -3 if 30 stamina points had been expended, and the victim would have to roll equal to or lower than 11 to survive the experience. Insulated equipment and armour (vacuum suits, etc.) will provide a +7 to the Shock CR. This technique is typically used to quick freeze mortally wounded or just killed comrades to prevent tissue deterioration. Cryo PSI can also be used on a very low setting to cool the Adept in a hot of flaming environment, with 1 stamina point providing full protection for 1 minute x sum of PSI and Telekinetic level in hot climates. A 3 stamina point expenditure will provide protection for temperatures 100° C above boiling for the same time period, with each 2 points above that providing protection for each 100° C above 300° C. An Adept can thus literally walk through fire unscathed and will suffer no damage. The StarMaster will have to tell the Adept in such circumstances what stamina expenditure is needed by setting the heat of the fire, metal, etc.

MORASS, Level 6 Telekinesis: At an expenditure of 25 stamina points, an Adept can turn a solid footing into a soft 'morass' which causes all beings and vehicles to slow down to 10% of normal speed. There is also a 5% chance x Telekinetic level that the being/vehicle will become bogged down and unable to move. The area covered is 5 meters x 5 meters x 1/2 Telekinetic level. An additional 5 m² can be produced by an expenditure of 5 stamina points, with 5 points expendable per PSI level possessed. A PK Crystal reduces all stamina expenditures to 50%. The effect will last for 1d6 minutes x PSI level of the Adept. The depth of the effect will be from 1 to 3 meters, turning earth into a gumbo consistency even in the absence of water. Rock, Concrete, and metal will be unaffected. To produce the effect, the Adept must be standing at one edge of the area so affected. Bogged down personnel and vehicles have a 25% chance per minute of freeing themselves and proceeding out of the Morass at 10% speed. Personnel will suffer a 3d6 fatigue and wind penalty for each 10 meters traversed after freeing themselves to represent the effort required to gain that freedom.

MIND TOUCH, Level 6 Telekinesis: The Mind Touch talent is the same as that described in Telepathy.

LIFE SENSE, Level 6 Telekinesis: The Life Sense talent is the same as that described in Telepathy. The Telekinetic can 'target' his other talents by using this power if he cannot otherwise see his target.

PSYCHIC FORCE, Level 7 Telekinesis: The Psychic Force talent use the same as that described in Telepathy.

ENERGISE, Level 7 Telekinesis: At a cost of 50 stamina points, any portable power cell may be brought up to full charge when the Adept touches the terminals. Partial charges are also possible at 2% recharge per stamina point expended. A PK Crystal is required to Energise.

MAGNETOSCREEN, Level 8 Telekinesis: The Adept may erect a Telekinetic ForceScreen which will turn aside all projectiles fired by man-portable weapons (up to 20mm calibre), The cost of maintaining the MagnetoScreen is 5 stamina points per minute plus 1d6. stamina points per shot turned aside (a 'shot' includes an automatic weapon burst), A PK Crystal is needed to maintain a MagnetoScreen.

NEGAFIELD, Level 8 Telekinesis: The Adept Can erect a disruptive forcefield which causes all electronic circuitry to malfunction at a 5% chance x 1/2 the sum of his PSI + Telekinetic level. The NegaField effect Costs 25 stamina Points plus 1 stamina point per meter of range in all directions and has a duration of 1 minute. A PK Crystal is needed to maintain a NegaField. If electronic equipment is protected by a ForceField battlescreens, it will be unaffected by the talent. The centre of the disruptive zone is measured from the position of the Adept.

RADSHIELD, Level 8 Telekinesis: The Adept can erect a personal anti-radiation field which will deflect all forms of nuclear radiation. The cost of the RadShield is 1 stamina point per level of radiation damped by the field. Duration = 1 minute x PSI of the Adept. A PK Crystal is needed to maintain a RadShield.

BATTLESCREEN, Level 9 Telekinesis: The Adept can erect a personal ForceField battlescreens equal to portable units mounted in first class Powered Armour. The cost of the Telekinetic battlescreens is 10 stamina points per minute plus 2d6 stamina per shot or burst of energy small arms turned aside. However, there is a 2% chance x PSI that the PK Crystal will absorb the energy fire and convert a portion of it into stamina points. If such an event happens, 2d6 stamina points will be regained. No more than 36 stamina points may be obtained per day in such a fashion; the remainder that might accrue are lost. The battlescreens also turns aside small arms projectiles and missiles, but without additional stamina costs. It provides no protection against heavy energy weapons. The battlescreens requires a PK Crystal.

