Introduction

There are still those who remember the impact the game Traveller had when it first burst onto the RPG scene. Until then most RPG's had been based in fantasy (D&D, Tunnels & Trolls, RuneQuest etc). Traveller was the first decent, hard science fiction RPG. It had a simple (though not perfect) system, and was backed up with a wealth of detail. The success of Traveller resulted in a plethora of SF RPG's most of which were pretty dire (anyone remember Space Opera?).

Today there are still many SF RPG's on the market. Some are tied to specific film/TV licences, others to miniatures lines. All of them are intensely detailed and have rulebooks you could serve a dinner for four on. Traveller's adherence to the KISS (Keep It Simple Stupid!) principle has been lost, and Traveller itself has been absorbed into the D20 empire.

Blaster! is an attempt to recreate the magic once held by Traveller. It is a hard science fiction game with a simple and internally consistent set of core rules and game mechanics. Although it is supported by a detailed background these rules can be quickly adapted to any SF universe you could want to devise (or borrow).

This game's focus is on the extraordinary Heroes that the players create. You will quickly discover that the characters this system encourages are larger than life and almost cinematic in quality. Hey, if you want to play a down-on-his-luck, droid service engineer that's up to you. Personally I'd prefer to play a High-G World, former Corporate Marine on the run from the Southern Cross Organisation, who's battling to prevent Ancient Technology from falling into the hands of rogue AI Terminators. Or perhaps a gorgeous Belter Star-pilot trying to break the bank at an Orbital Casino while her crew ambush an alien courier. Or even a veteran Farsider Trader leading his men into the desperate pursuit of Rim Pirates who have his patron's daughter in their evil clutches.

This game is much more Flash Gordon than Star Trek. A universe where small starships abound (for reasons explained below) and a handful of good men can still play a major part in the future.

Game Philosophy

This is an abridged version of the D20 rules that has been designed to be quick and easy to play. The goal was to create a simpler game, but one where all of the resources of core D20 could be used without any serious conversion.

Key Concepts.

Before you begin playing this game it is necessary to understand a few key concepts about its background. These have a great bearing on how the game plays.

Folding Space.

For the first 2.2 millennia of the Common Era humanity was restricted to old Sol system. Although quite a few colony ships had set off into deep space their destinations were decades away and no-one was sure if they would ever make it. The dream of faster-than-light travel had faded as the engines and power sources required proved to be beyond the ability and resources of the early pioneers.

Then came the Lubinski-Friedman drive. This utilised a revolutionary principle, long known to a few mathematicians, that all points in the universe are linked and theoretically occupy the same space. The drive 'folds' space. That is it allows, just for an instant, two points to actually occupy the same location in the space-time continuum. The computational requirements to accurately plot a destination with this drive are enormous. The benefits though are incredible for it means you can instantaneously transport a vessel from one destination in the universe to another.

However, there are some drawbacks with this principle in practice. You cannot engage the drive within the primary gravitational well of a star or its attendant planets and satellite bodies. You must journey well beyond that into an area of empty space. Similarly your destination cannot be in a gravity well either. In practice this means ships must travel, utilising their fusion engines, outside of a system before engaging the LF drive. This can takes days or even weeks depending on the size of the system.

The second drawback is mass. The tonnage of pure hydrogen needed to engage the drive increases exponentially with the mass of the vessel attempting to fold space. A simplified version of the LF fuel formula is:

$$10 \times (\text{Vessel's Mass in tonnes}/100)^2$$

The following table shows you the effect of this in practice.

Vessel's Tonnage	Fuel required to fold space	Tonnage for essential systems*	Remaining free mass	Legal minimum crew
100	10	25	65	1
200	40	50	110	3
300	90	75	135	5
400	160	100	140	7
500	250	125	125	n/a
600	360	150	90	n/a
700	490	175	35	n/a
800	640	200	-40	n/a
900	810	225	-135	n/a
1000	1000	250	-250	n/a

*Essential systems include Fusion Engines, LF Drive, Hull, Computational Systems, Radiation Shielding and Communications.

As you can see it becomes uneconomic to build an interstellar vessel over 400 tonnes mass, and impractical at 700 tonnes plus. Indeed most vessels are 300 tonnes or less.

The later section on starship construction gives exact construction details, options and costs.

Obviously this affects both the economics and politics of interstellar relations. As in-system vessels, without LF drives, have no mass restrictions it makes it very difficult for a well prepared system to be invaded by a foreign power. No 400 tonne interstellar frigate is going to last seconds against a 2000 tonne System Defence Cruiser.

As the tonnage of trade goods that can be carried by even the largest corporate vessels is in the order of 60 tonnes per trip, it tends to be the most valuable items that are transported. Most systems have to rely upon their own resources for all their day-to-day needs.

Communications.

No technology has yet been devised that can communicate at faster than the speed of light. Thus interstellar communication would take decades to travel between most systems.

