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# Core Rules

## Die Roll Conventions

**Check (or Throw):** To determine if a character succeeds or fails at a particular task, the player must make a check. To make a check, the player rolls 2d6 and adds any appropriate Dice Modifiers (such as a skill his character possesses, or a bonus from a piece of equipment). If the total is equal to or greater than the target number for that check, he succeeds. A check will usually have a skill or characteristic associated with it. For example, a check of ‘Dex 8+’ means ‘roll 2d6, add your Dexterity Characteristic Modifier, and you succeed if you have a total result of 8 or more’.

**Target Numbers:** In many checks, the player needs to roll equal to or above a specific number (usually, eight or more). This is denoted by a number followed by a plus, such as 8+ or 10+.

**Dice Modifier (abbreviated to DM):** A number to be applied to a die roll before it is used. Dice Modifiers are preceded by a sign, which indicates if the number is to be added to or subtracted from the roll. For example, a Dice Modifier of -2 indicates that two is to be subtracted from the roll; a Die Modifier of +4 indicates that four is to be added to the roll.

## Technology Levels

Technology Levels measure the scientific capacity of a world and the complexity and effectiveness of a piece of equipment. TL 0: (Primitive) No technology. \* TL 1: (Primitive) Roughly on a par with Bronze or Iron age technology. \* TL 2: (Primitive) Renaissance technology. \* TL 3: (Primitive) The advances of TL 2 are now applied, bringing the germ of industrial revolution and steam power. \* TL 4: (Industrial) The transition to industrial revolution is complete, bringing plastics, radio and other such inventions. \* TL 5: (Industrial) TL 5 brings widespread electrification, tele-communications and internal combustion. \* TL 6: (Industrial) TL 6 brings the development of fission power and more advanced computing. \* TL 7: (Pre-Stellar) A pre-stellar society can reach orbit reliably and has telecommunications satellites. \* TL 8: (Pre-Stellar) At TL 8, it is possible to reach other worlds in the same system, although terraforming or full colonisation are not within the culture’s capacity. \* TL 9: (Pre-Stellar) The defining element of TL 9 is the development of gravity manipulation, which makes space travel vastly safer and faster. \* TL 10: (Early Stellar) With the advent of Jump, nearby systems are opened up. \* TL 11: (Early Stellar) The first true artificial intelligences become possible, as computers are able to model synaptic networks. \* TL 12: (Average Stellar) Weather control revolutionises terraforming and agriculture. \* TL 13: (Average Stellar) The battle dress appears on the battlefield in response to the new weapons. \* TL 14: (Average Stellar) Fusion weapons become man-portable. \* TL 15: (High Stellar) Black globe generators suggest a new direction for defensive technologies, while the development of synthetic anagathics means that the human lifespan is now vastly increased. Higher Technology Levels exist and may appear in other settings or be discovered by pioneering scientists.

## Characteristics

Every person and creature in Traveller has several characteristics that describe their base mental and physical potential. Strength (Str): A character’s physical strength, fitness and forcefulness. Dexterity (Dex): Physical co-ordination and agility, reflexes. Endurance (End): A character’s ability to sustain damage, stamina and determination. Intelligence (Int): A character’s intellect and quickness of mind. Education (Edu): A measure of a character’s learning and experience. Social Standing (Soc): A character’s place in society.

## Skills

If a character has no level in a skill, then he is untrained and will suffer a -3 Dice Modifier when trying to use that skill. If a character has zero level in a skill (Skill 0), then he is competent in using that skill, but has little experience. He does not get any bonus from his skill ranks when using that skill but at least he avoids the penalty for being untrained. If a character has one or more level in a skill (Level 1, Level 2, and so on) then he is trained in that skill. Each rank represents several years of experience using that skill. A character with Level 2-3 in a skill is a skilled professional in that field. Some skills have specialities – specialised forms of that skill. A character picks a speciality when he gains level 1 in a skill with specialities. For example, a character might have Engineer 0, allowing him to make any Engineer skill checks without an unskilled penalty. He might then gain a level in Engineer, giving him Engineer (Jump drives) 1. He would make all Engineer checks involving Jump drives at a +1 DM, but would make all other Engineer checks at a +0 DM. A character can have multiple specialities in a skill – an engineer might have Engineer (Jump drives) 1 and Engineer (power plant) 2. He would make checks related to Jump drives with a +1 DM, checks related to power plants with a +2 DM and all other Engineer checks with a +0 DM.

### Task Checks

The Referee should only call for checks:

* when the characters are in danger.
* when the task is especially difficult or hazardous.
* when the characters are under the pressure of time.
* when success or failure is especially important or interesting.

To make a check, the player rolls 2d6 and any appropriate Dice Modifiers. If the total is 8 or more, the character succeeds. The most common forms of task checks are characteristic checks and skill checks.

**Characteristic Check:** These checks are used when the task is one not covered by an obvious skill, or where the character’s innate abilities are the most important influence on the result. To make a Characteristic check, roll 2d6 and add the appropriate characteristic Dice Modifier.

**Skill Check:** For a skill check, the character adds both his skill level and an appropriate characteristic DM. When making a skill check, if a character does not have any levels in that skill, then he suffers a -3 unskilled Dice Modifier.

### Task Difficulties

* **Simple** tasks have a difficulty DM of +6.
* **Easy** tasks have a DM of +4.
* **Routine** tasks have a difficulty DM of +2.
* **Average** tasks have a difficulty DM of +0.
* **Difficult** tasks have a difficulty DM of -2.
* **Very difficult** tasks have a DM of -4.
* **Formidable** tasks have a difficulty DM of -6

### Situational Modifiers

If a character has help, such as good tools, competent aids or other beneficial circumstances, he receives a +1 DM to his skill check.

### Effect

If the degree of success is important, then subtract 8 from the total of the dice roll plus Dice Modifiers. This margin of success is referred to as the Effect. #### Success

| Effect Total | Success |
| --- | --- |
| 0 | **Marginal Success:** The character barely succeeds at the task, and may have to accept a condition on his success. He fixes the engine but it will overheat. He finds a buyer for the goods but the buyer is a untrustworthy criminal. |
| 1 to 5 | **Average Success:** The character succeeds normally. |
| 6 or more | **Exceptional Success:** The character succeeds in an impressive and elegant fashion. |

#### Failure

| Effect Total | Success |
| --- | --- |
| -6 or less | **Exceptional Failure:** The character failed as completely as it is possibly to fail. Anything that can go wrong goes wrong. If attempting to repair a device, the device is further damaged or even destroyed. In a social situation, the character gets into further trouble. |
| -2 to -5 | **Average Failure:** The character has failed the task. |
| -1 | **Marginal Failure:** The character has almost, almost succeeded, and the Referee may permit him to scrape a success if he takes a significant consequence. A character trying to jump across a chasm hangs onto the far side by his fingernails but can only pull himself up if he drops his backpack. A character trying to land a ship can bring it down safely but the ship may never fly again. A character hacking a computer gets in but the security programs can trace his location. |

### Timing

To determine how long a task takes, roll 1d6 and multiply it by the increment listed for that action.

### Going Faster or Slower

You can choose, before you roll, to move up or down one or two rows on the Time Frames table. Moving up (reducing the time increment) gives you a -1 DM for every row you move; moving down and increasing the time taken gives you a +1 DM for every row you move.

### Multiple Actions

A character can try to do two or more things at once, like firing a spacecraft’s weapons while also flying, or disarming a bomb while hiding from guards. For every extra thing that the character is doing, he suffers a -2 DM to all skill checks.

### Opposed Checks

If two characters are opposing each other directly in a task, then the character who obtains the highest Effect wins. Aiding Another Character The result of one check can give a DM to the next.

#### Task Chain DMs

| Effect Total | Success |
| --- | --- |
| -6 or less | **Exceptional Failure:** The character failed as completely as it is possibly to fail. Anything that can go wrong goes wrong. If attempting to repair a device, the device is further damaged or even destroyed. In a social situation, the character gets into further trouble. |
| -2 to -5 | **Average Failure:** The character has failed the task. |
| -1 | **Marginal Failure:** The character has almost, almost succeeded, and the Referee may permit him to scrape a success if he takes a significant consequence. A character trying to jump across a chasm hangs onto the far side by his fingernails but can only pull himself up if he drops his backpack. A character trying to land a ship can bring it down safely but the ship may never fly again. A character hacking a computer gets in but the security programs can trace his location. |

| Previous Check | New DM | Previous Check | New DM |
| --- | --- | --- | --- |
| Effect -6 or less | -3 | Effect 0 | +0 |
| Effect -2 to -5 | -2 | Effect 1 to 5 | +1 |
| Effect -1 | -1 | Effect 6 or more | +2 |

### Skills

#### Admin

This skill covers bureaucracies and administration of all sorts, including the navigation of bureaucratic obstacles or disasters.

#### Advocate

Advocate gives a knowledge of common legal codes and practises, especially interstellar law.

#### Animals

This skill, rare on industrialised or technologically advanced worlds, is for the care of animals.

##### Animals Specialities

* **Riding:** The character knows how to ride an animal who is trained to bear a rider.
* **Veterinary:** The character is trained in veterinary medicine and animal care.
* **Training:** The character knows how to tame and train animals.
* **Farming:** The character can grow and harvest crops and raise animals.

#### Athletics

The character is a trained athlete and is physically fit.

##### Athletics Specialities

* **Co-ordination:** Climbing, juggling, throwing.
* **Endurance:** Long-distance running, hiking.
* **Strength:** Feats of strength, weight-lifting.
* **Flying:** Species that fly gain this skill for free at level 0.

#### Art

The character is trained in a type of creative art.

##### Art Specialities

* **Acting:** The character is a trained actor, at home on the stage, screen or holo.
* **Dance:** The character is trained dancer and performer.
* **Holography:** Recording and producing aesthetically pleasing and clear holographic images.
* **Instrument:** Playing a particular musical instrument, such a flute, piano or organ.
* **Sculpting:** Making artistic or abstract sculptures in a variety of media.
* **Writing:** Composing inspiring or interesting pieces of text.

#### Astrogation

This skill is for plotting the courses of starships and calculating accurate jumps.

#### Battle Dress

This skill permits the character to operate advanced battle armour.

#### Broker

The Broker skill allows a character to negotiate trades and arrange fair deals.

#### Carouse

Carousing is the art of socialising; of having fun, but also ensuring that other people have fun, of infectious good humour.

#### Comms

The Comms skill covers the use of modern telecommunications – opening communications channels, querying computer networks, jamming signals and so on, as well as the proper protocols for communicating with starports and other spacecraft.

#### Computers

The Computers skill is for using and controlling computer systems.

#### Deception

Deception allows a character to lie fluently, disguise himself, perform sleight of hand and fool onlookers.

#### Diplomat

The Diplomat skill is for negotiating deals, establishing peaceful contact and smoothing over social faux pas.

#### Drive

This skill is for controlling ground vehicles of various types. There are several specialities.

##### Drive Specialities

* **Hovercraft:** This is the skill of operating hovercraft, which behave much differently than conventional vehicles on most surfaces.
* **Mole:** For controlling vehicles that move through solid matter using drills or other earth-moving technologies, like plasma torches or cavitation.
* **Tracked:** For tanks and other vehicles that move on tracks.
* **Walker:** Though usually computer-controlled, walking vehicles require a different set of skills to any other land vehicle. This covers the use of two, four, or even eight-legged walkers.
* **Wheeled:** For automobiles and similar groundcars.

#### Engineer

The Engineer skill is used to operate and maintain spacecraft and advanced vehicles.

##### Engineering Specialities

* **Manoeuvre Drive** (M-Drive): Maintaining and operating a spacecraft’s manoeuvre drive, as well as its artificial gravity.
* **Jump Drive (J-Drive):** Maintaining and operating a spacecraft’s Jump drive.
* **Electronics:** All forms of computing hardware, sensors and other electronics and electrics.
* **Life Support:** Covers oxygen generators, heating and lighting and other necessary life support
* **Power:** Maintaining and operating a spacecraft’s power plant. Explosives

The Explosives skill covers the use of demolition charges and other explosive devices, including assembling or disarming bombs.

#### Flyer

The various specialities of this skill cover different types of flying vehicles.

##### Flyer Specialities

* **Airship:** This is the skill of piloting balloons and airships, of any sort.
* **Grav:** This covers air/rafts and other vehicles that use gravitic technology. Grav vehicles have theoretically perfect manoeuvrability and can hover, but skill checks may be necessary when performing high-speed aerobatics.
* **Rotor:** For helicopters, hovercraft and other similar craft. Rotor craft can hover but may require skill checks to keep steady in the face of adverse environmental conditions.
* **Wing:** For jets and other aeroplanes using a lifting body. Winged aircraft must keep moving forwards or they will stall and fall out of the sky.

#### Gambler

The character is familiar with a wide variety of gambling games, such as poker, roulette, blackjack, horse-racing, sports betting and so on, and has an excellent grasp of statistics and probability.

#### Gunner

The various specialities of this skill deal with the operation of ship-mounted weapons in space combat.

##### Gunner Specialities

* **Turrets:** Operating turret-mounted weapons on board a ship.
* **Ortillery:** An abbreviation of Orbital artillery – using a ship’s weapons for planetary bombardment or attacks on stationary targets.
* **Screens:** Activating and using a ship’s energy screens like Black Globe generators or meson screens.
* **Capital Weapons:** Operating bay or spinal mount weapons on board a ship.

#### Gun Combat

The Gun Combat skill covers a variety of ranged weapons.

#### Gun Combat Specialities

* **Slug Rifle:** Using rifle weapons such as the autorifle or gauss rifle.
* **Slug Pistol:** Using pistols like the body pistol or snub pistol.
* **Shotgun:** Using shotguns.
* **Energy Rifle:** Using advanced energy weapons like laser rifles or plasma rifles.
* **Energy Pistol:** Using advanced pistol-style energy weapons like laser pistols and stunners.

Heavy Weapons

The Heavy Weapons skill covers man-portable and larger weapons that cause extreme property damage, such as rocket launchers, artillery and plasma weapons.

##### Heavy Weapons Specialities

* **Launchers:** Rocket launchers and grenade launchers.
* **Man Portable Artillery:** Man portable fusion and plasma weapons – the FGMP, PGMP and similar.
* **Field Artillery:** Fixed guns, mortars and other indirect-fire weapons.

#### Investigate

The Investigate skill incorporates keen observation, forensics, and detailed analysis.

#### Jack of All Trades

The Jack of All Trades skill works differently to other skills. It reduces the unskilled penalty a character receives for not having the appropriate skill by one for every level of Jack of All Trades.

#### Language

There are numerous different Language specialities, each one covering reading and writing a different language. All characters can speak and read their native language without needing the Language skill, and automated computer translator programs mean that Language skills are not always needed on other worlds. Having Language 0 implies that the character has a smattering of simple phrases in many languages.

#### Language Specialities

* **Anglic:** The common Trade language, derived originally from the English spoken in the Rule of Man.

#### Leadership

The Leadership skill is for directing, inspiring and rallying allies and comrades.

#### Life Sciences

TODO: INSERT Description of Life Sciences

#### Mechanic

The Mechanic skill allows the character to maintain and repair most equipment.

#### Medic

The Medic skill covers emergency first aid and battlefield triage as well as diagnosis, treatment, surgery and long-term care.

#### Melee

The melee skill covers attacking in hand-to-hand combat.

##### Melee Specialities

* **Unarmed Combat:** Whether it is trained martial arts or street fighting learned the hard way, this is the skill for using your body as a weapon.
* **Blade:** Attacking with swords, rapiers, blades and other edged weapons.
* **Bludgeon:** Attacking with maces, clubs, staves and so on.
* **Natural Weapons:** The favoured combat skill of wild animals, this covers fighting with claws, teeth, and other weapons that are a part of you.

#### Navigation

Navigation is the planet-side counterpart of astro-gation, covering plotting courses and finding directions on the ground. Persuade

Persuade is a more casual, informal version of Diplomacy.

#### Pilot

The Pilot skill specialities cover different forms of spacecraft.

##### Pilot Specialities

* **Small Craft:** Shuttles and other craft under 100 tons.
* **Spacecraft:** Trade ships and other vessels between 100 and 5,000 tons.
* **Capital Ships:** Battleships and other ships over 5,000 tons.

#### Recon

A character trained in Recon is able to scout out dangers and spot threats, unusual objects or out of place people.

#### Remote Operations

Remote operations is the skill of using telepresence to remotely control drones, missiles, robots and other devices.