POWER, Level 9 Telekinesis: The Adept can tap the vast power potentials of the Force and may produce 10% of the power requirements of a Corvette-sized Starship. The energy is channelled through his PK Crystal and mind to the power delivery systems. There is no stamina cost beyond a basic 5 stamina points per hour to maintain concentration (no other activity is possible). The Power can be delivered for a number of hours equal to the Constitution of the Adept, after which he must rest for an equivalent number of hours in a semi-comatose state. If the Adept chooses, he may attempt to increase the Power levels he is delivering. This requires a PSI CR, and he must roll equal to or lower than his PSI score, minus a -l penalty to the CR level for each 10% increase in Power over the basic 10%. The CR is checked hourly. If the Adept fails the CR, he must roll a Shock CR minus the same penalties as given for the Power increase. If he fails that, he is struck unconscious for 1d6 days by the surge of Force through his mind.

MANOEUVRE DRIVE, Level 9 Telekinesis: The Adept can augment the Manoeuvre Drive rating of his spacecraft (up to Corvette size) by increasing the Power available, Each 10% increase in Power over the maximum rating of the spacecraft will add +5% of maximum Manoeuvre speed until Light Speed is attained. There is also a 3% chance that the boost in the spacecraft's power levels will cause a Breakdown. (See 4,31 Starship

Malfunctions.) For each hour that the engines are overloaded a further 3% chance of a Breakdown exists. If an overload occurs, there must be an immediate Manoeuvre Drive Shutdown by the Drive Engineer or serious damage can result. A PK crystal is essential to perform this operation, and the Adept cannot attend to any other activity or he will lose his concentration on maintaining the Power link to the Manoeuvre Drive. Cost = 7 stamina points per hour.

FTL DRIVE, Level 10 Telekinesis: The Adept can augment the FTL rating of his Starship (up to Corvette size) by increasing the Power available. Each 10% increase in power over the maximum rating of the Starship will add +5% of the maximum FTL speed. There is also a 3% chance that each 10% boost in the Starship 's power levels will cause a Breakdown. (See 4.31 Starship Malfunctions.) For each hour that the engines are overloaded, a further 3% chance of a Breakdown exists, If an overload occurs, there must be an immediate FTL Drive Shutdown by the Drive Engineer or serious damage can result. A PK Crystal is essential to perform this operation, and the Adept cannot attend to any other activity or he will lose his concentration on maintaining the Power link to the Manoeuvre Drives. Cost = 15 stamina points per hour.

## 4.17 TELEPORTATION

Teleportation is a psionic talent which permits an Adept Teleport to travel instantaneously from one location to another location. Most forms of intervening matter will not prove to be a barrier, but defensive battlescreens, Starship BattleArmour, and some high-density materials like lead will prevent teleportation effectively returning the Teleport to his original location because a 'failed' teleportation means that he does not move at all.

A Teleport Adept must have some form of pre-knowledge of his destination in order to be able to Teleport to it at all, Such pre-knowledge is in the form of a clear mental image or 'picture' of the location to which a teleportation jump will be made. Such pre-knowledge can be obtained in several ways:

1  The location is well known to the Adept because of frequent visitations, such as his home, office, etc., and a 100% possibility of making a teleportation results.
2.  The location had been visited personally by the Adept on a previous occasion. Reliance is on memory for an accurate mental image, so roll an Intelligence CR to see if the Adept has remembered the details sufficiently to be able to Teleport at all.
3.  The Adept has been viewing the location from a distance, either with the naked eye or with some vision-enhancing device. In such an instance, the Adept has a 100% chance of making a successful teleportation.
4.  The Adept uses Perception or Clairvoyance II to 'view' a location psionically. In such an instance, the Adept has a 5% chance x PSI + 1% x Teleport level of viewing accurately

enough to succeed with a teleportation.

5.  The Adept receives a mental image of the location through the operation of Telepathy. The chance of viewing accurately enough to succeed with a teleportation is 5% x PSI + 1% x Telepathy level of the viewer. Note: the 'viewer' can be the Teleport Adept himself, if he is also a Telepath, or it can be a Telepath sending a mental picture of the location to the Teleport Adept.

If the location is beyond the range of the Teleport Adept or if an inaccurate mental image of the destination is unclear, all stamina points will be expended as indicated for the particular jump, but no movement will Occur.

On planetary surface, changes in altitude will result in a substantial change in an Adept's intrinsic energy levels, usually manifested as a heating or cooling effect produced within his body. This effect is the result of movement to locations with different gravitational energy potentials. Teleporting to a lower elevation will result in a change in gravitational potential such that an increase in the internal body temperature will occur. Teleporting to a higher elevation will result in a decrease of body temperature. In a 1.0 G gravity field, a Teleport jump should not involve a change in elevation of more than 500 meters. This figure can be modified for a given gravity field. To convert to any other gravity field, simply divide 500 meters by the G-force. For example, a Teleport in a 1.75 G field has an elevation change limit of 500/1.75 = 285 meters. In a 0.4 G field the elevation change limit is 500/0.4 = 1250 meters.