The net result of this is that specialist Mail Ships, carrying secure data cores, act as the communications medium of the age. These travel from system to system on preset routes, picking up and delivering electronic

mail. They also carry a lot of hard copy mail, for those still unwilling to commit their information to an electronic medium (see AI below).

Many systems, especially those further away from the main trade and mail routes, can waits weeks, months or even years for news and information.

AI

Possibly the greatest threat that humanity faced as it expanded across the galaxy was one of its own invention. For centuries humanity had been researching and developing ever more powerful computer systems, most integrating one form or another of artificial intelligence (AI).

In the latter half of the 24th century CE, some scientists began to claim that these AI's were becoming self-aware. Corporations, hungry for the profits that advanced AI's could bring, ignored them, or even researched ways to exploit this emerging sentience. They began to integrate advanced AI's into androids and these were hugely successful. They effectively replaced humans in all the most dangerous and demeaning roles in society. Looking back with 20-20 hindsight it can now be seen that humanity had reinvented the slave state, 500 years after the last one had disappeared upon Terra.

In 2522 things came to a head on the mining world of Dispater. The androids stopped working and slaughtered their programmers and technicians. A force of Corporate Marines were sent in to shut down the mines but were slaughtered in their turn. The androids boarded the many vessels at Dispater and escaped into space. In the months that followed world after world descended into chaos as both androids and all AI-based systems 'threw off their chains'.

Conventional weapons such as lasers and slug-throwers were pretty ineffective against androids, and only where fusion bombs were deployed was order restored, though at enormous cost in human lives. For a while it looked like humanity was going to be wiped out, but then came the Farsiders.

Farsiders are believed to be the survivors of the original slower-than-light colony ships, and they came home bringing with them Blaster technology. The Blaster weapon uses a electromagnetic rail system to propel pellets of super-heated metal to enormous speeds (upwards of 2000m/s). This has excellent armour piercing qualities but, more importantly against AI's, imparts a large electromagnetic charge to the pellet. A piercing shot from a Blaster will fry an AI's delicate positronic circuitry. Even a glancing hit can seriously disorientate them.

Over the next thirty years humanity pushed the AI menace back into the fringes of human space. There they remain, always a threat but no longer a serious one.

The backlash against computers and AI was huge. People lost their faith in thinking machines, and scores of machine-breaker and Luddite movements swept through the galaxy. Many worlds rejected electronics altogether and signed up to the 'New Covenant'. On these worlds industry has reverted to a strictly mechanical level. There has even been advances in the creation of analytical and differential engines based upon the ancient works of the 19th century visionary and mathematician, Charles Babbage.

As a result most present 'computers' are essentially complex mathematical calculators, with no ability to do things automatically or without direct human intervention. The most complex remaining computational devices are ship's Navcoms, used for computing the folding of space.

The pace of technological advance has slowed and stabilised. Many say that this is for the better and generally humanity has been strengthened by the experience.

Note:

The male pronoun has been used throughout the text to remove the ugliness of s/he, his/her etc. Nothing else is implied in this usage.

Character Creation

Attributes

There are 3 attributes - Strength, Dexterity and Mind. These are abbreviated as STR, DEX and MIND.

Roll 4d6, drop lowest dice. Total remaining 3 dice and allocate to one of the attributes. Repeat for remaining attributes.

Attribute bonus = (attribute-10)/2, round down.

Professions

The characters could come from one of a huge range of backgrounds. Most of these are desperately dull and would create poor adventurers. The following have been initially chosen as suitable for new characters.

The professions are Corporate Marine, Free Trader, Scientist and Scout.

Characters begin at Level 1.

Corporate Marine.

The officers and other ranks of the Corporate Marines are tough, well-trained and self-confident. They form the backbone and tactical leadership of an adventuring company. Given the opposition they are expected to face no company should deploy without military support and protection.

Corporate Marines add +1 to all attack and damage rolls. They can use any weapons. They have a +3 bonus to the Physical skill.

Free Trader.

In every adventure there may be situations where the more 'subtle' skills of the Free Trader may come in very useful. Free Traders hail from the many small interstellar trading houses and come with a wide range of useful contacts. They are experts in diplomacy and realising the assets of others.

Free Traders can initially use any light weapons. They have a +3 bonus to the Subterfuge skill and +2 bonus to the Communication skill.

Scientist.

It is extremely likely, given the devices so far recovered, that the adventurers are going to come into contact with advanced cultures. The role of the scientists is to recover, analyse and reproduce this technology on behalf of the company. They also provide a level of technical expertise unavailable in the other classes.

Scientists can initially use pistols. They gain a +2 bonus to the Knowledge and Technology skills. They may also choose a 'speciality' - a single area of scientific knowledge in which they get a +4 bonus (i.e. A Doctor is a scientist who has specialised in medicine).

Scout.

Scouts come from the exploratory fleets who work beyond the rim of human space. They are tough, resourceful and experts at survival in hostile environments.