#### Science

There are four separate Science skills – Physical Sciences, Life Sciences, Social Sciences and Space Sciences. Each science skill has a number of specialisations.

##### Science, Physical Specializations

* **Physics:** The study of the fundamental forces.
* **Chemistry:** The study of matter at the atomic, molecular, and macromolecular levels
* **Electronics:** The study of circuits and computers.

##### Science, Life Specializations

* **Biology:** The study of living organisms.
* **Cybernetics:** The study of blending living and synthetic life.
* **Genetics:** The study of genetic codes and engineering.
* **Psionicology:** The study of psionic powers and phenomena.

##### Science, Social Specializations

* **Archeology:** The study of ancient civilisations. It also covers techniques of investigation and excavations.
* **Economics:** The study of trade and markets.
* **History:** The study of the past, as seen through documents and records as opposed to physical artefacts.
* **Linguistics:** The study of languages.
* **Philosophy:** The study of beliefs and religions.
* **Psychology:** The study of thought and society.
* **Sophontology:** The study of intelligent living creatures.

##### Science, Space Specializations

Planetology: The study of planet formation and evolution. Robotics: The study of robot construction and use. Xenology: The study of alien life forms.

#### Seafarer

The Seafarer skill covers all manner of watercraft and ocean travel.

##### Seafarer Specialities

* **Sail:** This skill is for wind-driven watercraft.
* **Submarine:** For vehicles that travel underwater.
* **Ocean Ships:** For large, motorised sea-going vessels.
* **Motorboats:** For motorised small craft.

#### Sensors

The Sensors skill covers the use and interpretation of data from electronic sensor devices, from observation satellites and remote probes to thermal imaging and densitometers.

#### Stealth

A character trained in the Stealth skill is adept at staying unseen and unheard.

#### Steward

The Steward skill allows the character to serve and care for nobles and high-class passengers.

#### Streetwise

A character with the Streetwise skill understands the urban environment and the power structures in society.

#### Survival

The Survival skill is the wilderness counterpart of the urban Streetwise skill – the character is trained to survive in the wild, build shelters, hunt or trap animals, avoid exposure and so forth.

#### Tactics

This skill covers tactical planning and decision making, from board games to squad level combat to fleet engagements.

#### Tactics Specialities

* **Military Tactics:** Coordinating the attacks of foot troops or vehicles on the ground.
* **Naval Tactics:** Coordinating the attacks of a spacecraft or fleet.

#### Trade

A character with a Trade skill is trained in producing some useful goods or services.

#### Trade Specialities

* **Biologicals:** Engineering and managing artificial organisms.
* **Civil Engineering:** Designing structures and buildings.
* **Space Construction:** Building orbital habitats and megastructures.
* **Hydroponics:** Growing crops in hostile environments.
* **Polymers:** Designing and using polymers.

#### Vacc Suit

The Vacc Suit skill allows a character to wear and operate spacesuits and environmental suits. If the character does not have the requisite Vacc Suit skill for the suit he is wearing, he suffers a -2 DM to all skill checks made while wearing a suit for each missing level.

#### Zero-G

Having the Zero-G skill means the character is adept at moving around in micro-gravity environments and freefall. A character without the Zero-G skill suffers a -2 DM to all checks made in free-fall.

### Learning New Skills

A character’s Skill Total is calculated by summing the levels of each skill (level zero skills count as zero). A character with Mechanic 1 and Gun Combat (slug pistols) 2 would have a Skill Total of 3. To increase a skill, a character must train for a number of weeks equal to his current Skill Total plus the desired level of the skill. So, to advance from Pilot 2 to Pilot 3 with a current Skill Total of 3 would take (three, plus three) six weeks. A character may only train one skill in a given week. The Jack of all Trades skill cannot be learned.

### Background Skills

Before embarking on your careers, you get a number of background skills equal to 3 + your Education DM (1 to 5, depending on your Education score).

#### Homeworld Skills

Growing upon your homeworld gave you skills that depend on the planet’snature. You can select any skill that matches your homeworld’s planetary description and trade codes. If you came from a planet already established, then consult those sources for the planet’s description.

* **Agricultural:** Animals 0
* **Asteroid:** Zero-G 0
* **Desert:** Survival 0
* **Fluid Oceans:** Seafarer 0
* **Garden:** Animals 0
* **High Technology:** Computers 0
* **High Population:** Streetwise 0
* **Ice-Capped:** Vacc Suit 0
* **Industrial:** Trade 0
* **Low Technology:** Survival 0
* **Poor:** Animals 0 R
* **Rich:** Carouse 0
* **Water World:** Seafarer 0
* **Vacuum:** Vacc Suit 0

#### Education Skills

A formal education gives you a basic level of competence in various sciences and academic disciplines. Any character may choose from the following list:

* Admin 0
* Advocate 0
* Art 0
* Carouse 0
* Comms 0
* Computer 0
* Drive 0
* Engineer 0
* Language 0
* Medic 0
* Physical Science 0
* Life Science 0
* Social Science 0
* Space Science 0
* Trade 0

### Careers

At many points during a career, a character will have to make a throw of some sort. Most of these throws are characteristic throws – roll 2d6, add the DM from the listed characteristic, and try to get a total higher than the listed value. A throw of Int 8+ means ‘roll 2d6, add your Intelligence DM, and you succeed if you roll an 8 or more’. A few throws are skill checks, where you add any levels in that skill and the DM from an appropriate characteristic. For example, a throw of Gunnery 8+ would mean ‘roll 2d6, add your Gunnery skill and the DM from an appropriate characteristic such as Dexterity, and get over 8’.

#### Career Format

**Qualification**: What you need to roll to enter that career. Military careers use Enlistment as the description for this roll instead of qualification. If you fail this check then you cannot enter your chosen career this term. You must either submit to the Draft or take the Drifter career for this term. You suffer a -1 DM to qualification rolls for each previous career you have entered. Once you leave a career you cannot return to it. The Draft and the Drifter career are exceptions to this rule – you can be Drafted into a career you were previously in but got ejected from and the Drifter career is always open.

**Skills and Training**: Each career has skill tables associated with it – Personal Development, Service Skills, Specialist Skills and Advanced Education. In each term you spend in a career, pick one of these tables and roll 1d6 to see which skill you increase. You may only roll on Advanced Skills if your character has the listed qualification (usually Education 8+ or a certain Rank). You may only roll on the Officer Skills if your career has one and if you have received a commission. Skills can be listed with or without an associated level. If no rank is listed, then you gain that skill at Level 1 if you do not have it already, or increases its level by one if you are already trained in that field. If a rank is listed, then you gain the skill at that level as long as it is better than your current level in that skill.

**Basic Training**: For your first career only, you get all the skills listed in the Service Skills table at Level 0 as your basic training. For any subsequent careers, you may pick any one skill listed in the Service Skills table at Level 0 as your basic training.

**Survival**: Each career has a survival roll. If you fail this roll, roll on the mishap table. This mishap is always enough to force you to leave the service. You lose the benefit roll for the current term only. A natural 2 is always a failure.

**Events**: If you are still in your career after resolving the survival roll, roll on the events table to see what interesting things befall you this term.

**Commission**: This only applies to the military careers of Army, Navy and Marines. A character who succeeds at a commission roll becomes a Rank 1 officer in that career, and uses the officer Rank table from then on. A character may attempt a commission roll once per term, and trying for commission is optional. If you obtain a commission after having already advanced several ranks, you become a Rank 1 officer as normal but you may add your two final ranks together for the purposes of determining benefits and pensions. Some events give a bonus DM to advancement rolls, or give automatic advancement. You can apply these DMs to commission rolls also.

**Advancement**: Each career has an advancement roll. If you make a successful Advancement roll, then you move to the next rank and gain an extra roll on any of the Skills and Training Tables for this career. You also get any benefits listed for your new rank. You may only attempt to advance once per term. If your result is equal to or less than the number of terms you have spent in this career, then you cannot continue in this career after this term. Either your services are no longer required, or events have caused you to leave, or perhaps you are simply bored and want a new challenge. If you roll a natural 12, then you must continue in this career.

**Ranks and Benefits**: You start at Rank 0 in your career. Each time you succeed at an advancement check, you move onto the next Rank. Some ranks have benefits associated with them, such as extra skills or more benefits. You gain these benefits as soon as you attain that rank.

**Mustering-Out Benefits**: When you leave a career for any reason, you gain material benefits from that career. There are two tables – Cash and Benefits. You may only roll on the cash tables a maximum of three times, regardless of how many careers or benefit rolls you have. You get one benefit roll per full term served. Leaving due to a mishap means you lose the benefit roll for that term, but not previous full terms in that career. If you reached rank 1 or 2, you get an extra benefit roll when leaving that service. If you reached rank 3 or 4, you get two extra benefit rolls, and if you reached rank 5 or 6, you get three extra benefit rolls and may apply a +1 to rolls on the Benefits table that you gain from that career.

#### Sample Career: Scout

**Enlistment**: Int 5+ -1 DM for every previous career. **Assignments**: Choose one of the following:

* Courier
* Survey
* Exploration

##### Skills and Training

| Roll | Personal Development | Service Skills | Advanced Education (Minimum Edu 8) |
| --- | --- | --- | --- |
| 1 | +1 Str | Pilot (spacecraft or small craft) | Medic |
| 2 | +1 Dex | Survival | Navigation |
| 3 | +1 End | Mechanic | Engineer (any) |
| 4 | +1 Int | Astrogation | Computer |
| 5 | +1 Edu | Comms | Space Science (any) |
| 6 | Jack of all Trades | Gun Combat (any) | Jack of all Trades |

| Roll | Specialist: Courier | Specialist: Survey | Specialist: Exploration |
| --- | --- | --- | --- |
| 1 | Comms | Sensors | Sensors |
| 2 | Sensors | Persuade | Pilot (spacecraft) |
| 3 | Pilot (spacecraft) | Pilot (small craft) | Pilot (small craft) |
| 4 | Vacc Suit | Navigation | Life Science (any) |
| 5 | Zero-G | Diplomat | Stealth |
| 6 | Astrogation | Streetwise | Recon |

##### Ranks and Skills

| Rank | Title | Skill or Benefit |
| --- | --- | --- |
| 0 |  |  |
| 1 | Scout | Vac Suit 1 |
| 2 |  |  |
| 3 | Senior Scout | Pilot 1 |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |

##### Mishaps

| 1d6 | Mishap |
| --- | --- |
| 1 | Severely injured in action. (This is the same as a result of 2 on the Injury table.) Alternatively, roll twice on the Injury table and take the lower result. |
| 2 | Psychologically damaged by your time in the scouts. Reduce your Intelligence or Social Standing by 1. |
| 3 | Your ship is damaged, and you have to hitch-hike your way back across the stars to the nearest scout base. Gain 1d6 Contacts and 1d3 Enemies. |
| 4 | You inadvertently cause a conflict between the Imperium and a minor world or race. Gain a Rival and Diplomat 1. |
| 5 | You have no idea what happened to you – they found your ship drifting on the fringes of friendly space. |
| 6 | Injured. Roll on the Injury table. |

##### Events

| 2d6 | Events |
| --- | --- |
| 2 | Disaster! Roll on the mishap table, but you are not ejected from this career. |
| 3 | Your ship is ambushed by enemy vessels. Either run, and throw Pilot 8+ to escape, or treat with them and throw Persuade 10+ to bargain with them. If you fail the check, then your ship is destroyed and you may not re-enlist in the Scouts at the end of this term. If you succeed, you survive and gain Sensors 1. Either way, gain an Enemy. |
| 4 | You survey an alien world. Gain one of Animals (riding or training) 1, Survival 1, Recon 1 or Life Science (any) 1 |
| 5 | You perform an exemplary service for the scouts. Gain a +1 DM to any one Benefit roll. |
| 6 | You spend several years jumping from world to world in your scout ship. Gain one of Astrogation 1, Navigation 1, Pilot (small craft) 1 or Mechanic 1. |
| 7 | Life Event. Roll on the Life Events table. |
| 8 | When dealing with an alien race, you have an opportunity to gather extra intelligence about them. Roll either Sensors 8+ or Deception 8+. If you succeed, gain an Ally in the Imperium and a +2 DM to your next Advancement roll. If you fail, roll on the Mishap table, but you are not ejected from this career. |
| 9 | Your scout ship is one of the first on the scene to rescue the survivors of a disaster. Roll either Medic 8+ or Engineer 8+. If you succeed, gain a Contact and a +2 DM to your next Advancement check. If you fail, gain an Enemy. |
| 10 | You spend a great deal of time on the fringes of known space. Roll Survival 8+ or Pilot 8+. If you succeed, gain a Contact in an alien race and one level in any skill of your choice. If you fail, roll on the Mishap table. |
| 11 | You serve as the courier for an important message from the Imperium. Either gain one level of Diplomat, or take a +4 DM to your next Advancement roll. |
| 12 | You discover a world, item or information of worth to the Imperium. You are automatically promoted. |

#### Drifters and The Draft

You may attempt to enlist in one career each term if you are not continuing on in an existing career. If you fail to for a new career, you have two options. You can apply to the Draft and be randomly sent to one of the military services or you may spend that term travelling through known space as a Drifter without a career or purpose. A character may only enter the Draft once.

##### Draft Table

1d6 | Career (specialty) 1 | Navy (any) 2 | Army (any) 3 | Marines (any) 4 | Merchants (merchant marine) 5 | Scouts (any) 6 | Agent (law enforcement)

#### Life Events

If you roll a Life Event on the Events table for your career, roll on the Life Events table.

#### Mustering Out Benefits

Benefits are gained when a character leaves a career for any reason other than failing a survival roll. You may only roll on the Cash table a maximum of three times no matter how many careers you have had.

##### Cash Benefits

A character with the Gambler skill at level 1 or better gets a +1 DM to all rolls on the Cash table. If the character has any money after rolling on the Cash table then he may purchase personal equipment worth up to 2,000 credits immediately.

##### Other Benefits

When you leave a career in good standing with your previous employers, you are permitted to keep various pieces of equipment or even shares of a vessel.

##### Retirement Pay

A character that leaves a service at the end of the 5th or later term of service may receive retirement pay.

| Terms | Pay |
| --- | --- |
| 5 | Cr. 10,000 |
| 6 | Cr. 12,000 |
| 7 | Cr. 14,000 |
| 8 | Cr. 16,000 |
| 9+ | +2,000 per term beyond 8 |

#### Ageing

The effects of ageing begin when a character reaches 34 years of age. At the end of the fourth term, and at the end of every term thereafter, the character must roll 2d6 on the Ageing Table. Apply the character’s total number of terms as a negative Dice Modifier on this table.

Aging Table

| 2d6 | Effects of Aging |
| --- | --- |
| -6 | Reduce three physical characteristics by 2, reduce one mental characteristic by 1 |
| -5 | Reduce three physical characteristics by 2. |
| -4 | Reduce two physical characteristics by 2, reduce one physical characteristic by 1 |
| -3 | Reduce one physical characteristic by 2, reduce two physical characteristic by 1 |
| -2 | Reduce three physical characteristics by 1 |
| -1 | Reduce two physical characteristics by 1 |
| 0 | Reduce one physical characteristic by 1 |
| 1+ | No effect |

**Ageing Crisis**: If any characteristic is reduced to 0 by ageing, then the character suffers an ageing crisis. The character dies unless he can pay 1d6 x 10,000 credits for medical care, which will bring any characteristics back up to 1. The character automatically fails any Qualification checks from now on – he must either continue in the career he is in or become a Drifter if he wishes to take any more terms. **Anagathics**: While using anagathic drugs, the character effectively does not age – add the number of terms since the character started taking anagathics as a positive Dice Modifier to rolls on the ageing table. If a character stops taking anagathics, then he must roll immediately on the ageing table to simulate the shock that comes from his system beginning to age again. The risk of trying to obtain a reliable supply and the disruption to the character’s biochemistry means the character must make a second Survival check if he passes his first Survival check in a term. If either check is failed, the character suffers a mishap and is ejected from the career. The drugs cost 1d6 x 2,500 Credits for each term that the character uses the drugs. These costs are paid out of the character’s eventual mustering-out cash benefits. If the character cannot pay these bills, he goes into debt.

#### Injuries

Characters that are wounded in combat or accidents during character creation must roll on the Injury table.