If a Teleport Adept exceeds the elevation change limit, a Shock CR must be rolled, With -1 from the CR level for every 10% he has exceeded the limits. For example, an Adept teleports 750 meters upward in a 1.25 G field. His limits are 500/1.25 = 400 meters. Since he has exceeded the limit by 350 meters, he has a 350/400 = 8.75 = -9 on his Shock CR level. If his Shock CR was normally 14, it would now be 5 or less, rolled on 1d20. If the Shock CR fails, the Teleport Adept will suffer 1 point of damage per -1 on his Shock CR level, plus 1d6 points of damage per -3 from the Shock CR. In our example, the Adept will therefore suffer 9 + 3d6 points for his folly. Also, having failed his Shock CR, he likely will be unconscious.

The only way that the internal temperature differences can be prevented is for an Adept to have the talents of Cyro PSI to counteract heating and Pyro PSI to counteract cooling. Such talents bestow a +1 to the Shock CR level for each Telergy level possessed by the Adept.

Teleportation ranges and costs vary according to the Teleport level of the Adept and whether the effect occurs within a planetary boundary or in deep space. The 'mass' indicated refers to any object or being carried along with the Adept. Equipment, etc., exceeding the mass limit will be left behind.

| Teleport Level | | PLANETARY TELEPORTATION | | DEEP SPACE TELEPORTATION | |
|---|---|---|---|---|---|
| Attained | Mass | Range | Stamina | Range | Stamina |
| L/1 | 1 kg | 10 meters x PSI | 5* | 1 km x PSI | 5* |
| L/2 | 2 kg | 20 meters x PSI | 6* | 2 km x PSI | 6* |
| L/3 | 3 kg | 50 meters x PSI | 8* | 5 km x PSI | 8* |
| L/4 | 5 kg | 100 meters x PSI | 10* | 10km x PSI | 10* |
| L/5 | 10kg | 1 km x PSI | 12* | 100 km x PSI | 12* |
| L/6 | 15kg | 5 km x PSI | 15* | 500 km x PSI | 15* |
| L/7 | 20kg | 10 km x PSI | 20* | 1000 km x PSI | 20* |
| L/8 | 25kg | 100 km x PSI | 25* | 10,000 km x PSI | 25* |
| L/9 | 50kg | 250 km x PSI | 30* | 25,000 km x PSI | 30* |
| L/10 | 100 kg | 1000 km x PSI | 35* | 100,000 km x PSI | 35* |

'If the Teleport Adept has more than one level of Teleportation, the lower cost applies until the limit is exceeded. For example, a Teleport 3 has PSI/16. He makes a teleportation jump of 150 meters. This is within his L/1 range of 10 x 16 = 160 meters, so the stamina cost is 5 stamina points. However, he can take 3 kg of equipment, etc., with him because he has L/3 capacity.

When a Teleport leaves or arrives, there is a sudden shimmering of his image and a faint moaning whine just before he disappears or appears. Consequently, Teleportation cannot be used as a complete surprise, as in the case of an Adept

suddenly appearing behind a guard to attack out of nowhere, Anyone within earshot or eyeshot of the effect will be alerted. However, a 'Surprise CR' might be rolled, if the StarMaster desires.

There is also a chance that the Teleport Adept will be disoriented for 1d6 x 6 seconds (combat turns) after a jump. This chance is equal to 5% x (20 - Intelligence or Intuition). Such a disorientation results in Initiative and Surprise CRs being reduced in level by -1d6,. While combat bonuses are reduced by 1/2.

MINDSHIELD, Level 3 Teleportation: This talent is as described for Telepathy.

DEMATERIALIZE, Level 6 Teleportation: If the Teleport Adept has a PK Crystal, he can place the molecules of his body and up to 10% of his body mass in equipment out of phrase with solid matter such that he can pass through walls, etc. Each meter of solid material he passes through will require the expenditure of 10 stamina points. If he has not come completely through the material when he exhausts his stamina levels, he will be re-materialised in the 'living' rocks, etc., and instantly slain. ForceField BattleScreens and most forms of BattleArmour are totally impervious, as in a dense material like lead.

LIVING MATRIX, Level 10 Teleportation: The talent is as described for Telepathy.

## 4.18 CLAIRVOYANCE

Clairvoyance is a field of Psionics which deals with the capacity to mentally perceive objects at a distance or when they are concealed from sight. Some aspects of Clairvoyance also deal with apprehension of the immanent likelihood of some as yet future menace or event. Not only the basic Psionic levels of an Adept but also his Intuition will come to bear on many of the clairvoyance talents. The talents will not penetrate Mind Shields, Thought Screens, force field Battle Screens, Battle Armour or Lead or other high density materials.