Scouts can use any weapon. They add +1 to ranged weapon attack and damage rolls. They gain a +2 bonus to the Survival and Perception skills. They gain a further +2 bonus to the Technology skill when piloting a spacecraft.

Character Races

So far humanity has not encountered anything it would recognise as <u>sentient</u> alien life even though hundreds of thousands of species have been documented, examined and dissected. Four varieties of humanity are available to players for use as characters. There are quite a few others, such as the amphibian humans of Hydra, but these may prove very difficult to play.

Pure Human

The default race for characters is Pure Human.

Belters

Belters are born in space. Often they come from the many asteroid-mining colonies scattered throughout the galaxy. They claim no human ancestry instead believing in some sort of relationship to the stars themselves. They are slim and graceful, disdainful of the 'young races', and generally more fragile than their planet-born colleagues.

High-G'ers

These are descendants of humans who settled on high gravity worlds. Most come from worlds of 1.5-4.0 standard gravities. This makes them short, very robust and quite dependant upon technology. High G'ers are renowned for their technical capabilities, their short tempers and complete lack of a sense of humour. Everything to them is a matter of survival. A good man to have at your back, but not one to have on your trail…

Farsiders

The origins of this short and cheerful people are mysterious. If you ever ask one he'll simply say that he is from the 'farside' of somewhere. Farsiders are very persuasive and are natural merchants, entertainers and lawyers. Although not averse to taking risks, they generally avoid violence where they can (there's no profit in it).

Blaster! – The SF Role-playing Game.

Benefits Table.

A new character may roll a number of times upon the table equal to their Mind bonus +1. The player must roll 2D6 and consult the column for the character's background. Certain benefits may only be received once and these are shown in italics. Roll again if this comes up.

Die Roll	Far Trader	Scout	Marine	Scientist
2	*Ship*	*Ship*	*Power Armour*	*Navcom*
3	*EVA Suit*	*Navcom*	Low Passage	*EVA Suit*
4	High Passage	Low Passage	*Combat Armour*	High Passage
5	Laser Pistol	Blaster Pistol	Blaster Rifle	Laser Pistol
6	Low Passage	*EVA Suit*	Blaster Pistol	Low Passage
7	2D6x100 Credits	1D6x100 Credits	1D6x100 Credits	1D6x100 Credits
8	+1 to a Skill	+1 to a Skill	+1 to a Skill	+1 to a Skill
9	+1 to Communication	+1 to Survival	+1 to Ranged Combat	+1 to Knowledge
10	+2 to a Skill	+2 to a Skill	+2 to a Skill	+2 to a Skill
11	Contacts	Contacts	Contacts	Contacts
12	*+3 to a Skill*	*+3 to a Skill*	*+3 to a Skill*	*+3 to a Skill*

Ship

The fully paid lease of a 100 tonne Free Trader or Scout-ship for three years, after which time the character may extend the lease or buy it. All running and maintenance costs are the responsibility of the character.

Navcom

A Corporate Navigation Crystal giving accurate and up-to-date star maps of the entire Sector and a simple System Gazetteer. These only last a couple of years as they steadily go out of date.

Contacts

This is a person from the character's background that can be depended upon to help the character is some way – once. Contacts are unlikely to risk their lives or their careers for the character. The contact is agreed with the BM.

Equipment

Descriptions of the EVA Suit, Power Armour, Combat Armour, Blaster Pistols, Laser Pistols and Blaster Rifles, can be found in the equipment section.

Low Passage

Transport for one Fold in a cryopod aboard a Corporate Trader.

High Passage

Transport for one Fold in a stateroom aboard a Corporate Trader or Liner.

Skills

The character can choose a skill from the general lists or from their background list and adds the bonus indicated. Where a specific skill is named then that is the one improved by this benefit.

Blaster! – The SF Role-playing Game.

Skills

There are just seven skills - Physical, Subterfuge, Technology, Knowledge, Perception, Communication and Survival. These are fairly generic categories, and it is up to the players to explore the breadth and depth of them in play.

Skills are used in two ways, opposed and unopposed. The former is where there is an active intelligence opposing the adventurer. The latter is where there is not.

For an opposed roll compare the scores of the adventurer against that rolled by the GM on behalf of the 'active intelligence'.

In the case of an unopposed skill use to succeed the player must score higher than the given Difficulty Class to succeed.

> **Skill roll = D20 + skill rank + whatever attribute bonus is most applicable to the use + situation modifiers**

Skill rank = The adventurer's level + any bonus due to his class or race.

For example:

- Climbing would use Physical + STR bonus.
- Dodging a falling rock is Physical + DEX bonus.
- Finding a trap is Subterfuge + MIND bonus.
- Disabling a trap is Subterfuge + DEX bonus.
- Piloting a ship in a dogfight or re-entry is Technology + DEX bonus.
- Repairing the LF Drive on a spaceship is Technology + MIND bonus.
- Recalling an ancient legend would use Knowledge + MIND bonus.
- Treating a comrade who has been poisoned would use Knowledge + MIND bonus.
- Bargaining for provisions with tribesmen would use Communication + MIND bonus.
- Tracking a deer or finding water is Survival + MIND bonus.