Injury Table

| 1d6 | Injury |
| --- | --- |
| 1 | Nearly killed. Reduce one physical characteristic by 1d6, reduce both other physical characteristics by 2 (or one of them by 4). |
| 2 | Severely injured. Reduce one physical characteristic by 1d6. |
| 3 | Missing eye or limb. Reduce Strength or Dexterity by 2. |
| 4 | Scarred. You are scarred and injured. Reduce any one physical characteristic by 2. |
| 5 | Injured. Reduce any physical characteristic by 1. |
| 6 | Lightly injured. No permanent effect. |

**Injury Crisis**: If any characteristic is reduced to 0, then the character suffers an injury crisis. The character dies unless he can pay 1d6 x 10,000 credits for medical care, which will bring any characteristics back up to 1. The character automatically fails any Qualification checks from now on – he must either continue in the career he is in or become a Drifter if he wishes to take any more terms. **Medical Care**: If your character has been injured, then medical care may be able to undo the effects of damage. The restoration of a lost characteristic costs 5,000 Credits per point. If your character was injured in the service of a patron or organisation, then a portion of his medical care may be paid for by that patron. Roll 2d6 on the table below, adding your Rank as a DM. The result is how much of his medical care is paid for by his employer.

Medical Bills

| Career | Roll of 4+ | Roll of 8+ | Roll of 12+ |
| --- | --- | --- | --- |
| Army/Navy/Marines | 75% | 100% | 100% |
| Agent/Nobility/Scholar/Entertainer/Merchant/Citizen | 50% | 75% | 100% |
| Scout/Rogue/Drifter | 0% | 50% | 75% |

**Medical Debt**: During finishing touches, you must pay any outstanding costs from medical care or anagathic drugs out of your Benefits before anything else.

#### Finalise Connections

The connections between characters rule can give you bonus skills. At this stage, you may make (or finalise) a connection between your character and up to two other player characters. For each connection you make, you may gain one level in any skill, but you cannot bring a skill above level 3 using this rule nor may you take the Jack of all Trades skill.

#### Skill Packages

As a group, select one of the following skill packages.

**Traveller Skill Package**: \* Pilot (any) 1 \* Sensors 1 \* Comms 1 \* Gunner (any) 1 \* Gun Combat (any) 1 \* Persuade 1 \* Stealth 1 \* Medic 1

**Mercenary Skill Package**: \* Sensors 1 \* Comms 1 \* Medic 1 \* Leadership 1 \* Heavy Weapons (any) 1 \* Gun Combat (any) 1 \* Gun Combat (any) 1 \* Stealth 1

**Trader Skill Package**: \* Pilot (any) 1 \* Sensors 1 \* Medic 1 \* Streetwise 1 \* Broker 1 \* Advocate 1 \* Diplomat 1 \* Astrogation 1

**Starship Skills Package**: \* Pilot (any) 1 \* Gunner (any) 1 \* Engineer (any) 1 \* Mechanic 1 \* Sensors 1 \* Medic 1 \* Comms 1 \* Astrogation 1

**Explorer Skills Package**: \* Pilot (any) 1 \* Astrogation 1 \* Sensors 1 \* Survival 1 \* Recon 1 \* Gun Combat (any) 1 \* Stealth 1 \* Medic 1

**Diplomat Skill Package**: \* Advocate 1 \* Diplomat 1 \* Persuade 1 \* Stealth 1 \* Streetwise 1 \* Deception 1 \* Computers 1 \* Comms 1

**Investigator Skill Package**: \* Advocate 1 \* Admin 1 \* Investigate 1 \* Persuade 1 \* Stealth 1 \* Streetwise 1 \* Computers 1 \* Sensors 1 \* Gun Combat (any) 1

**Criminal Skill Package**: \* Pilot (any) 1 \* Sensors 1 \* Stealth 1 \* Deception 1 \* Persuade 1 \* Streetwise 1 \* Broker 1 \* Medic 1

### Aliens

TODO: Change to Mutations or something along those lines. Not Aliens

Alien species may have different criteria for Social Standing: Caste or Charisma. When dealing with a race that has a different concept of Social Standing, all DMs from Social Standing or its alien equivalent – whether positive or negative – are halved. In addition to their characteristics, aliens may have one or more alien traits.

**Armored**: The alien possess thick fur, scales, a bony exoskeleton or other natural protection that gives it one point of natural armor.

**Aquatic**: The alien is adapted to life underwater. It can breathe underwater, or hold its breath for a long period (Endurance x 10 minutes on average). If amphibious, its Dexterity is halved on land. If the species is not amphibious, then it cannot operate out of water without mechanical aid or telepresence.

**Atmospheric Requirements**: The species requires an unusual combination of gasses to breathe, and cannot survive in most atmospheres without artificial aid.

**Engineered**: The species has been altered by some external factor to adapt to changed circumstances or a different environment. Medical treatment of Engineered species by a facility of a lower Technology Level than that at which the species was created receives a negative DM equal to the difference.

**Fast Metabolism**: Creatures with a fast metabolism require more food than most species, and their life support costs are doubled. In combat, fast-metabolism creatures gain a +2 initiative bonus. Fast-metabolism creatures halve their Endurance for the purposes of determining fatigue.

**Feral**: Feral species are uncivilised, regardless of their technological knowledge. Feral species roll Education on 1d6 only.

**Flyer**: The species can fly using wings, glider membranes, gasbags or other means. Characters of this species gain the Athletics (flying) skill at Level 0 and can travel at a speed noted in their description. Flying creatures who are aloft must spend one minor action every round on movement or stall and fall out of the air.

* Winged flight is tiring and can only be sustained for a number of rounds equal to the creature’s Endurance before requiring a like amount of rest. Some specialised avians can increase this to minutes or even hours equal to Endurance.
* Species with glider membranes cannot gain altitude while flying. They descend one metre every time they move forwards and cannot use more than one minor action for flying movement in a round.
* Species that float using gasbags or some other method do not need to move to remain aloft.

**Large**: The species is considerably larger than the average for sophonts. Large creatures generally have a Strength and Endurance of 3d6 or even 4d6, and a Dexterity of 1d6. Life support requirements for Large creatures are doubled.

* Some Large creatures are described as Huge. Attacks against Huge creatures receive a +1 DM to hit.

**Natural Weapon**: The species has a natural weapon, such as claws, a strong bite or a poisonous stinger. Such weapons are usable at Personal range and deal +1 damage. The creature gains Melee (natural weapons) at level 0.

**No Fine Manipulators**: The species has no fingers or other prehensile appendages, preventing them from easily picking things up, pushing small buttons, reaching into tight spaces, and so on.

**Notable (Characteristic)**: Some species are notably dextrous, intelligent, tough or strong. Characters from such races have a positive Dice Modifier when rolling for that characteristic (+2 unless otherwise specified), and their racial maximum for that characteristic is increased by the same amount.

**Psionic**: All members of the species are Psionic, and may determine their Psionic Strength and talents at the start of character generation.

**Small**: Small species generally have a Strength and Endurance of only 1d6, and a Dexterity of 3d6. The minimum size for a sophont is about half that of a human, Some Small creatures are described as Tiny. Attacks against Tiny creatures receive a -1 DM to hit.

**Slow Metabolism**: Creatures with a slow metabolism require less food than most species, and their life support costs are halved. In combat, slow-metabolism creatures suffer a -2 initiative penalty.

**Uplifted**: This species was originally non-sentient, but has been raised to a higher intelligence by another species. Uplifted races generally become client species of their patron. Two common uplifted animals are apes and dolphins:

* Uplifted apes have Notable Strength and Endurance (+2) but all other characteristics are Weak (-2). They have the Uplifted trait.
* Uplifted dolphins have Notable Strength (+4) and Notable Endurance (+2) but Weak Intelligence, Education and Social Standing (-2). They have the Uplifted, Aquatic (fully aquatic, air-breathers) and No Fine Manipulators traits.

**Weak (Characteristic)**: The opposite of Notable (Characteristic), some species are weaker, less resilient or less well educated than others. Characters from such races have a negative Dice Modifier when rolling for that characteristic (-2 unless otherwise specified), and their racial maximum for that characteristic is decreased by the same amount.

### Combat

If the combatants are all unprepared for combat, then each rolls 2d6 and adds their Dexterity DM to determine starting Initiative. Initiative determines the order that characters act in, but it can also be spent to react to events. If some of the combatants are ready for combat and some are not, such as in an ambush, the prepared characters are considered to get an automatic 12 on their roll, giving them an Initiative of 12 + Dexterity DM. Characters who have the Tactics skill may make a Tactics check and add the Effect of this check to the Initiative of everyone in their unit.

##### The Combat Round

Each combat round lasts around six seconds of game time. In a combat round each character gets a minor action and a significant action. Actions are taken in descending order of Initiative. If two characters have the same Initiative, the character with the highest Dexterity goes first. If they are still tied, then characters act simultaneously. When a character acts, he takes all his actions at once. Once everyone has acted a combat round is over and a new round begins. Initiative is not re-rolled but is dynamic, and may be adjusted up and down by actions taken during a round.

##### Dynamic Initiative

During the course of a round a character’s Initiative score may be changed by reactions, recoil and hastening. Any changes affect your Initiative for one round only – either the current round if you have yet to act or the following round if you have acted already. Reactions reduce your Initiative in order to allow you to defend yourself from attacks. Recoil slows you down if you are using a weapon heavier than you can handle. Hastening your action lets you act sooner but at a penalty to your roll. At the start of each combat round a character may declare that he is acting hastily. This gives him a +2 bonus to his Initiative for that round only but all his actions receive a -1 DM. A character can only hasten once.

#### Minor Actions

##### Movement

The character moves up to six metres. Difficult terrain, such as rubble, mud or thick underbrush can halve a character’s movement, allowing him to move only three metres per movement action. Crouching also halves movement.

##### Changing Stance

A character can change to any one of the three stances – prone, crouched or standing – as a minor action.

##### Drawing and Reloading

The time taken to draw a weapon depends on its size and ease of use. The number of minor actions to ready or reload a weapon is listed in the description of each weapon. Most weapons take one minor action to draw and another minor action to reload, but some weapons are especially fast or slow.

##### Aiming

A character who spends a minor action aiming at a target gets a +1 DM to his next attack on the target, as long as the character does nothing except aim until he makes his attack. A character may spend multiple actions on aiming, gaining a maximum aiming DM of +6 if he spends six minor actions on aiming.

##### Miscellaneous

The Referee may permit a character to perform a skill check or other action as a minor action if the use of the skill does not require the character’s full attention or complex physical actions.

#### Significant Actions

##### Minor Actions

A character can take two minor actions instead of a significant action.

##### Miscellaneous

A character may make a skill check or do something else as a significant action when such an action requires the character’s full attention, concentration, complicated physical actions or some combination thereof.

##### Attack

The most common significant action is an attack. The basic attack action is trying to injure a foe with a melee attack or a ranged weapon. The attacker declares his target, and the foe may choose to react. The attacker then makes a skill check, and if successful, deals damage to his target. As with any other skill check, the standard roll for success is 8+. The standard skill checks used in making an attack are: **Melee Attack = 2d6 + Melee (appropriate specialty) + Strength or Dexterity DM (attacker’s choice)** **Shooting Attack = 2d6 + Gun Combat (appropriate specialty) or Heavy Weapons (appropriate specialty) + Dexterity DM** **Thrown Attack = 2d6 + Athletics (co-ordination) + Dexterity DM**

    | | | |  
— | — | — | — |Common Modifiers to Attacks  
Action/Item | Bonuses | Effect | Penalties |  
— | — | — | — |  
Aiming | +1 per Aim action | Cover | -0 to -6 |  
Laser Sight | +1 if aiming | Movement | -1 for every 10 full metres of target movement |  
Intelligent Weapon | +1 if total DM is within the program’s tolerance | Target Dodges (Reaction) | -1 |  
    | | Environmental Effects | -1 to -2 |  
    | | Range | -0 to -6 |  
    | | Target Stance | -2 if attacking a prone target at Medium or greater range if attacking a prone target at Personal range |  
    | | Target Parries (Reaction) | -Defender’s Melee skill |

##### Recoil and Heft

When you make an attack, compare your Strength DM to the Recoil rating of the weapon you are using. If your Strength DM is lower then the difference is applied to your initiative next round. Melee weapons have a rating called Heft which works in exactly the same way. When firing automatic weapons in burst mode, increase Recoil by 1. When firing them on full auto increase Recoil by half the Auto score.

#### Reactions

The more time a character spends reacting, the longer it will be until he acts himself. Each reaction lowers Initiative by 2 and applies a -1 DM to all skill checks until the following round. There is no limit to how many times a character can react in a round but a character can only react once to each attack and the penalties from reacting are cumulative. A character can only react to attacks that he is aware of.

##### Dodging

A character who is being attacked may dodge, giving his attacker a -1 DM and giving himself a -1 DM on all skill checks until the next round. If the character is in cover or has an obstruction to duck or dodge behind, the DM to hit him is increased to -2.

##### Parrying

A character who is being attacked in melee can parry, applying his Melee skill as a negative DM equal to the attack roll. A parrying character also has a -1 DM on all skill checks until the next round.

#### Other Actions

##### Free Actions

Some actions are so fast they do not even qualify as a minor action – shouting a warning, pushing a button, checking your watch, and so on. A character can perform as many of these free actions as he likes in a turn, although if he performs several the Referee may require him to spend a minor or even a significant action on his various tasks.

##### Extended Actions

Some skill checks will take longer than a single combat round to complete. Make a Timing roll for the task and then work out how many six second combat rounds it will take to complete. A character engaging in an extended action cannot do anything else but can abandon their action at any time and return to the normal Initiative order. A character who is hit by an attack while undertaking an extended action must make an 8+ roll using the skill in question with a negative DM equal to the amount of damage the attack causes (after armour). Failure indicates that this round’s work does not count towards the completion of the task. Failure by six or more (an Exceptional Failure) ruins the task and the character must start again.

##### Delay

A character does not have to act when his turn comes up in the Initiative order. He may act at any later point during the round, even interrupting another’s actions to do so. When he acts, his Initiative is set to the count on which he acted. If the character has not acted by the end of the round he may choose to act first in the next round, effectively giving up his actions in the previous round in exchange for an Initiative advantage. His new Initiative is set to one higher than that of the current first person in the order. When multiple characters are delaying and all wish to act first in the following round, their Initiatives are all set to the same score and they act in Dexterity order as normal.

#### Special Considerations

##### Automatic Weapons

Automatic weapons – any with a number listed in the Auto column are capable of three fire modes: single-shot, burst, and auto-fire.

* When using single shots, make attacks as normal.
* When using burst fire, add the Auto value to the damage. Burst fire uses a number of rounds equal to the Auto rating.
* When using auto-fire, roll a number of dice equal to the Auto rating of the weapon and sort them into pairs as you wish. Each pair is an attack. Auto-fire attacks can be allocated to as many different targets as you have attacks provided all the targets are within six metres of each other. Auto-fire attacks cannot benefit from a skill any higher than level 1. Weapon skills of 2 or higher only count as 1 when making auto-fire attacks. Auto-fire uses a number of rounds equal to 3 x the Auto rating.

##### Battlefield Comms

Communications technology is a vital part of the battlefield. If a character is not in communication with the rest of his unit and his commander, then he cannot benefit from Tactics or Leadership. Characters who benefitted from Tactics at the start of combat and are later cut off from their commander have their Initiative lowered by the same amount it was boosted at the start of combat. Unlike other Initiative modifications, this lasts until combat ends or communication is re-established. There are several methods of communication:

* **Direct**: This covers hand signals and verbal communications.
* **Hardlinks**: Hardlinks are wires or other physical connections, and cannot be jammed.
* **Radio**: Radio communications allow communications as long as the radio signal can get through – they can be jammed or blocked by local conditions.
* **Laser**: Two characters with tight beam lasers are in communication as long as line of sight exists between a character and another friendly laser-comm equipped character.
* **Masers**: These work just like lasers, but can cut through smoke and aerosols.
* **Meson**: Meson communicators cannot be jammed or blocked, but cannot be used while a character is moving.

##### Battlefield Sensors

There are several types of sensors.