SENSE DANGER, Level 1 Clairvoyance: The Adept has a heightened awareness of potential danger, the 'sixth sense' which causes the hairs to prickle at the back of one's neck or a cold shudder to run down the back. The chance of such a 'premonition' of possible menace occurs when the StarMaster rolls a CR on 1d20, with the result equal to or lower than the Adept's CR. The roll is occasioned whenever the Adept is within range of some possible danger to himself or his fellows. Range = 10meters x PSI (tripled with a PK Crystal), Cost = 1 stamina point. The feeling will increase if the Adept moves closer to the possible menace, or vice versa.

LOCATE DANGER, Level 1 Clairvoyance: The Adept can attempt to locate the general direction and position of a possible danger once he is alerted to its presence. The probability is 3% x 1/2 sum of PSI and Intuition scores. Also a +1% chance is obtained per Clairvoyance level attained. If within a distance equal to 1 meter x Intuition, the Adept will have his attention drawn to the exact place or object from which he has Sensed Danger. Range = 10 meters x 1/2 sum of PSI and Intuition scores (doubled with PK Crystal), Cost = 5 stamina points + 2 stamina points for each minute that the talent is exercised (halved if with a PK Crystal).

FARSEE, Level 2 Clairvoyance The Adept is able to sense the approximate characteristics of a location that is in line of vision but quite distant and perhaps obscured by intervening terrain, etc. Only the barest of details will be given, and the precise location of the 'picture' seen mentally by the Adept is uncertain. It will be in the approximate vicinity of the place towards which he is looking. Range = 100 meters x PSI (with PK Crystal, 200 meters x PSI x Clairvoyance level). Cost = 3 stamina points plus 1 point per 2000 meters. For example, an Adept is looking at a foggy mountainside and is attempting to find the pass. As he scans the misty shape, he is told, 'About 10,000 meters distance you sense a valley leading upward to a deep V-shaped opening in the mountain wall. There is rushing water, a stream. Trees many trees, A lake. The bearing is about NNW.' Note that the Adept will have to be fairly proficient at such a range. Also, if there was anything of special interest, he might note it as well. 'You also sense a large metal object. A vehicle. Tracked, There is a powerful weapon present. Four man-like creatures but not men.'

DETECT PSI, Level 2 Clairvoyance: The Adept becomes very sensitive to the presence of Psionic Forces. The sense is similar to Sense Danger, a 'sixth sense' that comes into play whenever a psionic is using PSI within range of the Clairvoyant Adept, The chance of such an awareness coming upon the Adept is an Intuition CR, rolled by the StarMaster on 1d20, If such an awareness occurs, the Adept can attempt to determine the general direction and distance. Only then will stamina points be expended. Range = 100 meters x PSI (x10 with a PK Crystal).

Cost = 1 stamina point plus 1 per 2000 meters (range costs are 1 per 5000 meters with a PK Crystal). The Adept will be told the direction of the PSI Force and the range, give or take 100-1000 meters. If within 10 meters x 1/2 sum of PSI and Intuition scores (tripled with PK Crystal), the Adept will have his attention drawn to the exact place from which he has sensed the PSI Forces.

SENSE POISON, Level 2 Clairvoyance: When a Clairvoyance is within 1 meter x PSI of a poisonous plant, object, etc., he will Sense Danger. When he attempts to Locate Danger, he will have his attention drawn to the poisonous substance immediately if the Locate Danger is successful. An additional cost of 2 stamina points is paid for the knowledge that 'This is Poison!' The Clairvoyant will know for whom the substance is poisonous or especially poisonous, as well, when there are several members of different races in his party.

TRUTHFUL, Level 3 Clairvoyance: The talent is as described for Telepathy, except that the Clairvoyant has a 4% chance x Intuition + 1% x Clairvoyance level of knowing if the subject is lying.

STORYTELL, Level 3 Clairvoyance: When a Clairvoyant handles an object, he has a 2% chance x sum of PSI and Intuition scores plus 2% x Clairvoyant level of learning 1 fact about the object's function or background (history) per 2 stamina points expended. One fact may be learned for each Clairvoyance level possessed by the Adept in a given day, If the first 'question' fails, no more questions can be asked about the object for 1d6 days (there are literally 'bad vibrations' which cannot be overcome for the moment). Ability, no questions as such will be asked by the Adept. Rather, the StarMaster simply gives some piece of information upon each successful roll. Some information will be relatively useless, mere general background. But some facts will be highly relevant. The StarMaster should exercise discretion here. The more effort that the Adept spends on examining the object, the more he will become sensitive to the important facts. It is a question of rewarding perseverance, Also, clearly insignificant objects will soon reveal that fact.