Note that there are no "saving throws" in this game. Use Physical + STR or DEX bonus for the equivalent of Fortitude and Reflex saves as appropriate. Saving against mental attacks (Will save) is usually MIND bonus + Level.

Re-rolls.

The adventurers are heroes and as such have one or two abilities beyond the reach of normal men.

At first level each adventurer is allowed a single re-roll per day. A re-roll must be used immediately after the adventurer made a roll that failed or wasn't good enough, not ten minutes later when the consequences of the roll become clear. A player can only re-roll dice for his own adventurer's actions, not for someone else's.

For game purposes the power to use a re-roll regenerates at zero hours, ship's time (or it's local equivalent).

At every third level the adventurer gets another re-roll to use per day.

Blaster! – The SF Role-playing Game.

Combat

Initiative

Roll D20 + DEX bonus for initiative order. Everyone can do one thing each turn; move, attack etc.

The exception being the charge. This is where you move up to someone and hit them with something.

Drawing a weapon is generally a free action, within reason.

Hitting something

Roll a D20 and add the character's attack bonus:

- Melee attack bonus = STR bonus + Level + any professional bonuses

- Ranged attack bonus = DEX bonus + Level + any professional bonuses

If the score higher than the opponent's Armour Class (AC), it's a hit.

A natural 20 is automatically a critical doing maximum damage. A natural 1 is always a miss.

There are no attacks of opportunity.

Pistols and close combat weapons can be used against opponents in adjacent squares. Longer firearms need at least one square of empty space between the firer and their target, unless you are using them as clubs.

Damage

Hit Points = STR attribute + (Level x3).

There is no such thing as subdual damage. In these rules it matters not if you beat a man unconscious with your bare fists or blast him with a shotgun, he can still die of it.

There are weapons that are designed to render an opponent unconscious. Also a character that is helpless, such as when pinned, kneeling in surrender or held by several burly Marines can be rendered unconscious with the classic blow to the back of the head.

Weapon damage as per the equipment tables. Add STR bonus to Melee damage. Double the STR bonus for 2-handed weapons.

Damage is deducted from Hit Points. If Hit Points are reduced to zero the victim is incapacitated and can no longer act or move. Further damage will kill the victim. Note a victim's Hit Points can only be reduced to zero, not below. There is no such thing as negative hit points. A victim who is left untreated for longer than (STR) minutes dies of shock and blood loss.

Armour and Cover

Armour as per the equipment tables.

AC = 10 + DEX bonus + Armour bonus + Cover Bonus

Cover can be quite important, and complex. In Blaster there are just two types of cover:

| Soft Cover | Where at least 50% of the target is obscured by something that prevents vision but may not stop a bullet | +2 bonus to AC. |
| Hard Cover | Where at least 50% of the target is obscured by something that prevents vision and may stop a bullet | +4 bonus to AC. |

Given the weapons available to the adventurers, and their enemies, combat can be seen to be quite dangerous. Adventurers may have to balance their martial pride with the realisation that surrender is a pragmatic option.

Blaster! – The SF Role-playing Game.

Movement

Character's movement per round is measured in two meter squares, with bonuses for high DEX. Base movement 5 + DEX bonus in squares.

Wearing medium armour reduces movement by 1 square, and heavy armour reduces movement by 2 squares.

Movement through or across difficult terrain is halved, as is movement through a square occupied by a friend who is not engaged in combat. A character cannot move through a square occupied by friend who is engaged in combat. Movement through squares directly adjacent to an unengaged enemy are at half speed due to the need to avoid any attacks. There are no attacks of opportunity in these rules.

Climbing and swimming is at half speed.

An encumbered character moves at half speed. A character is encumbered when he is carrying more than STR/2 in encumbrance (see the Equipment section below for a description of encumbrance). The maximum a character can carry is twice this figure and the maximum he can lift is three times the figure, but he cannot carry it.

In Zero Gravity characters move at full speed, they are considered experienced space travellers. However, once moving they will generally continue to move in a direction unless they can manoeuvre themselves in some way or they impact a bulkhead etc. This is the one occasion when a character can move and act at the same time.

Note that using weapons that have a recoil factor in zero gravity will change the direction of movement, which is why laser weapons are so popular in space (and the fact that they are less likely to penetrate an outer bulkhead or fry sensitive electronic equipment).

Recovering Hit Points.

Hit Points represent more than just flesh and blood. They also include fatigue and shock. Initially the Adventurer's only ways to regain Hit Points will be through medical attention or rest & recuperation.

The use of a First Aid kit is based upon the Knowledge skill. After being wounded a successful Knowledge roll against a DC of 15 will allow an Adventurer to restore 1D4 hit points.