* **Bioscanner**: Bioscanner ‘sniffers’ detect airborne pathogens and hazardous chemicals.
* **Infra-Red (Heat)**:Infra-red sensors detect warm bodies, and negate concealment from smoke and soft cover, but can be jammed by strong heat sources.
* **Densitometer**: An outgrowth of gravitic technology, a densitometer can scan an area and plot variable densities, effectively creating a three-dimensional map of all objects.
* **Electromagnetic Detectors**: These sensors can detect unshielded high-power electrical devices, such as gauss weapons or transmitters.
* **Laser-Assisted Targeting**: A low-powered laser is reflected off the target, giving targeting data to the firer.
* **Light Intensification**: Light intensification technology magnifies visible light, negating the penalties for darkness or low light.
* **Motion Sensors**: Can detect motion within range.
* **Neural Activity Sensor**: A combination of highly sensitive EM-detectors and psionic theory, NAS detectors pick up on the brain activity of living beings and classifies them according to amount and complexity, giving a rough idea of the intelligence of subjects.

##### Certain battlefield conditions affect ranged attacks:

* **Darkness**: Low light gives a -1 DM to ranged attacks. Complete darkness gives a -4 DM. Light penalties can be avoided by using sensors to target instead of the naked eye.
* **Smoke or Fog**: Smoke gives a -1 DM to ranged attacks by obscuring the target; especially thick and impenetrable smoke gives a -2 DM. These penalties are doubled for laser weapons.
* **Extreme Weather**: Driving wind, rain, snowstorms and so forth give a -1 DM to ranged attacks from poor visibility and a -1 DM to ranged attacks from environmental interference. Sensors can be used to avoid the visibility penalty.

##### Cover

Any sort of low wall, undergrowth, convenient rocks or other objects can serve as cover. Attacks made on characters who are behind cover suffer the negative cover DM on the table below. Crouching or prone targets (see overleaf) can claim cover one step higher on the table. If a character in full cover is crouching or prone they are impossible to hit but cannot return fire.

| Cover | Cover DM |
| --- | --- |
| 1/4 (undergrowth, small rock, corner of a building) | -0 |
| 1/2 (thick forest, low wall, crate) | -1 |
| 3/4 (jungle, trench, reinforced position) | -2 |
| Full (pillbox) | -4 |

##### Explosions

Grenades, rockets and other explosives affect an area. A character caught in an explosion may dodge at the usual Initiative cost. A character who dodges an explosion may reduce the damage by 1d6 if he just dodges or by half if he dives for cover. A character who dives for cover ends up prone and loses his next significant action.

##### Firing into Combat

If a character is firing a weapon at a target who is at Personal range to another combatant, then the attack suffers a -2 DM. If the attack misses, roll 1d6. On a 4+, the attack hits the nearest other combatant to the original target.

##### Grappling

A character can attempt to wrestle or grab another person instead of hitting him. The attacker must move to Personal range and beat his target in an opposed Melee (unarmed) check. If he wins, he may do any one of the following:

* Knock his opponent prone.
* Disarm his opponent. If he succeeds by 6+ he can take the weapon away; otherwise it ends up on the floor.
* Throw his opponent up to three metres for 1d6 damage.
* Inflict damage equal to 2 + the Effect.
* Escape the grapple and move away (as if with a normal movement action).
* Continue the grapple with no other effects.
* Drag his opponent up to three metres.

Throwing an opponent always ends the grapple. With any other option the winner can choose to end or continue the grapple as he sees fit. A character in a grapple cannot move or do anything other than make opposed Melee checks. Each time an opposed check is made the winner can choose an option from the above list.

##### Range

Personal combat is divided into a series of range bands:

| Range | Distance to Target | Squares to Target |
| --- | --- | --- |
| Personal | Less than 1.5 metres | 0 (combatants are in the same square) |
| Close | 1.5 to 3 metres | 1 to 2 squares |
| Short | 3 to 12 metres | 3 to 8 squares |
| Medium | 12 to 50 metres | 9 to 34 squares |
| Long | 51 metres to 250 metres | 35 to 166 squares |
| Very Long | 251 metres to 500 metres | 167 to 334 squares |
| Distant | 501 metres+ | 334 squares+ |

##### Stance

A character can be standing, crouched or prone. A standing character uses the normal rules. A crouching character moves at half speed but can make better use of cover. If a crouching character is in cover, consider it one row lower on the Cover. A prone character cannot make melee attacks or dodge. He may make improved use of cover like a crouching character and he may still parry melee attacks. All ranged attacks targeting him suffer a -2 DM penalty. At Close range, the penalty is reduced to +0; a prone character being attacked at Personal range grants a +2 DM to attacks against him.

##### Tactics and Leadership

The Tactics skill can be used to give an Initiative bonus to a whole unit at the start of combat. The unit commander may make a Tactics check, and everyone in the unit may increase their Initiative by the Effect of the check. The Leadership skill can be used to increase another character’s Initiative. The character with Leadership makes a Leadership check, and the target character’s Initiative is increased by the Effect of the check. Making a Leadership skill check is a significant action.

##### Thrown Weapons

There are two kinds of thrown weapons: the first kind strike a single target and do damage from the force of their impact, such as throwing knives or a thrown rock. These use the normal rules for ranged combat. The other kind of thrown weapon is a grenade or other explosive projectile that inflicts no damage from impact but typically delivers a harmful payload. The first kind of thrown weapon adds the Effect of the Athletics (co-ordination) check to its damage. The second does not. If the attack fails the projectile scatters in a random direction for (6 + Effect) metres. This is usually only important if the projectile explodes on or after impact.

##### Damage

Each weapon lists the damage it inflicts as a number of d6. Add the Effect of the attack roll to this damage. Damage is applied initially to the target’s Endurance. If a target is reduced to Endurance 0, then further damage is subtracted from the target’s Strength or Dexterity. If either Strength or Dexterity is reduced to 0, the character is unconscious and any further damage is subtracted from the remaining physical characteristic. If all three physical characteristics are reduced to 0, the character is killed.

##### Armour

Armour reduces damage by the value of the armour. A hit with Effect 6+ always inflicts at least one point of damage, regardless of the target’s armour.

#### Vehicles

Combat in and on vehicles is much the same as ordinary combat. The differences are as follows:

* Unlike people, who are mobile and manoeuvrable, careful track must be kept of which way a vehicle is facing. Vehicle-mounted weapons – and armed passengers, to a lesser extent – are restricted to certain fire arcs.
* Vehicles are considered to move on the driver’s Initiative. The driver must spend a minor action every round to keep control of the vehicle under normal circumstances – a straight road or simple manoeuvres – or a significant action to navigate obstacles, conduct evasion or pursuit, or dodge incoming fire.
* Attackers gain a +1 DM to hit most vehicles because of their size.

##### Types of Vehicles

There are two main types of vehicles: open and closed. Closed Vehicles

* Closed vehicles grant cover to the occupants – unless the description mentions otherwise civilian vehicles grant  ½ soft cover and military vehicles full hard cover.
* Only a few people in a closed vehicle can shoot out, depending on the number of windows or other firing ports and the internal space available. Unless the description mentions otherwise up to two people can fire into each arc from a civilian vehicle and one person in each arc in a military one.

Open Vehicles

* Open vehicles grant no cover to the passengers.
* Any passenger in an open vehicle can shoot (or otherwise attack) in any direction.

##### Vehicle-Mounted Weapons

Weapons mounted on vehicles are limited in what directions they can fire. A weapon mounted in the front arc, for example, can only fire into a 90? area in front of the vehicle. Weapons in turrets can fire in any direction.

##### Collisions

When a vehicle collides with something else everything takes damage. Roll 1d6 for every 10 km/h of the vehicle’s speed (round up). This is applied as damage directly to anything hit and, if the thing struck is solid enough, also to the ramming vehicle. Any unsecured passengers in a vehicle damaged in a collision take the same damage and, if possible, are thrown three metres for every 10 km/h of speed. Secured passengers (those wearing seatbelts or something similar) are not thrown anywhere and take one quarter damage.

##### Vehicular Actions

These are all significant actions that the driver of a vehicle can take when his turn in the initiative order arrives.

##### Evasive Action

Vehicles are not typically manoeuvrable enough to dodge as a reaction. Instead, the driver may declare that he is taking evasive action when his turn arrives. He makes a skill check (skill determined by vehicle) and the Effect acts as a -DM to all attacks against the vehicle or its passengers. The Effect also acts as a -DM to any attacks made from the vehicle as well. This lasts until the driver’s next action.

##### Manoeuvring

A driver or pilot can manoeuvre his vehicle without making a skill check. This allows the vehicle to avoid large or obvious obstacles, to get where it is going, to move out of one fire arc of an enemy vehicle and into a different one, or to change the fire arc that a single target is in.

##### Ram

Deliberately driving a vehicle into someone or something requires a significant action and a successful skill check (skill determined by vehicle). Rams are affected by dodging and evasive action as normal. The Referee may grant bonuses to a ram attempt or declare it automatically successful if the target is particularly large.

##### Stunt

With a significant action and a successful vehicle control check the driver or pilot of a vehicle can do pretty much anything it is possible to do in his vehicle – stand a car up on two wheels, perform stunning aerobatics in a jet plane, or skim a speedboat over a low sandbar. A stunt can be used to put a single target into one additional fire arc for one round, to set up some other skill check using the rules for task chains, to achieve something that would normally be difficult or impossible in your vehicle, to achieve up to three manoeuvre actions in one go, just to show off, or anything else you can imagine.

##### Weave

In an environment with many obstacles, such as an inner city or tight underground caverns, a driver or pilot may choose to weave his vehicle in and around the obstacles at high speed in order to evade pursuit. The driver chooses a weaving number, as low as one or as high as one per 20 km/h of speed (round up), and must then make a skill check (skill determined by vehicle) with the weaving number as a penalty on his roll. If he fails, he has woven into an obstacle and crashed. If he succeeds, any pursuers must choose a weave action when their initiative count comes up and make their skill test at the same penalty with the same consequence for failure. Alternatively, they can choose to break off pursuit and either give up or try to reacquire the target later.

##### Vehicle Damage

Vehicles have a Hull value and a Structure value, which measure the vehicle’s structural integrity. When Hull is reduced to 0, the vehicle starts taking damage to its internal systems. When Structure is reduced to 0, the vehicle is reduced to scrap. Vehicles also suffer damage to onboard systems as they take damage. To determine the effects of an attack on a vehicle, first determine how much damage the vehicle suffers as normal. Many vehicles will have one or more points of armour that reduces the damage. Consult the Vehicle Damage table to determine how many ‘hits’ the vehicle suffers.

    | |  
— | — |Vehicle Damage Table  
Damage | Effect |  
— | — |  
0 or less | No damage |  
1-3 | Single Hit |  
4-6 | Two Single Hits |  
7-9 | Double Hit |  
10-12 | Three Single Hits |  
13-15 | Two Single Hits, Double Hit |  
16-18 | Two Double Hits |  
19-21 | Triple Hit |  
22-24 | Triple Hit, Single Hit |  
25-27 | Triple Hit, Double Hit |  
28-30 | Triple Hit, Double Hit, Single Hit |  
31-33 | Two Triple Hits |  
For every extra three points | +1 Single Hit |  
For every extra six points | +1 Double Hit |

Each hit is then applied to a particular location on the vehicle. Double or Triple hits count as two or three hits on the same location.

    | | | |  
— | — | — | — |Location Table  
2d6 | External Hit (vehicle) | Internal Hit (Vehicle) | Robot or Drone |  
— | — | — | — |  
2 | Hull | Structure | Hull |  
3 | Sensors | Power Plant | Power Plant |  
4 | Drive | Power Plant | Sensors |  
5 | Weapon | Cargo | Weapon or Limb |  
6 | Hull | Structure | Hull |  
7 | Armour | Passengers | Armour |  
8 | Hull | Structure | Hull |  
9 | Weapon | Cargo | Weapon or Limb |  
10 | Drive | Computers | Drive |  
11 | Sensors | Cockpit | Sensors |  
12 | Hull | Cockpit | Computer |

##### Hull

Reduce the vehicle or drone’s Hull by one. If a vehicle runs out of Hull, further Hull hits become hits on the same row of the Internal Damage table (if a vehicle) or Structure hits (if a robot or drone).

##### Structure

Reduce the vehicle or drone’s Structure by one. If a vehicle runs out of Structure, it is destroyed. If the vehicle is destroyed by an attack that reduces it to a negative Structure score it explodes, doing 4d6 damage to everyone within six metres (including the occupants) and 2d6 damage to everyone within twelve metres. The occupants of a closed vehicle cannot dodge or dive for cover from this explosion but the occupants of an open vehicle can.

##### Armour

Reduce the vehicle’s armour by one.

##### Drive

* *First Hit:* Reduce movement by 10% and apply a -1 DM to all vehicle control skill checks.
* *Second Hit:* Reduce movement by 25% and apply a -2 DM to all vehicle control skill checks.
* *Third Hit:* Drive disabled.
* Further drive hits count as Hull hits.

##### Weapon

Choose a weapon or device randomly for each hit.

* *First Hit:* The weapon or device suffers a -2 DM to all checks related to its operation.
* *Second Hit:* The weapon or device is destroyed.
* If no weapons remain to be destroyed, further hits on this location become Hull hits.

##### Sensors

* *First Hit:* The vehicle or drone suffers a -2 DM to all Sensors checks. For drones and robots, this also applies to Recon checks.
* *Second Hit:* The sensors are destroyed, blinding the vehicle or drone.
* Further Sensor hits count as Hull hits.

##### Power Plant

* *First Hit*: The vehicle or drone loses one round’s worth of actions.
* *Second Hit:* The vehicle or drone’s movement is reduced by 50%.
* *Third Hit:* The power plant is destroyed, disabling the vehicle and inflicting 1d6 Hull hits on it.

##### Limb

Choose a limb randomly for each limb hit.

* *First Hit:* The limb suffers a -2 DM to all checks related to its operation.
* *Second Hit:* The limb is destroyed.
* Further Limb hits count as Hull hits.

##### Passengers

Choose a passenger randomly for any passenger hit. The passenger takes damage equal to the damage inflicted on the vehicle. If all the passengers are dead, further passenger hits become Structure hits.

##### Cargo

Any cargo present is hit and may be destroyed. If no cargo remains, further cargo hits become Structure hits.

##### Cockpit

The pilot of the vehicle is hit, and takes damage equal to the damage inflicted on the vehicle. If the pilot is dead, further pilot hits become Structure hits.

##### Computer

* *First Hit:* The vehicle’s computer system is disabled. A drone or robot with a disabled computer system shuts down for 1d6 rounds.
* *Second Hit:* The vehicle’s computer system is destroyed. A drone or robot with no computer system is completely disabled.
* Further Computer hits count as Structure hits.

#### Repairs

Damage to a vehicle or drone falls into three categories – System Damage, Hull Damage, and Structure Damage.

**System Damage**: A damaged system can be jury-rigged back to functioning, but it will stop functioning again after 1d6 hours. Repairing a damaged system requires not only an Average skill check (Mechanic, Engineer (appropriate speciality) or Science (appropriate speciality)) taking 1-6 hours but also a source of spare parts. The spare parts can come from a scrap yard, a workshop, systems on another vehicle, or can be taken from other systems on the same vehicle. When taking spare parts from other vehicle systems, each ‘hit’ of damage provides enough spare parts to make a single repair check. The Passengers and Cockpit systems cannot take hits to provide spare parts, although cybernetic parts might be able to provide enough spare material to repair minor damage. A destroyed system costs 2d6 x 10% of its original cost to repair, and cannot be repaired using spare parts. It requires a full workshop and specialist materials.

**Hull Damage**: Hull damage can be repaired with a Mechanic check taking 1-6 hours and consumes one ‘hit’ of spare parts.

**Structure Damage**: Structure damage can only be repaired in a workshop and requires 10-60 hours per point of damage. It costs 20% of the base cost of the vehicle per point repaired. No skill check is required.

### Aiming for the Kill

Specifically aiming for a kill works exactly like regular Aiming, but does not add to the character’s DM to hit the target. Instead, the character gains a bonus of +2 to his damage equal to the number of minor actions he spends Aiming for the Kill. He cannot dodge, duck, or move while aiming. He also loses his Aim bonus if hit or distracted. The maximum bonus obtainable from Aiming for the Kill is +6.

### Extreme Range Firing

Any weapon that has the ability to fire into the Distant range band can potentially strike targets even beyond, so long as the firer can see the target. Weapons fired at this extreme range do so using the modifiers for Distant range with an additional DM of -2. Only characters with at least three levels of skill in the weapon may fire at extreme range. To fire at extreme range, characters must be stationary and prepared to fire from some kind of rest (tripod, tree limb, bunker embrasure and so on). Vehicles must be stationary for weapons to be fired at extreme range from it. Energy-based weapons (lasers, PGMPs, and so on) inflict half damage (round up) at this extreme range. This can be combined with Aiming for the Kill (above).