CLAIRAUDIENCE, Level 3 Clairvoyance: The Adept is able to overhear words spoken at a distance. Range = 10meters x sum of PSI + Clairvoyance level (tripled with a PK Crystal). Cost = 5 stamina points per 10 words overhead (2 with a PK Crystal). The Clairaudience can be held for 10 words per Clairvoyance level.

MIND SHIELD, Level 3 Clairvoyance: The Adept has a Mind Shield as described for Telepathy.

TRUESIGHT, Level 4 Clairvoyance: The Adept sees things as they are and is not affected by any form of Telepathic Illusion, etc., which attempts to disguise the real nature of a being or an object. The talent is triggered by a Sense Danger, and when the Adept attempts to Locate Danger, the TrueSight talent is activated instead. The cost is 5 stamina points. The Adept has a 3% chance x Intuition of seeing the object or being as it really is. A further 2% chance x Clairvoyance level is added to his chances. If he doesn't TrueSee, he will still Sense Danger so long as he is in the presence of the suspicious object. Thus he may attempt to TrueSee again, as often as he *feels* it is necessary. If the Clairvoyant has a PK Crystal, his TrueSight chances are increased by an additional 15%. Only the Adept is told what is seen; communicate by notes,

PATHFIND, Level 4 Clairvoyance: The Adept will have a mental picture of the route to follow out of a situation in which he and his fellows find themselves lost. If in danger, he will also pick the safest way. Cost 10 stamina points (7 with PK Crystal). The effect will have a duration of 5 minutes x Clairvoyance level of the Adept. The chance of finding the right path or route is 6% x Intuition score, which means that Adepts with Intuition/17+ always find the way out.

PRECOGNITION, Level 5 Clairvoyance: The Adept begins to develop truly visionary powers. A PK Crystal is required. The Adept receives a foreshadowing of a scene yet to come, usually up to 24 hours in the future. The scene will be described in some detail, and he or else a person for which he is concerned will be an active participant. Only the Adept is told what is seen; communicate by notes. It is up to the player to impart whatever he sees in the future to the others. There will be

no indication of the outcome of the situation, merely a warning that it will occur. Of course, once the correctness of the foretelling is ascertained, the StarMaster will be bound to arrange matters in the meantime so that events will occur as prophesied. The probability of exact prophecy is 2% x Intuition plus 1% x Clairvoyance level of the Adept. The cost of Precognition 1 is 50 stamina points. The Adept must also roll a Shock CR or be rendered unconscious for 1d6 hours if he fails to roll equal or lower to his Shock CR level.

Designer's Note: Trying with prophecy of future events can prove difficult unless the StarMaster is prepared to think ahead to later developments in an adventure scenario. If the StarMaster prefers, he will present 2 to 5 possible alternatives, depending on the complexity of the developing situation. Some of the details will be vague, but the effect will be to alert the players in general to the possibility that some potentially serious or momentous events are about to transpire, and they will be able to make some preparations to meet the challenge. Also, if no exact prophecy occurs, a very vague and probably somewhat irrelevant 'vision' will occur, or else no precognition at all. The talent is, after all, rather erratic and undependable.

PERCEPTION, Level 5 Clairvoyance: The Adept acquires the power to 'see' without benefit of normal vision.. He could be blindfolded and in a dark room, or even blind, but he still will see clearly. Cost = 5 stamina points (2 with PK Crystal) for vision as if sighted and in an illuminated area. Cost = 10 stamina points (7 with PK Crystal) to have a psionic form of x-ray vision, with range of 10 meters x sum of PSI and Intuition scores, Duration = 1 minute x Clairvoyance level (tripled with PK Crystal). Both forms of Perception may be combined with TrueSight at an additional cost of 2 stamina points.

PERCEPTION, Level 6-10 Clairvoyance: For each level of Clairvoyance attained between 6 and 10 an Adept may acquire a refined form of Perception which permits him to see vast distances with the aid of a PK Crystal. In space, each level of Perception gives the Adept the equivalent of a Sensor Field with which he can survey the volume of space around him, detect spacecraft and other bodies, and even subject them to limited forms of analysis. The Perception will penetrate a spatial anomaly field of a Manoeuvre Drive, but not defensive Battle-Screens. Duration of the Perception scan is 1 minute x Clairvoyance level + PSI, with a 99% detection probability. The ranges and stamina costs are:

| Clairvoyance Level Attained | Range | Cost with PK Crystal |
|---|---|---|
| L/6 | 100 light-seconds | 10 stamina points* |
| L/7 | 500 light-seconds | 12 stamina points* |
| L/8 | 1000 light-seconds | 14 stamina points* |
| L/9 | 5000 light-seconds | 17 stamina points* |
| L/l0 | 10,000 light-seconds | 20 stamina points* |

*If at shorter range, the reduced stamina expenditure applies. A Clairvoyant/9 who Perceives out to 500 light-seconds will expend 12 stamina points, for example. He does not have to use full power.