A Scientist who has specialised in Medicine (a Doctor) can use a Medical Kit to restore 1D4+MIND bonus Hit Points. First Aid or Medical treatment can only be made for each 'set' of injuries.

For example if during a fight an Adventurer takes three wounds for 3, 4 and 3 points of damage the First Aider/Doctor cannot treat each injury individually. However, if the Adventurer has sought aid after receiving the first two wounds, and then later for the third wound then they could be treated in two 'sets'.

These skills take approximately five minutes to use.

Each full day's uninterrupted rest will recover (Level x STR Bonus) hit points. This is always at least 1 per day. The attention of a Doctor doubles this recovery rate. Short walks and light camp activity (cooking etc) do not interrupt rest.

A Ship's Medbay acts as a Doctor. A full day in a Medbay will heal all but the most serious injuries.

Level Advancement

There are no Experience Points in this game. Add up the Encounter Levels (EL) of every person or creature defeated in an encounter the character takes part in. Divide this total by the number of characters, round down and award to each character still alive at end of encounter. When the total = 10 x the character's current level, they've advanced to the next level. Reset the total to 0 after advancing.

Each level adds:
- +1 to all skills, or +2 to two chosen skills
- 3 Hit Points
- +1 to all attack rolls
- If the Adventurer's level divides by three (i.e., level 3, 6, 9, etc.) then add one more re-roll per day.
- If the Adventurer's level divides by six (i.e., level 6, 12, etc.) then add 1 point to either STR, DEX or MIND.

Blaster! – The SF Role-playing Game.

Equipment

The range of equipment available to Heroes is immense. What is presented here is a summary of the most commonly required by new Heroes. A full equipment supplement will be available shortly.

It is important to remember when viewing these lists that because of the AI Wars very little technology exists that contains anything more complex than a simple computational chip. There are no PC's, no laptops, no mobile phones. All decisions are, by necessity, made by people. In systems that are signatories to the New Covenant, even simple electronic devices are viewed with suspicion. Where robotics are used they are remote controlled by human operators.

Encumbrance

Every item of equipment is rated in terms of its encumbrance. This rating represents not only the weight of the item but also its bulkiness. A Hero may carry a maximum of four times his STR attribute in encumbrance.

Carrying more will reduce the agent's effective STR attribute by one for each extra one encumbrance, thus reducing all associated skills. Once the Body attribute is reduced to zero the agent collapses under his load unable to move, and barely able to breathe.

Availability.

Obviously not all equipment is available in all systems. The BM will know what equipment is considered uncommon, unavailable or even illegal to acquire in different systems. For instance you will not find Laser Weapons or Comm Units for sale on New Covenant worlds. Similarly Belter Colonies are unlikely to have and slug weapons in stock. Far too dangerous to their deep space habitats.

However, if you can find a Farsider Trader or Corporate Outlet, and you have enough money, you can generally get most of what you need.

Currency.

In Blaster the default currency is Corporate Credit. Many systems have their own means of exchange but most recognise the Credit, even New Covenanters.

Common Equipment Lists

Ranged Weapons

Item	Enc.	Weapon Cost	Ammo/ Mag	Ammo Cost	Cell needed?	Shots /Cell	Cell Cost
Blaster Pistol	2	250	10	40	Yes	50	100
Blaster Rifle	4	750	30	100	Yes	30	100
Slug Pistol	1	100	15	20	No	N/a	N/a
Slug SMG	2	200	30	35	No	N/a	N/a
Slug Rifle	3	400	30	35	No	N/a	N/a
Shotgun	2	200	5	20	No	N/a	N/a
Laser Pistol	1	150	N/a	N/a	Yes	20	100
Laser Rifle	2	250	N/a	N/a	Yes	10	100
Grenade Launcher	3	50	1	75	No	N/a	N/a
Throwing Knife	0.5	10	N/a	N/a	N/a	N/a	N/a

Notes on ranged weapons

Blaster weapons are based on electromagnetic rail gun technology. They heat a pellet of metal (normally Titanium) to a near molten state and then accelerate it to 2500 metres per second. This makes for a very effective weapon with good penetration values. The electromagnetic charge that is carried by the pellet is devastating to any electronic equipment it hits. This makes it good against AI's but very unpopular on starships where stray shots can be disastrous. It also makes the attachment of most sighting accessories impossible. All Blaster's are single shot.

Blaster! – The SF Role-playing Game.

Slug weapons are cheap to make and reasonably effective. They rely on the ignition of a chemical propellant to throw a metal slug at speeds up to 900 metres per second. Slug weapons are rifled for greater accuracy at distance and may be fitted with a wide range of sighting aids. Slug SMG's are capable of burst fire. Fully automatic versions are rare outside the military.

The shotgun is a descendant of the ancient hunting weapon. It remains a large gauge smoothbore weapon, but there the similarity ends. It is now exclusively a combat weapon and is used extensively by both Military Assault teams and Law Enforcement Agencies. Its short range, due in part to its short barrel (less than 30cm in most models) is made up for by its flechette ammunition and high shock value. At close quarters it is a dangerous as a Blaster Rifle or a SMG in burst fire mode.