### Blind Firing

Blind firing works exactly like any other form of firing (including automatic), but it always treats the firer as having Level 0 in that weapon’s relative skill. Additionally an extra die is thrown when firing, but before any calculations are made the highest die (or one of the highest, in case of a tie) is removed completely. For automatic firing this extra die is thrown after all the dice are paired up, with one extra die rolled for each pair of dice. Any successful attack(s) needs to then have a die rolled to randomly choose which eligible target in the firing line is hit – whether friend or foe.

### Panic Fire

In order to call upon Panic Fire, a character must be using some form of small arms slug thrower. Panic fire uses all remaining rounds in the weapon, and hits are resolved as if the weapon were being fired with an Auto rating two higher than the weapon would normally have. For every shot there is a -2DM penalty to hit. If there are insufficient bullets left in the weapon’s magazine prior to firing then there will be no benefit from using Panic Fire.

### Parabolic Fire

To throw a grenade or launch another projectile in a proper parabolic arc, the character makes the appropriate skill (Heavy Weapons, Athletics and so on) check with a penalty depending on how far the shot is intended to land (see table below), regular range modifiers do not apply. If the check is successful, add the Effect to the projectile’s damage. No matter what happens, the projectile scatters in a random direction 1d6 minus the Effect in meters. This means that even a failure could still potentially strike the target (or scatter back over the obstacle for short parabolic arcs!), but get no bonus to damage.

#### Parabolic Weapon Ranges

| Weapon Type | Personal | Close | Short | Medium | Long | Very Long | Distant |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Ranged Attacks |  |  |  |  |  |  |  |
| Thrown | Out of range | -1 | -2 | -3 | Out of range | Out of range | Out of range |
| Launcher | Out of range | Out of range | Out of range | -2 | -3 | Out of range | Out of range |
| Artillery | Out of range | Out of range | Out of range | Out of range | +0 | +0 | -1 |

### Shotgun Spread

Any shotgun loaded specifically with flechette rounds can be fired like a common round at a single target up to Short range, using the standard statistics for the weapon. If firing at a target or group of targets at Medium or Long range, the frag shell has its damage reduced to 2d6 but gains a +1DM bonus to hit, and can hit not only the target aimed at but also anyone (friend or foe) within 1 metre of the initial target.

### Suppression Fire

Suppression fire works by having the character actually target the areas surrounding the target; a wall, a tree or even the ground at their feet are all perfectly suitable. The impact of the character’s attacks are often enough to give pause to a potential attacker. The firing character rolls his shooting attack as normal, except with a -2 DM for trying to hit cover and nearby objects to the target(s). This attack action also uses up double the normal amount of ammunition per attack. Failures are treated as normal misses. Success means that the firer has hit close enough to the target to force them to duck away, stalling their next action by adding an initiative penalty equal to the Effect of the attack. Suppressed targets also receive a -1DM penalty to any skill checks that they try to perform in both the current and following combat round. Automatic fire can be used for Suppression fire, but no target can be affected twice by Suppression fire on the same action. The target must be allowed to take one action before he can be suppressed again. If multiple hits are used upon the same target, the highest Effect takes precedence. There are some situations and instances that can make a target so unshakeable that they do not care about Suppression fire, and will not be harried by it. Some of those exceptions are found on the list below.

* Vehicles, or targets fully enclosed in vehicles
* Zealots
* Mechanical or android targets
* Targets wearing full Battle Dress
* Suicidal targets

### Ground Force Weaponry against Starship-scale Targets

Gaining a +4DM bonus to hit anything on the starship-scale, ground force weaponry must divide its damage by 50 before comparing it to a starship-scale target’s armour. Because a single weapon will, obviously, be unable to punch though armour it is possible for multiple weapons to all target the starship simultaneously, and the cumulative effect can inflict damage. Every additional ground weapon beyond the first can add half its damage dice to the total before dividing the total by 50 in order to calculate damage.

# Animals

Animals have a similar range of characteristics to humans, but there are several differences:

**Instinct**: Instinct is the animal equivalent of Education. Animals apply their Instinct DM to tasks such as sensing prey or solving problems.

**Pack**: Pack is the animal equivalent of Social Standing. The higher a creature’s Pack score, the larger the group that it is associated with, and the more standing the creature has in that group.

Terrain DM Chart

Roll for Creature Movement

| Terrain Type | DM | Size DM | 1 | 2 | 3 | 4 | 5 | 6 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Clear | +3 | – | W | W | W | W | W +2 | F -6 |
| Plain or Prairie | +4 | – | W | W | W | W +2 | W +4 | F -6 |
| Desert (hot or cold) | +3 | -3 | W | W | W | W | F -4 | F -6 |
| Hills, foothills | – | – | W | W | W | W +2 | F -4 | F -6 |
| Mountain | – | – | W | W | W | F -2 | F -4 | F -6 |
| Forest | -4 | -4 | W | W | W | W | F -4 | F -6 |
| Woods | -2 | -1 | W | W | W | W | W | F -6 |
| Jungle | -4 | -3 | W | W | W | W | W +2 | F -6 |
| Rainforest | -2 | -2 | W | W | W | W +2 | W +4 | F -6 |
| Rough, Broken | -3 | -3 | W | W | W | W +2 | F -4 | F -6 |
| Swamp, Marsh | -2 | +4 | S -6 | A +2 | W | W | F -4 | F -6 |
| Beach, Shore | +3 | +2 | S +1 | A +2 | W | W | F -4 | F -6 |
| Riverbank | +1 | +1 | S -4 | A | W | W | W | F -6 |
| Ocean shallows | +4 | +1 | S +4 | S +2 | S | S | F -4 | F -6 |
| Open ocean | +4 | -4 | S +6 | S +4 | S +2 | S | F -4 | F -6 |
| Deep ocean | +4 | +2 | S +8 | S +6 | S +4 | S +2 | S | S -2 |

Animal Types 2d6 | Herbivore | Omnivore | Carnivore | Scavenger  
———-:|:———— | ——– | ——— | ————- 1 or less | Filter | Gatherer | Pouncer | Carrion-eater 2 | Filter | Eater | Siren | Reducer 3 | Intermittent | Gatherer | Pouncer | Hijacker 4 | Intermittent | Eater | Killer | Carrion-Eater 5 | Intermittent | Gatherer | Trapper | Intimidator 6 | Intermittent | Hunter | Pouncer | Reducer 7 | Grazer | Hunter | Chaser | Carrion-eater 8 | Grazer | Hunter | Chaser | Reducer 9 | Grazer | Gatherer | Chaser | Hijacker 10 | Grazer | Eater | Killer | Intimidator 11 | Grazer | Hunter | Chaser | Reducer 12 | Grazer | Gatherer | Siren | Hijacker 13 or more | Grazer | Gatherer | Chaser | Intimidator

Rural Encounter Table 2d6 | Creature Type — | ————- 2 | Scavenger  
3 | Omnivore  
4 | Scavenger  
5 | Omnivore  
6 | Herbivore 7 | Herbivore 8 | Herbivore 9 | Carnivore 10 | Unusual Event or Natural Feature 11 | Carnivore 12 | Carnivore

## Behaviours

Terran creatures that exemplify these behaviours are noted in brackets after the name. Characteristic modifiers and skills are noted after the description – the exact level of skills varies depending on the particular creature.

**Carrion-Eater (vulture)**: Scavengers which wait for all other threats to disperse before beginning. Carrion-eaters have Recon. Instinct +2.

**Chaser (wolf)**: Animals which kill their prey by attacking and exhausting it after a chase. Chasers have Athletics (co-ordination and/or endurance). Dexterity +4, Instinct +2, Pack +2.

**Eater (army ant)**: Eaters will eat anything they encounter, including characters. Endurance +4. Pack +2.

**Filter (earthworm)**: Herbivores which pass their environment through their bodies are termed filters. Unlike grazers, which move to food, filters move a flow of matter through themselves and filter out the food. Endurance +4.

**Gatherer (raccoon, chimpanzee)**: Gatherers are herbivores that collect and store food. Gatherers have Stealth. Pack +2.

**Grazer (antelope)**: Grazers move from food source to food source, often in large packs. Their primary form of defence tends to be fleeing danger. Instinct +2, Pack +4.

**Hunter (baboon)**: Opportunistic predators that stalk easy prey. Hunters have Survival. Instinct +2.

**Hijacker (lion)**: Scavengers which steal the kills of others through brute force or weight of numbers are hijackers. Strength +2, Pack +2.

**Intimidator (coyote)**: Scavengers which establish their claim to food by frightening or intimidating other creatures. Intimidators have Persuade.

**Killer (shark)**: Carnivores that possess a raw killing instinct, attacking in a frenzied manner. Killers have Melee and either Strength or Dexterity +4, Instinct +4, Pack -2.

**Intermittent (elephant)**: Herbivores that do not devote their entire time to searching for food. Intermittents have Pack +4.

**Pouncer (cat)**: Pouncers kill by stalking and ambushing their prey. Pouncers have Stealth, Recon and Athletics. Dexterity +4, Instinct +4.

**Reducer (vermin)**: Reducers are scavengers that act constantly on all available food, devouring even the remains left by other scavengers. Pack +4

**Siren (venus fly-trap)**: Sirens create a lure to attract prey. Usually, this lure will be specific to the species the siren preys on, but some rare lures are universal. Sirens have Deception. Pack -4

**Trapper (spider)**: An animal which allows its prey to enter a trap. Generally, any creature surprised by a trapper is caught in its trap. Pack -2.

## Creature Sizes and Characteristics

For each creature, roll 2d6 for its Size and apply any Dice Modifiers from its Terrain or Movement category. The creature’s Size determines its Weight, Strength, Dexterity and Endurance – for example, a roll of 7 means that the creature has a Strength of 3d6, an Dexterity of 3d6 and an Endurance of 3d6. Roll 2d6 separately for the animal’s Weapons and Armour. Add a +8 DM when rolling for weapons if the animal is a Carnivore, and a +4 if it is an Omnivore; subtract a -6 DM if the animal is a Herbivore. Scavengers automatically have Teeth in addition to any other weapons. If a number is present after the Weapons type, then add that number to the number of damage dice the creature rolls.

Size Table 2d6 | Weight (kg) | Strength | Dexterity | Endurance ———-:|:———–:|:——–:|:———:|:———: 1 or less | 1 | 1 | 1d6 | 1  
2 | 3 | 2 | 1d6 | 2  
3 | 6 | 1d6 | 2d6 | 1d6 4 | 12 | 1d6 | 2d6 | 1d6 5 | 25 | 2d6 | 3d6 | 2d6 6 | 50 | 2d6 | 4d6 | 2d6 7 | 100 | 3d6 | 3d6 | 3d6 8 | 200 | 3d6 | 3d6 | 3d6 9 | 400 | 4d6 | 2d6 | 4d6 10 | 800 | 4d6 | 2d6 | 4d6 11 | 1600 | 5d6 | 2d6 | 5d6 12 | 3200 | 6d6 | 1d6 | 6d6 13 or more | 5000 | 7d6 | 1d6 | 7d6

Weapons Table 2d6 | Weapons ———-:|:——- 1 or less: | None 2 | Teeth 3 | Horns 4 | Hooves 5 | Hooves and Teeth 6 | Teeth +1 7 | Claws +1 8 | Stinger +1 9 | Thrasher +1 10 | Claws and Teeth +2 11 | Claws +2 12 | Teeth +2 13 or more | Thrasher +2

Armour Table 2d6 | Armour ———-:|:——- 1 or less | 0  
2 | 0  
3 | 0  
4 | 1  
5 | 1  
6 | 2  
7 | 2  
8 | 3  
9 | 3  
10 | 4  
11 | 4  
12 | 5  
13 or more | 5

Roll 2d6+DMs for the animal’s Instinct and Pack. Intelligence for most animals is 0 or 1. All animals have at least Survival 0, Athletics 0 and Recon 0, and most will have 1d6 ranks split among these skills, Melee (natural weapons), and any skills listed in their behaviour. Damage from attacks depends on the creature’s Strength score.

| Strength | Damage |
| --- | --- |
| 1-10 | 1d6 |
| 11-20 | 2d6 |
| 21-30 | 3d6 |
| 31-40 | 4d6 |
| 41-50 | 5d6 |
| 51-60 | 6d6 |

Number Encountered Pack | Encountered ——:| ———– 0 | 1  
1-2 | 1d3 3-5 | 1d6 6-8 | 2d6 9-11 | 3d6 12-14 | 4d6 15+ | 5d6

## Animal Reactions

When characters disturb an animal or otherwise draw attention to themselves while within its territory roll 2d6 and consult the following table. If the result on the table is neither attack nor flee, then the animal stands still until provoked again, in which case roll again.

| Type | Attack | Flee |
| --- | --- | --- |
| Herbivore |  |  |
| Filter | 10+ if possible | 5- |
| Intermittent | 10+ | 4- |
| Grazer | 8+ | 6- |
| Omnivore |  |  |
| Gatherer | 9+ | 7- |
| Hunter | If bigger than at least 1 character, then attacks on a 6+. Otherwise, attacks on a 10+ | 5- |
| Eater | 5+ | 4- |
| Carnivore |  |  |
| Pouncer | If has surprise, it attacks. | If is surprised, it flees. |
| Chaser | If outnumber the characters, they attack. | 5- |
| Trapper | If has surprise, it attacks | 5- |
| Siren | If has surprise, it attacks | 4- |
| Killer | 6+ | 3- |
| Scavenger |  |  |
| Hijacker | 7+ | 6- |
| Intimidator | 8+ | 7- |
| Carrion-eater | 11+ | 7- |
| Reducer | 10+ | 7- |

# Environmental Dangers

## Diseases

Diseases reduce a character’s Characteristics, usually Endurance. The character must make an Endurance check with the listed DM   to resist the effects of the disease. If the character fails the Endurance check then he takes the listed damage and must make another Endurance check a few hours or days later, depending on the interval of the disease. Once an Endurance check has been passed, the character has fought off the disease.

| Disease | DM | Damage | Interval |
| --- | --- | --- | --- |
| Pneumonia | +0 | 1d6+4 | 1d6 weeks |
| Anthrax | -3 | 1d6+2 | 1d6 days |
| Regina Flu | +1 | 1d6-2 | 1d6 days |
| Biological Weapon | -6 | 1d6+8 | 1d6 hours |

## Poisons

Poisons operate in the same way as diseases, but generally work much faster and often have a wider range of effects. Most poisons do not have an interval but apply their damage immediately.

| Poison | DM | Damage |
| --- | --- | --- |
| Arsenic | -2 | 2d6 |
| Tranq Gas | -1d6 | Unconscious if Endurance check is failed |
| Neurotoxin | -4 | 1d6 Intelligence |

## Extremes of Temperature

Unusually hot or cold worlds can cause damage unless the characters are suitably protected. Temperatures are in Celsius.

| Heat | Effect |
| --- | --- |
| 50° (Very hot desert) | 1d6/hour |
| 200° (≈Mercury) | 1d6/round |
| 500° (≈Venus) | 2d6/round |
| Burning Torch | 1d6/round |
| Welding Torch | 2d6/round |
| Inferno | 3d6/round |

## Weather

High winds and torrential rain can inflict a negative Dice Modifier of -1 to -4 to all skill checks.

## Falling

A character who falls on a 1-gravity world suffers 1d6 damage per two metres fallen. High- or low-gravity worlds will increase or decrease the damage. Look up the size code for the world and the gravity level associated with it and multiply the falling damage by the gravity number.

## Fatigue

A fatigued character suffers a -2 DM to all checks until he rests. The amount of rest needed is 3 – the character’s Endurance DM hours . If a character suffers fatigue while already fatigued they fall unconscious.

## Unconsciousness

An unconscious character may make an Endurance check after every minute of unconsciousness – if successful, he regains consciousness. If he fails he must wait another minute and can then try again with a +1 DM on the check for every check previously failed.

# Healing

## Injury and Recovery

Injured characters are either wounded or seriously wounded. A character is considered seriously wounded if he has lost at least one point from all three of his physical characteristics. As soon as one of his physical characteristics is restored, no matter how, he is no longer seriously wounded. Seriously wounded characters who have somehow avoided unconsciousness cannot move except to hobble or crawl along at 1.5 metres per combat round. They also lose their minor action in combat. Wounded characters heal naturally and can also benefit from medical care. When characteristic points return from healing, players may choose which characteristic regains the points and may split healing between characteristics if they wish.