PSYCHIC FORCE, Level 6 Clairvoyance: The Adept acquires Psychic Force as described in Telepathy.

LIVING MATRIX, Level 10 Clairvoyance: The Adept acquires Living Matrix as described in Telepathy.

## 4.19 TELERGY & SELF—AWARENESS

Telergy deals with the very nature of the Force itself, the mysterious source of Power from which all psionic talents arise. The Adept learns how to develop his mind and body to their maximum potentials so that he can become fully attuned to the life principle which is the Force. Players should be prepared to do some work, for an Adept PC with PSI/19 will undergo a series of changes in his personal characteristics until 'perfection' is attained. Once his personal characteristics have all been boosted to 19 scores, development of his psionic talents will begin in earnest.

The following basic talent of Telergy are learned through the same procedure that expertise is acquired in the various skills outlined previously for the character types (see 4.1 Learning Skills). Such characters will likely be 'contacted' prior to entry in the game. A 'contacted' character is assumed to have attained at least level/1 in each of the basic Telegic talents, and any bonus talents (see 4.11 Psionic Awakening) accruing for years of service after contact will be used to acquire further levels of Telergic development.

The Adept must progress through 10 levels of Telergy and Self-awareness in each talent area. Each talent requires 2 weeks of study x Telergic level. Half of the 'skills' learned at any time must be Telergic in nature. That is, if an Adept is employed, he must learn 1 Telergic talent out of the 2 possible skills possible for simultaneous learning. If he is a student, the PC must learn at least 3 Telergic talents out of the 6 possible for simultaneous learning.

The following Telergic talents must be learned in the order presented, with all skills progressing at the same rate. That is, Mind Shield must be learned before Strength, Strength before Constitution, and so on. One cannot progress to Mind Shield/2 before the other 10 basic talents have been learned to level/1. It will also come to pass that some Telergic talents will quickly provide the maximum boost in personal characteristics, but study must nevertheless continue to level/10 to make such gains permanent and to keep them attuned to other talents.

Each of the following talents will automatically deduct 1 stamina point from the Adept's stamina levels per day. In short, he will pay 11 stamina points 'off the top' at the beginning of each day until he has attained level/10 in all 11 basic Telergic talents. However, as some of his physical characteristics improve, the PC will gain an increased stamina level which will offset this expenditure.

MIND SHIELD, Level 1.10 Telergy: The talent is as described for Telepathy, except that the Adept always maintains a 'rigid' mind shield without stamina cost. He also enjoys a bonus +2 DM applied to Mental Attack rolls when attacked by a Telepath of equivalent level, and a +4 DM when attacked by a Telepath of a lower level of development. Such defensive bonuses are in addition to any other defensive advantages.

STRENGTH, Level 1-10 Telergy: The skill is a form of psycho-physical conditioning and training which brings a +1 boost to the Adept's Strength score for each Telergic level attained until Strength/19 is reached. For example, if an Adept has Strength/l6 when he enters the game (if he began training prior to entry this is regarded as a score partially boosted by Telergic means), +1 is added to the Strength score when he attains another level in Strength training, raising him to Strength/l7. When he reaches Strength/19, he cannot progress further because he has attained the maximum potential levels possible in his personal genetic make-up. He will have to continue his training however, until level/10 is reached, but the time period for each level will be only 1/3 of the normal training period if he has a PK Crystal. For example, if the Adept had attained Strength/l9 at Level/ 4, his level/5 training in Strength would take 1/3 x 2 x 5 = 3.3 weeks, not usual 10 weeks.

CONSTITUTION, Level 1-10 Telergy: The talent is again a form of psycho-physical conditioning and training which brings a +1 boost to the Adept's Constitution score for each Telergic level attained to level/10, with a maximum Constitution/19 possible. All comments made for Telergic Strength also apply here. In addition, when the Adept reaches level/10, he is able to enter into deep trance states which amount to suspended animation.

AGILITY, Level 1.10 Telergy: The talent is a form of psycho-physical conditioning and training which brings a +1 boost to the Adept's Agility score for each Telergic level attained to level/10, with a maximum Agility/19 possible. All comments made for Strength apply here. The training program improves nerve synapse speeds so that reflexes and motor responses are heightened.

DEXTERITY, Level 1-10 Telergy: Like Telergic Agility, the talent is a form of psycho-physical conditioning and training which improve the response levels of the nervous system so that all manipulations with the hand become perfectly co-ordinated. A +1 boost is given to the Adept's Dexterity score for each Telergic level attained to level/10, with a maximum Dexterity/19 possible. All comments made for Strength apply here.