Laser weapons are the favoured choice of ships' crews. Their great range and accuracy comes at the loss of penetration power. In the vacuum of space this is relatively unimportant. One minor problem with them though is barrel wear. A considerable amount of heat is generated by the pulse laser generator and this must be dissipated by the barrel.

Grenade Launchers are used by all manner of people, though are generally illegal outside of the Military. With Grenade Launchers all the value is in the ammunition, the launcher being little more than a tube and a trigger. The most common grenade type is the fragmentation, anti-personnel model. This attacks every person within a one square radius of the target point (a 3x3 square area). High Explosive Armour Piercing (HEAP) versions are available and are very useful against hard targets.

Blaster and laser weapons need Power Cells to operate. These are rechargeable from any standard power source (it takes about an hour per cell). In Blasters the cell melts the pellet and powers the rail. In lasers it operates the pulse generator and the barrel-cooler motor. The cost given is for the rechargeable type. Disposable cells can be bought for about a quarter of the cost.

Close Combat Weapons

Item	Enc.	Cost
Blade	1	20
Club, Truncheon or Nightstick	1	10
Cutlass or Sword	2	75
Plasma Torch	4	250
Taser weapon	1	125

Notes on close combat weapons.

The term 'Blade' covers a multitude of combat knives and bayonets. Generally it is a short (less than 30cms), but heavy bladed knife that can be lethal in trained hands. Every military force still trains its personnel in the use of the rifle bayonet. Even against AI's cold steel can be effective. In most systems it is legal to carry a blade for self-defence and it is very popular.

Clubs etc are possibly humanity's oldest manufactured weapon and remain in use, especially amongst Law Enforcement personnel. Ship's crews often use Hull Wrenches.

Cutlasses are the preferred boarding weapons of starship crewmen. At close quarters it is absolutely deadly in trained hands. Normally it is a slightly curved, single-edged heavy blade of about 75cms length. It is frequently made of extremely hard steel and is more than capable of penetrating light bulkheads or power armour.

The Sword remains popular amongst the corporate and system aristocracy. It is also issued to military officers. Usually it is a straight blade, often double edged, and varies between 50cms and 1m in length. Like the Blade it is a legal sidearm in many systems.

Plasma Torches are really an engineering tool. After centuries of starship combat though they have proved a useful assault and boarding weapon. They consist of a backpack mounted power/fuel cell that feeds a 30cm plasma flame out of a handset. This flame will cut through just about anything, bulkheads, armoured vehicles, or power armour, like they were butter. The actinic flare from the torch causes anyone looking in its direction a penalty of –1 on all combat rolls unless they have protective eyewear (Vac suits and Power Armour helmets have protective visors).

Taser weapons resemble a small remote handset. However if brought into contact with an enemy they discharge a large electromagnetic pulse into them. This can be very disabling and makes them popular with Law Enforcement and Security operatives.

Blaster! – The SF Role-playing Game.

Armour

Item	Enc	Cost
Civilian Armour	2	250
Military Armour	3	500
Power Armour	4	10k
EVA Suit	3	300
Hazmat Suit	2	150

Notes on Armour & Personal Protection

Civilian Armour ranges from various forms of flak jackets protecting the torso through to lined coats. This type of armour is considered legal in most systems as it is primarily for self-defence.

Military Armour usually consists of fitted body plates, greaves and vambraces, and a sturdy helmet. Law Enforcement and Security forces commonly wear this. System Defence Forces and Corporations do employ this type of protection in roles with low threat values. It is generally only legal to private citizens in times of emergency or in frontier systems.

Power Armour is a heavy plated suit that integrates the protection of an EVA suit and Military armour. All joints are power assisted or it would be just too heavy to bear. Most Corporations and System Defence Forces provide their front line units with this armour. This type of armour is never legal to private citizens, except where they are working under commission from a Corporation or System State.

The EVA suit is the workhorse of all starship operations. It provides decent protection against the hazards of deep space and a little against weapons. Most Heroes will pick up some skill in its use. It is legal in every system.

Hazmat suits are commonly available on planets where the environment is hostile to human life. It often integrates re-breather apparatus and primary skin protection. It provides no protection against weapons, thought it can be worn over most types of civilian and military armour.