## Natural Healing

An injured character regains a number of characteristic points equal to his 1d6 + Endurance DM per day of full rest. If the character continues an active lifestyle he only heals a number of characteristic points equal to 1 + Endurance DM per day. Characters with a low Endurance DM (quite possibly from injury) may degrade (lose more characteristic points) over time if they are unlucky or cannot (or will not) rest. A seriously wounded character only regains characteristic points equal to his Endurance DM per day of rest, which means that the character may never heal naturally and will even get worse if his Endurance DM is currently negative.

## Medical Treatment

**First Aid**: Applying first aid restores a number of characteristic points equal to twice the Effect of the Medic check. Points restored by first aid are divided as desired among all damaged physical characteristics. First aid must be applied within five minutes of the injuries being received to be fully effective. A character can still benefit from first aid up to an hour after their injury but they only receive a number of characteristic points equal to the Effect of the Medic check. Performing first aid on yourself is a Difficult (-2) task.

**Surgery**: A character who is seriously wounded (after first aid has been applied) requires surgery. Surgery restores characteristic points just like first aid but if the check is failed the patient loses characteristic points equal to the Effect. Surgery requires a hospital or sickbay. Once one characteristic is back to its maximum level the patient can benefit from medical care. Surgery does not benefit characters who are not seriously wounded. Performing surgery on yourself is a Very Difficult (-4) task.

**Medical Care**: Medical care restores 2 + the character’s Endurance DM + the doctor’s Medic skill in characteristic points per day, divided evenly among all damaged characteristics. Medical care requires a hospital or sickbay and for the patient to undergo full bed rest.

**Augmentation and Medical Care**: Cybernetic or genetic augments can interfere with medical treatment. All medical care or surgery Medic rolls treating a character suffer a negative DM equal to the difference in Technology Level between the medical facility and the highest relevant implant.

## Healing and Mental Characteristics

Other than Psionic Strength, characters may also suffer damage to their Intelligence or even their Education. Unless otherwise specified, each mental characteristic heals at the rate of one point per day.

# Sample Patrons

Each patron encounter lists:

* The patron’s name and role.
* The skills and resources required to complete the mission.
* The suggested reward for the mission.
* The mission as described to the characters.

What’s really going on. Several possible variants will be presented – either pick or roll for which is the real situation.

## Jefri haut-Oschem, Planetologist

**Required**: Life Sciences, Survival; Spacecraft. **Reward**: Cr. 2,000/day plus expenses.

## Players’ Information

His Excellency haut-Oschem is a respected Planetologist, specialising in worlds that are nearly habitable. A planet might be a little too cold, or too dry, or be infested with a lethal native species. Haut-Oschem’s genius is in making tiny changes to a planet’s ecosystem or climate. All too often, a change can ripple out through the complex balances of a planetary environment and have unforeseen consequences. Haut-Oschem requires a spacecraft and a crew trained in the sciences for a brief period of research – no more than a few weeks, possibly a month or two. While haut-Oschem has worked with the Scout Service in the past, this mission is entirely under the aegis of private research. The ship will be visiting worlds outside settled space.

## Referee’s Information

Any character with contacts in the Scout service can find out that haut-Oschem has quarrelled with the Survey section, and that his once-stellar career has dark clouds hanging over it. Something has gone wrong…

1. Haut-Oschem has been replaced in the eyes of the Scout service by a younger researcher, Harad Leish. Old haut-Oschem wants to prove that his theories and methodologies are still valid. Leish and a laboratory ship from the Scout Service are currently surveying a jungle world inhabited by numerous hostile species. To prove his worth, haut-Oschem needs to find a way for humans to live safely on the world before the Scout service do.
2. As above, but haut-Oschem is bitter, and his real plan is to sabotage Leish’s survey team.
3. Haut-Oschem has discovered that he made a terrible mistake at the start of his career. He approved the settlement of a world before he fully understood the ecosystem. Every few centuries, a species of carnivorous locusts hatches in vast swarms and devours everything in their path. The characters need to find a way to stop the insects from hatching.
4. As above, but haut-Oschem wants to preserve his reputation above all else. The characters need to stop the insects without revealing what they’re doing to the settlers.
5. Haut-Oschem discovered something very valuable on his most recent survey, such as a massive deposit of precious metals or alien technology. He wants the characters to help him recover it.
6. As above, but haut-Oschem is in a race with the Scout service. He’s not the only one to have read between the lines in his latest survey.

# Equipment

Each item is listed with the Technology Level needed to manufacture it, its mass (in kg) and its cost. If an item’s mass or cost is not listed, then its mass or cost is negligible.

## Credits

The Credit (Cr.) is the standard unit of currency in Traveller. Larger denominations include the KiloCredit (KCr; 1,000 Credits) and the MegaCredit (MCr; 1,000,000 Credits).

## Armour

Unless otherwise noted, only one type of armour can be worn at a time. Resolve damage from the outside in – damage that gets through the outer layer of armour is next applied to the inner layer. Some armours have a required skill. A character suffers a -2 DM to all actions taken in the armour per missing skill level, including level 0.

**Jack (TL 1)**: A natural or synthetic leather jacket or body suit covering the torso and upper arms and legs.

**Mesh (TL 6)**: A jacket or body suit lined with a flexible metal or plastic mesh that gives it added protection against bullets.

**Cloth (TL 7)**: A heavy duty body suit tailored from ballistic cloth. The fabric absorbs impact energy and spreads it over the body, which can result in bruising. However, cloth armour is highly useful and versatile – it can be effectively concealed under normal clothing although observers making an Investigate or Recon check at 8+ will notice something unusual.

**Flak Jacket (TL 7)**: A less expensive version of ballistic cloth, the bulky flak jacket is an unmistakably military garment.

**Vacc Suit (TL 8)**: The vacc suit or space suit is the spacer’s best friend, providing life support and protection when in space. A vacc suit provides a breathable atmosphere and protection from the extremes of temperature, low pressure and radiation typically found in a hard vacuum, for six hours.

**Hostile Environment Vacc Suit (TL 8)**: Hostile environment suits are designed for conditions where a normal vacc suit would be insufficient, such as deep underwater, worlds shrouded in toxic or corrosive gases, extremes of radiation or temperature, or other locales that offer serious physical danger as well as the lack of a breathable atmosphere. HEV suits provide all the life support offered by a normal vacc suit (for six hours) but are also impervious to flames, intense radiation such as that found at nuclear blast sites, and high pressure environments like undersea trenches.

**Ablat (TL 9)**: A cheap alternative to Reflec, ablat armour is made from a material that ablates (vaporises) when hit by laser fire. Each laser hit on ablat reduces its armour value (versus lasers) by one, but the armour is cheap and easily replaceable.

**Reflec (TL 10)**: Reflec armour is a flexible plastic suit with layers of reflective material and heat-dispersing gel. It is highly effective against lasers, but provides no protection against other attacks. Reflec can be worn with other armour.

**Combat Armour (TL 11)**: This full-body suit is used by the military and not generally available on the open market, although those with military or criminal contacts can obtain it without much difficulty. It is issued to troop units and mercenary battalions. Combat armour protects from hard vacuum in the same way as a vacc suit and provides life support for six hours.

**Battle Dress (TL 13)**: The ultimate personal armour, battle dress is a powered form of combat armour. The servomotors vastly increase the user’s speed and strength, boosting his Strength and Dexterity by +4 while wearing the armour. Damage to the wearer’s characteristics is calculated as normal, but the values from the armour are used for all other purposes such as hand to hand damage or skill checks. The suit has a built-in computer/2 running an Expert Tactics (military)/2 program to give tactical advice and updates and is commonly outfitted with numerous upgrades. The suit is fully enclosed, with a six-hour air supply and gives full protection against environmental hazards – including NBC shielding – as if it was an HEV suit. TL 14 battle dress is considerably stronger, giving Strength +6 instead of +4, and upgrades its internal systems to Computer/3 (although still running Tactics 2).

#### Options

Most of the options listed here can also be applied to normal clothing at the same cost. The exceptions are extended life support and grav assist.

**Eye Protection (TL 6)**: Many armours include eye protection such as visors or goggles to guard against flying debris but such protection becomes absolutely vital at TL 9 to guard against the blinding effects of lasers. Eye protection can be added to any armour and is included for free in any TL 9+ armour. Cr 50.

**Magnetic Grapples (TL 8)**: Magnetic plates in the boots of the armour allow the user to walk normally on a spacecraft without artificial gravity. Cr. 100.

**Computer Weave (TL 10)**: Computer weave can be added to any armour that does not already have a computer system, and gives Computer/0 to that armour. Cr 500.

**Extended Life Support (TL 10)**: This upgrade can be added to any suit that provides life support (vacc suit, HEV suit, combat armour, battle dress). By adding high-pressure oxygen tanks and recycling systems, the suit now provides eighteen hours of oxygen. Cr. 10,000.

**Medikit (TL 10)**: An internal medical scanner and drug injector, the medikit can be installed in combat armour, battle dress or a vacc suit. It automatically applies first aid if the wearer is reduced to Endurance 0 (treat the Medikit as having Medic 3). It can also administer Fast Drug on command, or if life support systems are failing (turning remaining minutes of life support into hours). Cr 5,000. A TL 11 medikit can also inject Combat or Slow drugs and the Slow Drug antidote on command. Cr 10,000.

**Smart Fabric (TL 10)**: Smart fabric resists stains and dirt, cleaning itself automatically. Cr. 1,000.

**IR Chameleon (TL 12)**: IR (infra-red) chameleon technology can be added to any full-body suit of clothing or armour. It selectively bleeds heat to match background IR levels and effectively renders the wearer invisible to IR (Very Difficult (-4) to detect with sensors). IR Chameleon costs Cr. 5,000.

**Grav Assist (TL 12)**: This upgrade can be added to combat armour or battle dress only, and adds the functionality of a grav belt to the armour at the cost of Cr. 110,000. The TL 15 version lasts longer. Costs Cr 120,000.

**Vislight Chameleon (TL 13)**: A more advanced form of IR Chameleon, Vislight Chameleon covers the surface of the armour with light-bending technology, making the wearer nearly invisible to the naked eye (+4 DM to Stealth rolls). Vislight Chameleon costs Cr. 50,000.

## Augments

Augmentation can bring characteristics above the normal maximum for a race. Augments can interfere with medical treatment. All long-term care or surgery Medic rolls treating an augmented character suffer a negative DM equal to the difference in Technology Level between the medical facility and the highest relevant implant. For example, a character with TL 15 Endurance implants being treated in a TL 10 hospital would give a -5 DM to the surgeon’s Medic skill checks.

**Neural Comm (TL 10)**: A neural comm has identical capacities to a standard comm, but the cost is much higher and the TL is increased by 2. For example, an audio-only comm costs 250 Credits and is TL 10. A character can access the capabilities of a neural comm by thought alone but must still make any relevant skill checks and must still speak aloud to send audio messages.

| Tech Level | Notes | Credits |
| --- | --- | --- |
| TL 10 | Audio only | Cr. 1,000 |
| TL 12 | Audio and visual, Computer/0 | Cr. 5,000 |
| TL 14 | Multiple forms of data, Computer/1 | Cr. 20,000 |

**Subdermal Armour (TL 10)**: Adds a mesh of ballistic fibres to the skin and reinforces the bones, giving the character extra armour. Subdermal armour stacks with other protection.

| Tech Level | Notes | Credits |
| --- | --- | --- |
| TL 10 | Armour 1 | Cr. 50,000 |
| TL 11 | Armour 3 | Cr. 100,000 |

**Physical Characteristic Augmentation (TL 11)**: A character’s Endurance, Strength or Dexterity can be increased in various ways, from replacing motor neurons with faster synthetic cells, to reinforcing bones and replacing organs with tougher vat-grown clones. Augmentations must be purchased for each characteristic separately.

| Tech Level | Notes | Credits |
| --- | --- | --- |
| TL 11 | Characteristic +1 | Cr. 500,000 |
| TL 12 | Characteristic +2 | Cr. 1,000,000 |
| TL 15 | Characteristic +3 | Cr. 5,000,000 |

**Augmentation (TL 12)**: Replacing slow nerve cells with faster synthetic substrates and implanting optoelectronic boosters can increase the speed at which a character thinks, effectively boosting his Intelligence.

| Tech Level | Notes | Credits |
| --- | --- | --- |
| TL 12 | Intelligence +1 | Cr. 500,000 |
| TL 14 | Intelligence +2 | Cr. 1,000,000 |
| TL 16 | Intelligence +3 | Cr. 5,000,000 |

**Skill Augmentation (TL 12)**: The character’s nervous system is rewired to be more suited to a particular task. A pilot might have his reflexes and sense of balance improved; a broker might be made capable of controlling his pupil responses and smelling the pheromones and skin salinity of the other party. A skill augmentation gives the character a +1 DM when using that skill. Cr. 50,000. A character can only have one skill augmentation and must possess that skill at level 0 to benefit from the augmentation.

**Wafer Jack (TL 12)**: A wafer jack is a computer system implanted into the base of the skull that consists of an external data socket and a processor running an interface program. A character with a wafer jack can use expert programs for tasks relying on Intelligence or Education only. The main benefit of the jack is that it is much smaller and more discrete than a hand computer, and the user can access the expert program by thought alone. A wafer jack is a Computer/2 (Computer/4 at TL 13) and can only run expert programs. It is always running Intelligent Interface at no cost. Cr. 10,000. (Cr. 15,000 at TL 13.)

**Enhanced Vision (TL 13)**: A character can be implanted with cybernetic eyes giving him the abilities of a set of binoculars and IR/ Light Intensifier goggles at the cost of Cr. 25,000.

## Communications

**Bug (TL 5)**: Surveillance devices such as hidden microphones and tiny cameras, bugs are available from TL 5 onwards. They rapidly miniaturise and become more intelligent. A TL 14 bug can be no bigger than a dust mote. The smaller a bug, though, the shorter its range – a bug that transmits data needs a much larger power supply than one that just records until it is collected.

| Tech Level | Notes | Credits |
| --- | --- | --- |
| TL 5 | Audio | Cr. 50 |
| TL 7 | Audio or Visual | Cr. 100 |
| TL 9 | Audio or Visual or Data | Cr. 200 |
| TL 11 | Audio/Visual/Data | Cr. 300 |
| TL 13 | Audio/Visual/Data/Bioscan | Cr. 400 |
| TL 15 | Audio/Visual/Data/Bioscan/Computer/1 | Cr. 500 |

**Audio**: The bug records anything it hears.

**Visual**: The bug records anything it sees.

**Data**: If attached to a computer system, the bug can search and copy data from the computer. The bug cannot breach computer security on its own, but if a user accesses the computer in the bug’s presence, the bug can read his data.

**Bioscan**: The bug has a basic biological scanner, allowing it to sample the area for DNA traces, chemical taint and so forth.

**Computer/1**: The bug has an onboard computer system with Computer/1. A bug can be active or passive. An active bug transmits data (either constantly, or when triggered). Passive bugs just record until activated.

**Transceiver (TL 5)**: A transceiver is a stand-alone communications device. Unlike a comm, which relies on the presence of an established communications network, a transceiver can send and receive directly under its own power. To reach orbit reliably, a transceiver needs a range of 500 kilometres.

Radio Transcievers

| Tech Level | Mass (kg) | Range | Cost (Cr.) |
| --- | --- | --- | --- |
| TL 5 | 20 | Distant (5km) | 50 |
| TL 8 | 2 | Distant (5km) | 100 |
| TL 9 (Computer/0) | 1 | Very Distant (50km) | 250 |
| TL 12 (Computer/0) | 1 | Regional (500km) | 500 |
| TL 13 (Computer/1) | 1 | Continental (5,000km) | 1,000 |

Laser Transceivers Tech Level | Mass (kg) | Range | Cost (Cr.) ——————:|:———:|:———————:|:—- TL 9 | 1.5 | Regional (500km) | 100 TL 11 (Computer/0) | 0.5 | Regional (500km) | 250 TL 13 (Computer/1) | – | Regional (500km) | 500

**Comm (TL 6)**: A personal comm unit is a portable telecommunications device/computer/camera, ranging in size from a bulky handset to a slim watch or pen-like cylinder. Larger comms have physical controls and screens, while smaller units either project data and control displays onto nearby surfaces, have fold-out plastic screens, or connect to cybernetics. Comms have only short-range transmission and reception capabilities, but most technologically advanced worlds will have planet-wide comm networks allowing the user to send messages and access data anywhere.

| Tech Level | Notes | Credits |
| --- | --- | --- |
| TL 6 | Audio only | Cr. 50 |
| TL 8 | Audio and visual, Computer/0 | Cr. 150 |
| TL 10 | Multiple forms of data, Computer/1 | Cr. 500 |

**Commdot (TL 10)**: A commdot is a tiny microphone/speaker and transmitter, ranging in size between a few centimetres and a few millimetres across. A commdot is capable of interfacing with another communications device and relaying messages back and forth. Commdots have a range of only a few metres. They are usually used as hands-free communicators, but can also be used as improvised bugs or throat microphones. Cr. 10 each.