INTELLIGENCE, Level 1-10 Telergy: The Adept begins to develop hitherto unknown levels of his mind and thereby improves the cognitive capacities of his brain. For each Telergic level attained a +1 boost is made to the Adept's Intelligence score. Intelligence may be boosted above a score of 19, with each Intelligence point above 19 increasing the Learning PCA by +3, regardless of the requisite characteristics required to learn a skill, This represents an improved capacity to learn in any field, Each Telergic level thus will have no reduced learning times as improvement beyond a 19 score is possible.

INTUITION, Level 1.10 Telergy: As the Intellectual faculties of the Adept's mind expand and exploration of his mental potentials proceeds, his Intuitive score will be boosted +1 per Telergic level up to Intuition/19. All comments made for Strength apply here.

LEADERSHIP, Level 1.10 Telergy: With the development of physical and intellectual competence comes a blend of self-confidence and good judgement that results in an increase of the Adept's capacity to lead others. For each Telergic level attained, +1 is added to his Leadership score until Leadership/19 is attained. At Leadership/l9+ Presence is acquired, as described in Telepathy.

BRAVERY, Level 1.10 Telergy: As the Adept rises in overall competence in physical, intellectual, and leadership areas, he discovers that he fears personal injury or death less than before. He has capacities beyond those of ordinary men, and a potential to reach levels surpassing those of almost all other members of his race. He has also learned the mental and physical disciplines which enable him to maintain control over his fears and to apply his growing talents to overcome any threat. Thus, for each Telergic level attained, +1 is added to his Bravery score. At Bravery/19+ he will no longer panic and never has to check his morale.

EMPATHY, Level 1-10 Telergy: As the Adept develops in physical and mental stature, a process of self-knowledge and self-discovery allows him to become increasingly aware of the fact that the Force touches the lives of all being, however much they pervert it. His Empathic levels cannot help but grow, for he intellectually deduces, intuitively knows, and physically feels the bonds that link all life forms together in the Force. Each Telergic level attained adds +1 to his Empathy score until Empathy/19 is reached,

AWARENESS, Level 1-10 Telergy: As the Adept rises in overall Telergic competence, he acquires the equivalent of Psychic Force, as described in Telepathy, beginning with level/1 Awareness. At level/10 Awareness, the stamina boost is 250% of normal levels, plus PSI bonus as described. The Adept also acquires certain talents associated with the Force automatically at Awareness/5, Awareness/6, Awareness/9, and Awareness/10 (see The Force in the following section.) The Adept also has the capacity to learn any psionic talent in the fields of Telepathy, Telekinesis, Teleportation, and Clairvoyance at the Awareness level he has currently attained in 1/2 the normal learning time. At Awareness/10 the Adept must make a momentous decision, if he has not already made it. As he progressed in his psionic development, he came to understand that there are two sides to the Force. By level/10, he must choose to serve the Light or the Dark side of the Force, becoming either a Champion of the best that Civilisation has to offer or a self-serving 'villain' who seeks personal power and self-aggrandisement at the expense of other beings. There are no other alternatives. A plain choice between Good and Evil must be made and, once chosen, there is no turning back from the path selected.

If an Adept chooses the path of the hero who champions the Light side of the Force, he learns Living Matrix as described in Telepathy. If an Adept elects for the Dark side of the Force, his Empathy levels are immediately reduced from 19 (or whatever the current score may be) by -3d8 points, with a maximum Empathy/11 possible. Service of the Dark side of the Force prevents the Adept from performing any curative procedures on others; his empathic levels are too low to permit the necessary identification with the plight of others.

TRANSHUMAN STATUS: When the Adept has completed Aware-ness/10 and his Telergic studies are now finished, he is transformed into Transhuman status if he is human or humanoid. All personal statistics (except height and mass) are corrected accordingly.

## 4.20 THE FORCE

The Force is perhaps nothing more than a vast energy source, but then again it may be Something far greater. Adapts who have a tendency to attach almost a religious significance to the Force, but not in a superstitious fashion. For them, the Force is a very real part of their lives.

Telergic Adapts who elect to serve the Light side of the Force have chosen the Life Principle. They are the Space Opera counterparts of such science fiction heroes as the Lensmen of 'Doc' Smith's epic series who engage in a titanic struggle of cosmic proportions against the minions of Boskone and the Eddadorians, Or they are like the .Jedi Knights of StarWars. Such characters will have before them the task of enacting the roles of almost superhuman Champions of 'humanity' and Civilisation, Depending on the scenario, they will be found in the StarForces or the Interstellar Police, and they do not have to concern themselves about being discharged from the service because they will be 'severed' from their chosen fields when they are slain. It might be that they are the remnants of a once great Brotherhood suppressed by unscrupulous men who would enslave all races under an iron dictatorship. Thus they become heroic revolutionaries seeking to overthrow a tyrannical empire. Whatever the situation, they are men who stand for the Right and the Just.