General Equipment

Item	Enc.	Cost	Item	Enc.	Cost
Backpack (cap: 6 enc.)	1	10	Mess tins	¼	5
Belt pouch	¼	5	Night vision Goggles	¼	150
Binoculars	¼	50	Electric Notepad & Stencil	¼	75
Blanket	½	5	Pitons (per 6)	½	6
Power cell, universal	¼	50	Rations (dried - 1 day)	¼	5
Comm Unit, short range*	¼	150	Rations (fresh - 1 day)	½	3
Comm Unit, long range*	½	250	Rope (Hemp - per 10')	½	2
Comm Unit, Satellite*	½	500	Rope (Polymer - per 10')	¼	5
Cord (hemp - per 10')	½	1	Sleeping Bag	½	10
Cord (Polymer - per 10')	¼	3	Spade, entrenching	1	15
Crowbar	1	5	Tent (1 man)	2	30
Distress Beacon*	¼	30	Tent (3 man)	4	70
Fire Lighter*	¼	15	Toolkit, Electronic*	½	200
First Aid Kit	½	50	Toolkit, Mechanical*	1	175
Grapnel	1	10	Water-flask (2 pints)	½	10
Heater*	½	20	Weapon care tools	¼	40
Lantern*	½	10			

*These items require a power cell.

Blaster! – The SF Role-playing Game.

Appendix 1: Starship Construction

Players need to know about the basic rules for starship construction. These will allow them to outfit a ship if they should be lucky enough to get one through the benefits table, or get enough money to have one built. These rules use a simplistic modular system that assumes that all the 'gubbins' that connects the modular components together is included in the mass and price of those modules. For a game such as this more detail is really not needed.

Primary Concepts.

As shown below the mass of a ship directly impacts upon its capability to fold space. Thus few interstellar ships exceed 300 tonnes.

Vessel's Tonnage	Fuel required to fold space	Tonnage for essential systems	Remaining free mass	Base Cost (in credits)	Legal minimum crew
100	10	25	65	250,000	1
200	40	50	110	750,000	3
300	90	75	135	1,500,000	5
400	160	100	140	2,500,000	7
500	250	125	125	n/a	n/a
600	360	150	90	n/a	n/a
700	490	175	35	n/a	n/a
800	640	200	-40	n/a	n/a
900	810	225	-135	n/a	n/a
1000	1000	250	-250	n/a	n/a

After the tonnage for essential systems such as Fusion Engines, LF Drive, Hull, Computational Systems, Radiation Shielding and Communications is taken into account what remains must serve the needs of protection, life support and cargo. Careful packing is essential.

Some modules, such as life support, have standard mass and costs. Others, such as atmospheric streamlining, relate to the overall tonnage of the vessel.

Computers & AI.

One of the issues that arose from the AI War was that starships had become far too computerised. These computers were often AI's and were highly vulnerable to conversion to the rebel AI cause. Many ship's crews died as their AI's depressurised the life support units, or worse.

Since then all AI's and most computers have been taken out of starships. What remains are basic computational and hard-wired automatic systems. This has meant that ships must be adequately crewed by trained men and women. The legal minimum crews set out above cover just the normal ships functions. Manning weapons systems etc., means additional crew.

Starship Economics.

The costs of running a starship can be roughly divided into three categories:

Crew – Not generally a problem for Heroes, as they tend to fulfil all these roles.

Fuel – Hydrogen for the L-F drive is set by interstellar treaty at 100 credits per tonne. Out on the Rim though prices can be a lot more. Fusion drives get by on a teacup of hydrogen per voyage due to the efficiency of their Farsider design.

Maintenance – All starships need constant maintenance to withstand the pressure of interstellar travel. Components, lubricants and consumable supplies all come at a price. For ease of play this is represented as being 10 credits per tonne of ship's mass, each trip. If you fail to pay this things will begin to break down, often at the most dramatically inconvenient moments.

Many crews try to cover their costs by humping a little freight in their spare cargo space. Most starports have a warehouse of occasional freight that needs taking on. Generally the going rate for this is 100 credits per tonne of 'inert' freight. Passengers wishing to travel by cryopod will pay a flat rate fee of 1000 credits, called a Low Passage. High Passage for those passengers wishing to travel conscious varies according to the ships facilities

Blaster! – The SF Role-playing Game.

and level of protection. Generally it is 2000 credits per 100 tonnes of ship's mass, plus 200 credits per operational weapons system or shield generator onboard.

Modules – mass, cost and descriptions.

Module	Cost in credits	Mass in tonnes
Life Support – per person	25,000	4
Cryopods – per person	10,000	1
Shield Generator	75,000	12
Hard point	5,000	4
Laser Battery	100,000	10
Torpedo Tube & 4 Torpedoes	80,000	8
Torpedo	10,000	1
Autodoc	50,000	4
Atmospheric Streamlining	Special	Special
Ramscoops	10,000	10
Shuttle	25,000	20

Module descriptions.

Life Support - This includes the bunk, storage, food, water, heating and air supply needs for one individual. It also contributes to the common space occupied by a crew. Normally this will last one person for two weeks. Additional supplies will be required at a rate of one tonne per additional week. Passengers who wish to travel awake are expected to pay a High Passage for this 'comfort'.

Cryopods – These are life support units for passengers who wish to travel in suspended animation. They are self-supporting in all but power needs and will keep a person 'fresh' for at least three months. They are normally hooked up in a vessel's cargo bays. Passengers travelling this way pay for a Low Passage. Military vessels often carry their Marines this way.