**Holographic Projector (TL 11)**: A holographic projector is a toaster-sized box that, when activated, creates a three-dimensional image in the space around it or nearby – the range is approximately three metres in all directions. The image can be given pre-programmed animations within a limited range and the projector includes speakers for making sound. The projected holograms are obviously not real so this device is mostly used for communication. The TL 12 version can produce holograms real enough to fool anyone who fails an Intelligence check (made upon first seeing the hologram) and the TL 13 version can produce holograms that are true-to-life images.

| Tech Level | Notes | Credits |
| --- | --- | --- |
| TL 11 | Obvious Holograms within 3 meters | Cr. 1,000 |
| TL 12 | Can fool some people | Cr. 2,000 |
| TL 13 | True to Life Image | Cr. 10,000 |

## Computers

The power of a computer is given by its rating (Computer/1, Computer/2 and so forth), which measures the complexity of the programs it can run. (Storage space is effectively unlimited at TL 9 and above.) Programs are rated by the computer rating they require. A system can run a number of programs up to its rating. The computers listed here are laptop size. Battery life is two hours at TL 7, eight hours at TL 8, and effectively unlimited at TL 9 and above. Desktop computers offer a slightly greater amount of processing power for the same cost but not enough to make a difference in-game. Desktops become obsolete during TL 8.

| Optimum TL | Computer Power | Mass (kg) | Cost (Cr.) |
| --- | --- | --- | --- |
| TL 7 | Computer/0 | 10 | 50 |
| TL 8 | Computer/1 | 5 | 100 |
| TL 9 | Computer/1 | 5 | 250 |
| TL 10 | Computer/2 | 1 | 350 |
| TL 11 | Computer/2 | 1 | 500 |
| TL 12 | Computer/3 | 0.5 | 1,000 |
| TL 13 | Computer/4 | 0.5 | 1,500 |
| TL 14 | Computer/5 | 0.5 | 5,000 |

**Computer Terminal (TL 7)**: This is a ‘dumb terminal’, with only limited processing power. It serves as an interface to a more powerful computer such as a ship’s computer or planetary network. Terminals range in size depending on their control method – a holographic display terminal can be much smaller than one with a physical keyboard and screen. A computer terminal has Computer/0, and costs Cr. 200.

**Hand Computer (TL 7)**: A hand computer is a portable computer system with considerable processing power. It is more powerful than a computer terminal, and can be used without access to a network. A hand computer costs twice as much as a normal computer of the same TL but can he held in one hand and operated with the other.

#### Options

**Data Display/Recorder (TL 13)**: This headpiece worn over one or both eyes provides a continuous heads-up display for the user, allowing him to view computer data from any linked system. Because of the transparent screen vision is not obscured while using a DD/R headset. DD/Rs can display data from any system, not just computers – they can display vacc suit oxygen reserves, grav belt status, neural activity scanner results and so forth. Cr. 5,000.

**Data Wafer (TL 10)**: The principle medium of information storage is the standard data wafer, a rectangle of hardened plastic about the size of a credit card. A TL 10 data wafer is memory diamond, with information encoded in structures of carbon atoms; more advanced wafers use more exotic means of data storage. Cr 5.

**Specialized Computer**: A computer can be designed for a specific purpose, which gives it a rating of 1 or 2 higher for that program only. The navigation computer on a starship might be only a Computer/1, but it could run the Expert Navigation/3 program because it is specially designed for that task. A specialised computer costs 25% more per added rating. In addition, running the program a computer is specialised for does not use up rating when working out how many programs the computer can run simultaneously.

#### Software

A character can use any high-rating software at a lower rating, to a minimum of the lowest rating shown. Programs above Rating/1 cannot be copied easily, as they require a non-trivial amount of bandwidth to transfer.

Computer Software Table Software | Rating | Tech Level | Cost  
———————:|:——:|:———-:|:— Database | – | TL 7 | Cr. 10 to Cr. 10,000 Interface | 0 | TL 7 | Included Security | 0 | TL 7 | Cr. Included ‎ | 1 | TL 9 | Cr. 200 ‎ | 2 | TL 11 | Cr. 1,000 ‎ | 3 | TL 12 | Cr. 20,000 Translator | 0 | TL 9 | Cr. 50 ‎ | 1 | TL 10 | Cr. 500 Intrusion | 1 | TL 10 | Cr. 1,000 ‎ | 2 | TL 11 | Cr. 10,000 ‎ | 3 | TL 13 | Cr. 100,000 ‎ | 4 | TL 15 | N/A Intelligent Interface | 1 | TL 11 | Cr. 100 Expert | 1 | TL 11 | Cr. 1,000 ‎ | 2 | TL 12 | Cr. 10,000 ‎ | 3 | TL 13 | Cr. 100,000 Agent | 0 | TL 11 | Cr. 500 ‎ | 1 | TL 12 | Cr. 2,000 ‎ | 2 | TL 13 | Cr. 100,000 ‎ | 3 | TL 14 | Cr. 250,000 Intellect | 1 | TL 12 | Cr. 2,000 ‎ | 2 | TL 13 | Cr. 50,000 ‎ | 3 | TL 14 | –

**Database**: A database is a large store of information on a topic that can be searched with a Computer check or using an Agent.

**Interface**: Displays data. Using a computer without an interface is a Formidable (-6 DM) task.

**Security**: Security programs defend against intrusion. Rating 0 is Average (+0 DM).

* Difficult (-2 DM) difficulty
* Very Difficult (-4 DM) difficulty
* Formidable (-6 DM) difficulty

**Translator**: Translators are specialised Expert systems that only have Language skills. The TL 9 version just provides a near-real-time translation. The TL 10 works in real-time and has a much better understanding of the nuances of language.

**Intrusion**: Intrusion programs aid hacking attempts, giving a bonus equal to their rating. Intrusion software is often illegal.

**Intelligent Interface**: Artificial intelligence allows voice control and displays data intelligently. Required for using Expert programs.

**Expert**: Expert programs mimic skills. A character using an expert system may make a skill check as if he had the skill at the program’s rating -1. Only Intelligence and Education-based checks can be attempted. If the character already has the skill at a higher level then an Expert program grants a +1 DM instead.

**Agent**: Agent programs have a Computer skill equal to their rating, and can carry out tasks assigned to them with a modicum of intelligence. For example, an agent program might be commanded to hack into an enemy computer system and steal a particular data file. They are effectively specialised combinations of Computer Expert and Intellect programs.

**Intellect**: Intellects are improved agents, who can use Expert systems. For example, a robot doctor might be running Intellect/1 and Expert Medic/3, giving it a Medic skill of 2. An Intellect program can use a number of skills simultaneously equal to its Rating.

## Medical Supplies

**Cryoberth (TL 10)**: A cryoberth, or ‘icebox’, is a coffin-like machine similar to the low or frozen berths used on some spacecraft. A cryoberth can be used to place a severely injured character into stasis until he receives medical treatment. While in a cryoberth, a character’s wounds neither heal nor degrade and all disease and poison activity is halted. A cryoberth’s internal power system can function for up to one week on its own, but a berth is usually connected to a vehicle’s power supply. Wt. 200 kg, Cr. 50,000.

**Medikit (TL 8+)** There are different types of medikit available at different Technology Levels. All medikits contain diagnostic devices and scanners, surgical tools and a panoply of drugs and antibiotics, allowing a medic to practise his art in the field. Higher-technology medikits do not give a bonus to basic treatment, but can help with more exotic problems or when treating augmented individuals. For example, a TL 8 medikit can test blood pressure and temperature (among other things); a TL 14 kit has a medical densitometer to create a three-dimensional view of the patient’s body and can scan brain activity on the quantum level. All medikits weigh 8 kg.

| Tech Level | Notes | Credits |
| --- | --- | --- |
| TL 8 | 8kg; Blood Pressure and Temperature | Cr 1,000 |
| TL 10 | 8kg; | Cr 1,500 |
| TL 12 | 8kg; | Cr 5,000 |
| TL 14 | 8kg; 3D body and brain quantum scan | Cr 10,000 |

### Drugs

**Medicinal Drugs (TL 5+)** include vaccines, antitoxins and antibiotics. They range in cost from five credits to several thousand credits, depending on the rarity and complexity of the drug. Medicinal drugs require the Medic skill to use properly – using the wrong drug can be worse than doing nothing. With a successful Medic check the correct drug can counteract most poisons or diseases, or at the very least give a positive DM towards resisting them. If the wrong drug is administered, treat it as a Difficult (-2 DM) poison with a damage of 1d6.

**Panaceas (TL 8+)** are wide-spectrum medicinal drugs that are specifically designed not to interact harmfully. They can therefore be used on any wound or illness and are guaranteed not to make things worse. A character using panaceas may make a Medic check as if he had Medic 0 when treating an infection or disease. Panaceas cost 200 credits per dose.

**Anti-rad drugs (TL 8)** must be administered before or immediately after (within ten minutes) radiation exposure. They absorb up to 100 rads per dose. A character may only use anti-rad drugs once per day – taking any more causes permanent Endurance damage of 1d6 per dose. Cr. 1,000 per dose.

**Stim drugs (TL 8)** remove fatigue, at a cost. A character who uses stim may remove the effects of fatigue but suffers one point of damage. If stims are used to remove fatigue again without an intervening period of sleep, the character suffers two points of damage the second time, three points the third time, and so on. Stims cost 50 credits per dose.

**Metabolic accelerator (‘Slow Drug’, TL 10)** boosts the user’s reaction time to superhuman levels. A character using slow drug in combat adds +8 to his initiative total at the start of combat (or whenever the drug takes effect). He may also dodge up to twice each round with no effect on his initiative score. The drug kicks in 45 seconds (eight rounds) after ingestion or injection and lasts for around ten minutes. When the drug wears off, the user’s system crashes. He suffers 2d6 points of damage and is exhausted. Metabolic accelerator costs 500 credits per dose.

**Combat Drug (TL 10)**: This drug increases reaction time and improves the body’s ability to cope with trauma, aiding the user in combat. A character using a combat drug adds +4 to his initiative total at the start of combat (or whenever the drug takes effect). He may also dodge once each round with no effect on his initiative score and reduces all damage suffered by two points. The drug kicks in twenty seconds (four rounds) after injection, and lasts around ten minutes. When the drug wears off, the user is fatigued. Combat drugs cost 1,000 credits per dose.

**Medicinal Slow (TL 11)** is a variant of the slow drug. It can only be applied safely in a medical facility where life-support and cryo technology is available as it increases the metabolism to around thirty times normal, allowing a patient to undergo a month of healing in a single day. Medicinal slow costs 500 credits per dose.

**Fast Drug (TL 10)** or ‘Hibernation’ puts the user into a state akin to suspended animation, slowing his metabolic rate down to a ratio of 60 to 1 – a subjective day for the user is actually two months. Fast drug is normally used to prolong life support reserves or as a cheap substitute for a cryoberth. Fast drug costs 200 credits per dose.

**Anagathics (TL 15)** slow the user’s aging process. Synthetic anagathics become possible at TL 15, but there are natural spices and other rare compounds that have comparable effects at all Technology Levels. Anagathics are illegal or heavily controlled on many worlds. They cost 2,000 Credits per dose. One dose must be taken each month to maintain the anti-aging effect – if the character taking anagathics misses a dose they must make an immediate roll on the aging table as their body reacts badly to the interrupted supply.

#### Medical Care

**Healing**: An injured character who needs hospital care for a prolonged period will pay approximately 100 credits per month per Technology Level. (At TL 11+ the doctors will just use medicinal slow in most cases and charge for that instead.) Surgery costs 1d6 x 50 x Technology Level in Credits.

**Replacements**: A character whose injuries require cloning limbs or cybernetic replacement must pay 5,000 credits per Characteristic point.

## Robots and Drones

A robot has an Intellect program running, allowing it to make decisions independently, while drones are remote-controlled by a character with the Remote Operations skill. Robots and drones operate in combat like characters but take damage as if they were vehicles. They have Hull and Structure characteristics instead of an Endurance characteristic, and an Endurance DM of 0. Any robot running an Intellect program has an Intelligence and Education score. Drones have neither. A robot’s Education characteristic is representative of the information programmed into it and even low-end robots can have high Education scores. Most robots have Social Standing characteristics of 0 as they are not social creations but there are some exceptions, usually high-end models running advanced Intellect programs. Drones do not have Social Standing but in cases where they are used to engage in diplomacy or other social intercourse the operator can use his own Social Standing score.

**Cargo Robot (TL 11)**: These simple, heavy-duty robots are found in starport docks and on board cargo ships. Cargo drones can be constructed as low as Technology Level 9 but their utility is extremely limited until the invention of Intellect programs.

* Strength 30 (+8), Dexterity 9 (+1), Hull 2, Structure 2
* Intelligence 3 (-1), Education 5 (-1), Social Standing 0 (-3)
* *Traits*: Armour 8, Huge, Specialised Computer/1 (running Intellect/1 and Expert Trade (any physical)/1)
* *Weapons*: Crushing Strength (Melee (unarmed), 3d6 damage)
* *Price*: 75,000 Credits

**Repair Robot (TL 11)**: Shipboard repair robots are small crab-shaped machines that carry a variety of welding and cutting tools. Specialised repair robots may run Expert Engineer (any) rather than Expert Mechanic.

* Strength 6 (+0), Dexterity 7 (+0), Hull 1, Structure 1
* Intelligence 5 (-1), Education 6 (+0), Social Standing 0 (-3)
* *Traits*: Integral System (mechanical toolkit), Specialised Computer/1 (running Intellect/1 and Expert Mechanic/2)
* *Weapons*: Tools (Melee (unarmed), 1d6 damage)
* *Price*: 10,000 Credits

**Personal Drone (TL 11)**: This is a small floating globe about thirty centimetres in diameter. It is equipped with holographic projectors which can display the image of a person, allowing a character to have a virtual presence over a great distance.

* Strength 2 (-2), Dexterity 7 (+0), Hull 1, Structure 1
* *Traits*: Tiny, Integral System (comm, audio/visual), Integral System (grav floater), Integral System (TL 11 holographic projector)
* *Price*: 2,000 Credits

**Probe Drone (TL 11)**: A probe drone is a hardened version of a personal remote, armoured and carrying more sensor packages. They have an operating range of five hundred kilometres, and can fly at a speed of 300 kph.

* Strength 3 (-1), Dexterity 7 (+0), Hull 3, Structure 3
* *Traits*: Armour 5, Integral System (comm, audio/visual), Integral System (grav belt), Integral System (TL 11 holographic projector), Integral System (every sensor available at TL 11 and below)
* *Price*: 15,000 Credits

**Autodoc (TL 12)**: An autodoc is a specialised, immobile medical robot, which is often installed inside vehicles or spacecraft.

* Strength 6 (+0), Dexterity 15 (+3), Hull 1, Structure 1
* Intelligence 9 (+1), Education 12 (+2), Social Standing 0 (-3)
* *Traits*: Integral System (TL 12 medikit), Specialised Computer/1 (running Intellect/1 and Medic/2)
* *Weapons*: Surgical Tools (Melee (small blade), 1d6 damage)
* *Price*: 40,000 Credits

**Combat Drone (TL 12)**: Combat drones are little more than flying guns mated to a grav floater and a computer system. The drones must be piloted with the Remote Operations skill but attacks are made using the appropriate weapon skill. Combat drones loaded with Intellect and combat Expert programs (making them autonomous combat robots) are illegal on many worlds.

* Strength 12 (+2), Dexterity 10 (+1), Hull 4, Structure 4
* *Traits*: Armour 9, Integral System (grav floater), Integral Weapon (any)
* *Weapons*: Any gun
* *Price*: 90,000 Credits plus the cost of the weapon (the Integral Weapon upgrade is included)

**Servitor (TL 13)**: Servitor robots are expensive humanoid robots who are programmed to act as butlers or servants to the nobility. Some servitor owners reprogram their robots with Expert Carouse or Expert Gambler to better suit their lifestyle.