Those Telergic Adapts who elect to serve the Dark side of the Force have chosen the Death Principle. They *are* the Space Opera counterparts of the science fiction villains like the Black Lensmen of the Lensman series or Darth Vader of StarWars, and so on. Such characters have before them the task of enacting the roles of the Enemies of 'humanity' and Civilisation. They are the power-hungry, the Destroyers and the would-be Dictators, Adapts who have turned the Force to the service of their own personal ambitions. However, that should not be interpreted to mean that they are given to cruelty for its own sake. Rather, they are merely 'expedient' in their approach to obstacles. Those who get in their way are neutralised or disposed of in the most efficient manner available.

All Telergic Adepts will automatically acquire certain powers at a given level of their development. These powers do not have to be learned.

SELF-HEAL, Level 5 Telergy: As the Adept acquires knowledge about the physiological functions of his body, he acquires the power to heal 1 point of damage to his body per day for each Telergic level he has attained, with the aid of a PK Crystal. If he has no PK Crystal, he can heal himself at 1/3 the rate possible with a Star-Stone.

HEAL, Level 5 Telergy: Servants of the Light side of the Force acquire the power to heal 2d6 points of damage to the body of another if the victim rolls a successful Constitution CR. Cost = 4 stamina points per damage point healed (2 stamina points with a PK Crystal). Range = touch. Only one such healing can be performed for any set of wounds; thus a victim cannot receive the benefit of several healing applications for the same wounds. A minimum Em.pathy/16 is required to perform the Healing.

PAINSTOP, Level 5 Telergy: All Telergic Adepts can totally block the pain they might feel as the result of injuries, etc. PainStop provides total immunity against torture, Shock from wounds, and such psionic attacks as PainBlast, The talent may also be bestowed on others through touch. Cost = 10 stamina points (5 with PK Crystal). Duration 1d6 hours.

MENTAL ATTACK, Level 5 Telergy: The Adept acquires the ability to deliver any Telepathic attack equal to his level of development if he has a PK Crystal requires that he have learned the Telepathic talent.

PAINTOUCH, Level 5 Telergy: The Adept acquires the ability to deliver a Mental Attack equivalent to PainBlast (see Telepathy) at 1/2 the normal stamina costs when he touches his victim. This attack cannot be turned by a Thought Screen.

SENSORYBLOCK, Level 5 Telergy: The Adept acquires the ability to deliver a Mental Attack against all Psionics and a simple physical attack against non-Psionics (touch only is required, with an expenditure of 5 stamina points) which will cause the loss of one of the senses for 3d6 minutes. When delivered as a Mental Attack, the cost is 10 stamina points (5 with PK Crystal), and the range is at Mental Attack ranges.

DEATHTOUCH, Level 6 Telergy: The Adept acquires the ability to deliver a Mental Attack against psionic and a simple physical attack against non-Psionics (touch only 1 required, with an expenditure of 5 stamina points) which will produce effects as described for DeathBolt in Telepathy. When delivered as a Mental Attack, stamina costs and ranges are as described for DeathBolt.

SELF CURE, Level 6 Telergy: Provided the Adept has attained Constitution/19, he can use his self-awareness to analyse and cure any disease he has contracted at a chance equal to his Constitution CR, rolled on 1d20. He can also analyse and neutralise any poison or drug that has been introduced into his system at a chance equal to his Constitution CR minus 1d6, rolled on 1d20. Cost = 1d6 stamina points expended for 1d6 days. A PK Crystal is not required. If a PK Crystal is used, the Cure is effected at a cost of 6 + 1d6 stamina points.

CURE, Level 6 Telergy: Servants of the Light side of the Force can perform a Cure on others to increase the survival chances when they contact any potentially fatal disease, The chance is equal to an Empathy CR minus 1d6, rolled on 1d20. Cost = 5.d6 stamina points (maximum of 15 stamina points with a PK Crystal). Only one attempt may be made for any given patient; if a failure occurs, the Force will not assist in combating that disease.

REGENERATE SELF, Level 9 Telergy: The Adept may use the Force to cause re-growth of lost limbs, organs, etc. The time required is 5 + 3d6 days per limb, organ, or other tissue to be so regenerated. Cost 25 stamina points per day.

REVIVIFY, Level 9 Telergy: The Adept acquires the Power to re-vive the recently dead. There is a 1% chance per stamina point expended. The chance is reduced -2% per hour after the occurrence of death unless the body had been quick-frozen or injected with Thanokalamine TKM to preserve it. Only one attempt may be made to revive a body in a given day; failure means that a full 24 hours must lapse before another attempt can be made to revive it through exercise of the Force. This extreme application of the Force will leave the Adept with reduced stamina levels for 1d6 days after each attempt (-25 stamina points per attempt).