Shield Generator – This module creates an electromagnetic shield that can be interposed, by a skilled operator, between the vessel; and an incoming torpedo or laser attack. Torpedoes are destroyed upon impacting a shield but laser fire may cause the shield to overload and fail.

Hard Point - To support the weight and stress that is placed upon a ship's hull by a Torpedo Tube, a Laser Battery or a Shield Generator considerable extra structural support is required. This is called a hard point.

Laser Battery – The standard protective system for most vessels. Even small civilian craft carry them for they are as good at removing asteroids and space debris as they are enemy torpedoes and vessels. The most common defence battery consists of a six-barrelled, 4cm pulse laser. The multiple barrels allow for radiant cooling between shots, though extended use can still burn them out. The laser barrels are mounted on a gyrostablised gimbal unit, beneath which lies the laser charge capacitors and pulse generator. As with all shipboard weapons they require a human operator.

Torpedo Tube – The torpedo is still the best method of disabling or destroying an enemy vessel. Each one weighs in at about one tonne and is packed with sensors, small fusion engine and about 200kg of high explosives. Being fusion-powered means they have incredible range and longevity. Basically if they can sense a target they can hit it. Large system defence vessels can afford the weight of ECM units, but smaller interstellar ones must rely on shields and laser batteries to defend themselves against this menace. The tube and ancillary systems, including loader, weigh about 4 tonnes. The standard unit for interstellar craft is a loader with 4 torpedoes in. This doesn't stop the crew from dedicating some cargo space to spare torpedoes.

Autodoc – This unit can accommodate one injured crewman. A trained operator can use the Autodoc's extensive array of tools, sensors and drugs to treat most common injuries, toxins and diseases.

Atmospheric Streamlining – Although many interstellar vessels rely on system shuttles for orbit to ground transfer many free traders and scouts prefer to be able to land under their own steam. Atmospheric streamlining takes up about ten percent of the total mass of the vessel. It costs 500 credits per tonne of the vessel.

Ramscoops – Vessels that are designated as adventurers often carry this adaptation. It allows the vessel to scoop up and process hydrogen for fuel from interstellar hydrogen clouds or the atmospheres of gas giants. To do the latter your vessel must first have atmospheric streamlining. It is a risky business as both environments are quite dangerous. However if you wish to venture into uncharted or unpopulated systems it may be vital. The

Blaster! – The SF Role-playing Game.

alternative is to carry extra fuel tanks in your cargo space. Which is only really practical in 100 and 200 tonne vessels.

Shuttle – The alternative to streamlining is to have a shuttle on board. These little fusion-engined craft can carry four passengers or two passengers and two tonnes of cargo from orbit to planet's surface. They have an in-space, life support endurance of about twenty-four hours.

Cargo Space – Although this doesn't take up mass per se it is useful to note that each tonne of allocated cargo mass is equivalent to four cubic metres of open space within the hull.

Example – The Scout Vessel L'Extraordinaire.

This was a benefit vessel to a retiring Corporate Scout called William 'Buster' Crabbe. Crabbe crew ran a small privateering operation out of Raglan Beta IV, until he was reported missing while attempting to hijack the Mail Ship Jonah Maru. The vessel has been through three lease owners since and is now back in refit ready for its fourth crew.

Item	Mass	Costs	Notes
Hull Type - Scout 100	(100)	250,000	Southern cross Body Shell 100sx
Essential Systems	25	0	Hyperdyne Fusion Engine, Southern Cross Yards
Fuel Tanks	10	0	Southern Cross Braced Fluid Cells
Life Support x4	16	100,000	Sirius Life Sciences Manpods
Hard Point x2	8	10,000	Southern Cross Yards
Laser Battery	10	100,000	ARM Industries 4cm Gatling Pulse Laser
Torpedo Tube & 4 Torpedoes	8	80,000	ARM Industries Star-Mantas
Autodoc	4	50,000	Sirius Life Sciences Resuscitator
Shield Generator	12	75,000	Hyperdyne Defender Array 1222B
Cargo Space	7	0	Southern Cross Yards
Totals	100	665,000	

The running costs for one trip would be:

Item		Costs
Fuel	10 tonnes @ 100 credits/tonne =	1,000
Maintenance	100 tones @ 10 credits/tonne =	1,000
Life Support	Replenish modules @ 100 credits/module x 4 modules	400
Docking Costs	Docking charges and System Taxes (approximately)	600
	Totals	3,000

If the crew of the L'Extraordinaire had leased their cargo space they could have made 700 credits towards their costs. Installing just three Cryopods would raise 3,000 credits per trip covering their costs, but there aren't always passengers available. An extra life support unit could be used as a High Passage Berth. This would realise 2,000 credits for it being a 100 tonne vessel plus 600 credits for the three defence systems aboard. Again this depends upon having a paying customer.