* Strength 7 (+0), Dexterity 9 (+1), Hull 2, Structure 2
* Intelligence 9 (+1), Education 12 (+2), Social Standing 7 (+0)
* *Traits*: Computer/3 (running Intellect/1 and Expert Steward/2 – servitors also have Expert Diplomacy/2 and Translator/1 available should they be necessary)
* *Weapons*: Robot Punch (Melee (unarmed), 1d6 damage)
* *Price*: 120,000 Credits

#### Options

**Armour**: Armour can be increased by 5, which increases the drone or robot’s cost by 25%.

**Integral System**: Certain devices can be built into drones or robots by increasing the cost of the device by +50%. Popular choices include toolkits of different kinds, various sensors, or mobility upgrades like thruster packs or grav floaters.

**Integral Weapon**: Any suitable weapon can be added to a drone or robot, at the cost of Cr. 10,000 + the cost of the weapon.

## Sensors

At TL 11 sensors become notably more discriminating because they can be hooked up to a system running Intellect/1 that can dynamically filter information based on pre-set parameters – not sounding the alarm if the motion sensor picks up anything too small to be an intruder, for example. Sensor equipment does not offer a bonus to skill checks but allows the user to find things that they would otherwise not be able to.

**Binoculars (TL 3)**: Allows the user to see further. 1 kg, Cr. 75. At TL 8 electronic enhancement allows images to be captured; light-intensification allows them to be used in the dark. Cr 750. At TL 12 PRIS (Portable Radiation Imaging System) allows the user to observe a large section of the EM-spectrum, from infrared to gamma rays. Cr 3,500.

**Geiger Counter (TL 5)**: Detects radiation, both presence and approximate intensity. Cr. 250. The Sensors skill is not needed to detect the presence of radiation with a Geiger counter but anything more complex than that requires a check.

**IR Goggles (TL 6)**: Permits the user to see exothermic (heat-emitting) sources in the dark. Cr. 500.

**Light-Intensifying Goggles (TL 7)**: Permits the user to see normally in anything less than total darkness by electronically intensifying any available light. Cr. 500. At TL 9, IR goggles and light-intensifying goggles can be combined into a single unit costing Cr. 1,250.

**Motion Sensor (TL 7)**: A motion sensor simply detects any and all movement within the area assigned to it. It cannot differentiate between kinds of movement, it just reports whether there is movement or not in an area roughly six metres in diameter. Cr. 500. At TL 9 the motion detector can report the general qualities of motion – size, speed and duration – but no more. Cr. 1,000. The Sensors skill is not required to use a motion detector to detect motion. When trying to interpret data from a TL 9 motion sensor, the Sensors skill may need to be checked.

**Electromagnetic Probe (TL 10)**: This handy device detects the electromagnetic emissions of technological devices, and can be used as a diagnostic tool when examining equipment (+1 DM to work out what’s wrong with it) or when searching for hidden bugs or devices. Cr 1,000. The Sensors or Investigation skills can be used to sweep a room for bugs.

**Densitometer (TL 14)**: The remote densitometer uses an object’s natural gravity to measure its density, building up a three-dimensional image of the inside and outside of an object. 5 kg. Cr. 20,000.

**Bioscanner (TL 15)**: The bioscanner ‘sniffs’ for organic molecules and tests chemical samples, analysing the make-up of whatever it is focussed on. It can be used to detect poisons or bacteria, analyse organic matter, search for life signs and classify unfamiliar organisms. 3.5 kg. Cr. 350,000. The data from a bioscanner can be interpreted using the Sensors or the Life Sciences (biology) skills.

**NAS (TL 15)**: This device consists of a backpack and detachable handheld unit, and can detect neural activity up to 500 metres away. The device can also give a rough estimation of the intelligence level of organisms based on brainwave patterns. 10 kg. Cr 35,000. The data from a neural activity scanner can be interpreted using the Sensors, the Life Sciences (biology) or the Social Sciences (sophontology)

## Survival Gear and Supplies

**Tent (TL 3)**: A basic tent provides shelter for two people against the weather, reducing skill check penalties by 2. Cr. 200. The TL 7 tent can be pressurised. There is no airlock – the tent is depressurised when opened. Cr 2,000.

**Rebreather (TL 6)**: The rebreather is a bulky backpack containing breathable atmosphere and a face mask that collects exhaled gasses and ‘scrubs’ them back into breathable gasses again. A rebreather provides six hours of breathable atmosphere and can be used to breathe in any environment that is not otherwise harmful, such as underwater. 10 kg, Cr. 250.

**Respirator (TL 6)**: This device concentrates inhaled oxygen, allowing a character to breathe on worlds with a thin atmosphere. Respirators take the form of a face mask or mouthpiece initially. Cr. 100. The more advanced TL 10 respirator is small enough to fit into the nose, or can even be a lung implant for 3 x cost. Cr. 2,000.

**Filter (TL 7)**: Filters are breathing masks that strip out harmful elements from the air inhaled by the character, such as dangerous gases or dust particles. Cr 100. The TL 10 filter is small enough to fit into the nose, or can even be a lung implant for 3 x cost. Cr. 2,000.

**Breather Mask (TL 8)**: Combines the filter and respirator into a single package. Cr. 150.

**Artificial Gill (TL 8)**: Extracts oxygen from water allowing the wearer to breathe underwater. Only works on worlds with breathable atmospheres (type 4-9). 4 kg. Cr 4,000.

**Environment Suit (TL 8)**: Designed to protect the wearer from extreme cold or heat, the environment suit has a hood, gloves and boots but leaves the face exposed in normal operations. Costs Cr 500.

**Habitat Module (TL 8)**: A modular, unpressurised quarters for six people, capable of withstanding anything less than hurricane-force winds. Includes survival rations and enough batteries to keep the lights on and the heaters (or air conditioning) running for a week. Requires 12 man-hours to assemble, and can be attached to other modules to form a base. Cr 10,000. The TL 10 module is pressurised, and includes life-support for six occupants for one week (1000 person/hours). Cr 20,000.

**Rescue Bubble (TL 9)**: A large (2m diameter) pressurised plastic bubble. Piezoelectric layers in the bubble wall translate the user’s movements into electricity to recharge the bubble’s batteries and power its distress beacon, and a small oxygen tank both inflates the bubble and provides two person/hours of life support. A self-repairing plastic seal serves as an emergency airlock. Rescue bubbles are found on both space and sea vessels as emergency lifeboats. Cr. 600.

**Thruster Pack (TL 9)**: A simple thruster pack gives the user the ability to manoeuvre in zero-gravity. A Zero-G check is required to use a thruster pack accurately. Thruster packs can only be used in microgravity environments and are only practical for journeys between spacecraft at Adjacent range. Cr. 2,000. At TL 12 the long-range thruster pack gives 0.1g acceleration for up to 48 hours, using standard starship fuel. This increases its practical range on the spacecraft scale to Short but gives it a weight of 10 kg. Cr. 14,000. The TL 14 version of the long-range pack is much smaller as it uses grav-thruster plates instead, but has the same performance profile as the TL 12 version. Cr. 20,000.

**Portable Generator (TL 10)**: This is a heavy-duty portable fusion generator, capable of recharging weapons and other equipment for up to one month of use. Cr. 500,000.

### Options

**Self-Assembling (TL 11)**: The self-assembling upgrade can be given to tents, habitat modules and other basic structures. The structure is capable of expanding and assembling itself with only minimal aid, reducing the time needed to set up the shelter to a single man-hour. Cr. 5,000.

**Self-Sealing (TL 13)**: Structures can be made self-repairing and self-sealing at TL 13 for Cr. 2,000. Small breaches and rips are automatically fixed in seconds.

#### Toolkits

Technical skills require specialist tools of various kinds. These kits contain diagnostic sensors, hand tools, computer analysis programs and spare parts. All kits cost Cr. 1,000 and weigh 12 kg.

**Engineer (specific specialty)**: Required for performing repairs and installing new equipment.

**Forensics**: Required for investigating crime scenes and testing samples.

**Mechanical**: Required for repairs and construction.

**Scientific**: Required for scientific testing and analysis.

**Surveying**: Required for planetary surveys or mapping.

## Weapons

Weapons are described with the following statistics:

**TL**: The lowest Technology Level at which the weapon is available.

**Range**: The range modifiers used for that weapon.

**Damage**: The damage the weapon inflicts.

**Auto**: The Auto rating of the weapon if it is capable of automatic fire.

**Recoil**: The Recoil rating of the weapon.

**Mass**: The amount, in kilograms, that the weapon weighs on a world with Earth-like gravity.

**Magazine**: The number of shots the weapon can take before needing to be reloaded or connected to a new power pack. Unless specified otherwise in the weapon’s description it takes only a single minor action to reload or two to switch to a new power pack.

**Cost**: The weapon’s cost in credits.

**Ammo Cost/Power Pack**: The cost in credits to buy a spare magazine for a gun or a spare power pack for an energy weapon.

#### Melee Weapons

**Blade**: A hybrid knife weapon, somewhere between a dagger and a cutlass, with a large basket hilt.

**Broadsword**: A heavy two-handed sword.

**Cutlass**: The standard shipboard blade weapon, often kept near airlocks to repel boarders.

**Rapier**: A character using a rapier increases their effective Melee (large blade) skill by one level when parrying.

**Club**: Whether a handy length of metal piping or an extending riot baton made of advanced polymers, the club remains a popular and practical weapon wherever intelligent species gather.

**Dagger**: Daggers are especially suited to close-quarters combat – while grappling someone armed with a dagger can do Effect + 4 damage if they choose to hurt their opponent.

**Improvised Weapon**: When there’s no real weapon available and your bare hands just aren’t enough, any snatched-up object can be used as an impromptu club.

**Shield**: A character using a shield increases their effective Melee (unarmed) skill by one level when parrying. A character with no Melee counts as having Melee 0 when using a shield to parry.

**Staff**: A length of wood or metal that can be used in a variety of combat styles, to aid walking, or to poke potentially dangerous things from a distance.

**Stunstick**: This melee weapon deals 2d6 stun damage in addition to its normal damage. A character struck by a stun stick must make an Endurance check with a negative DM equal to the stun damage (after armour is subtracted). If this Endurance check is failed, the character is knocked unconscious.

#### Slug Throwers

**Accelerator Rifle**: Also known as gyrojet weapons, accelerator rifles are designed for zero-gravity combat. They fire tiny missiles that leave the rifle with minimal velocity and thus minimal recoil, then accelerate to high speed.

**Advanced Combat Rifle (ACR)**: The ultimate evolution of the conventional firearm, advanced combat rifles are the weapon of choice for many military units. Standard equipment includes an electronic battlefield sight, incorporating both light amplification and IR abilities, visual magnification up to 5x zoom, and a laser rangefinder which may also be used as a target painting device (reveals exact distance to target). The weapon is also gyroscopically stabilised during firing.

**Antique Pistol**: Unless the weapon is especially well made, it will have a -1 DM to attacks. Antique pistols require three minor actions and a successful Gun Combat (slug pistol) check to reload. Failure means you have to start again.

**Antique Rifle**: Unless the weapon is especially well made, it will have a -1 DM to attacks. Antique rifles require three minor actions and a successful Gun Combat (slug rifle) check to reload. Failure means you have to start again.

**Assault Rifle**: Assault rifles fire lighter projectiles than rifles, but are capable of a higher rate of fire and are more suitable to short-range encounters.

**Autopistol**: Variants of this semi-automatic pistol are the standard sidearm for law enforcement officers and criminals.

**Autorifle**: Automatic rifles have a higher muzzle velocity and are capable of automatic fire. Also termed battle rifles.

**Body Pistol**: Body pistols are manufactured from plastics and cultured bone, making them very difficult to detect using conventional weapons scanners. Body pistols increase the difficulty of Sensors checks to detect them to Very Difficult (-4).

**Gauss Rifle**: Gauss rifles replace conventional rifles at TL 13. Like the smaller gauss pistol, rifles fire high-velocity projectiles using electromagnetic rails.

**Gauss Pistol**: Gauss pistols use electromagnetic coils to accelerate metallic darts to hypersonic speeds. Gauss weapons are lightweight, efficient and deadly.

**Revolver**: A conventional six-shooter handgun. Revolvers take two minor actions to reload.

**Rifle**: Reloading a rifle requires two minor actions.

**Shotgun**: A shotgun using pellet ammunition ignores Dodge dice modifiers, but Armour gives double protection against pellet attacks. A shotgun can also fire solid slugs, which follow all the normal rules for shooting.

**Snub Pistol**: These lightweight, low-recoil weapons were designed for use aboard spacecraft and in zero gravity.

#### Energy Weapons

A laser that hits with Effect 6+ will permanently blind its target unless they are wearing some sort of eye protection.

**Laser Carbine**: Laser carbines are shorter and lighter than laser rifles, and have a correspondingly shorter range.

**Laser Pistol**: The TL 9 pistol is bulky, but effective, with no recoil and a large magazine. At TL 11, advances in battery technology and miniaturisation mean that the pistol is no larger than a conventional firearm, but must still be connected to a battery pack for sustained use.

**Laser Rifle**: Laser rifles are highly accurate at long range. They are powered by heavy backpacks, although they have an internal battery that can store enough energy for six shots for mobile sniping.

**Plasma Rifle**: TL 16 technology allows the bulky reactor and plasma chamber of the PGMP to be made small enough to fit into a rifle frame. The plasma rifle is a high-power sniper weapon designed to crack Battle Dress. Because of its internal reactor it never runs out of ammunition.

**Stunners**: Stun weapons are non-lethal and do not inflict normal damage. A character struck by a stun weapon must make an Endurance check with a negative DM equal to the damage (after armour is subtracted). If this Endurance check is failed the character is knocked unconscious. If the Endurance check is successful, the character is unaffected by the weapon and the stun damage is ignored.

#### Grenades

**Aerosol**: Aerosol grenades create a fine mist six metres in radius that diffusess lasers but does not block normal vision. Any laser attack made through the mist has its damage reduced by 10. Laser communications through the mist are completely blocked. The mist dissipates in 1d6 x 3 rounds, although high winds and other extreme weather can sharply reduce this time.

**Frag**: The damage from fragmentation grenades decreases with distance from the blast:

| Distance | Damage |
| --- | --- |
| 3 metres | 5d6 |
| 6 metres | 3d6 |
| 9 metres | 1d6 |

**Smoke**: Smoke grenades create a thick cloud of smoke six metres in radius, centred on the location of the grenade. This smoke imposes a -2 DM on all attacks within or through the cloud (doubled for laser weapons). Smoke dissipates in 1d6 x 3 rounds, although high winds and other extreme weather can sharply reduce this time.

**Stun**: Stun weapons are non-lethal and do not inflict normal damage. A character struck by a stun weapon must make an Endurance check with a negative DM equal to the damage (after armour is subtracted). If this Endurance check is failed the character is knocked unconscious. If the Endurance check is successful, the character is unaffected by the weapon and the stun damage is ignored.

#### Heavy Weapons

**Grenade Launcher**: Grenade launchers are used to fire grenades over long distances.

**RAM Grenade Launcher**: Rocket Assisted Multi-purpose grenade launchers have a longer range and are capable of firing up to three grenades with a single attack. This uses the rules for firing on full auto; unlike other weapons with an Auto score, a RAM grenade launcher cannot fire in burst mode. It takes two minor actions to reload a RAM grenade launcher.

**Rocket Launcher**: To counteract the recoil of the weapon, a rocket launcher channels exhaust backwards in an explosive backblast. Anyone up to 1.5 metres behind a rocket launcher when it fires takes 3d6 damage from the burning gasses. Vehicle-mounted rocket launchers lose this side-effect as a vehicle is a more stable firing platform than a person. It takes three minor actions to reload a rocket launcher. The rockets presented are high-explosive models. Do not add the Effect of the attack roll to their damage but apply that damage to everything within six metres of the impact point. A rocket that misses has a 50% chance (4+ on 1d6) of detonating upon impact with the ground (6 – Effect metres away in a random direction). Otherwise it will miss completely and leave the battlefield without striking anything or detonating.

**PGMP**: It is so heavy and bulky that it can only be used easily by a trooper with a Strength of 12 or more – usually attained by wearing battle dress. Every point by which a user’s Strength falls short is a -1 DM on any attack rolls made with it.

**FGMP**: It includes a gravity suspension system to reduce its inertia, making it easier to use than the PGMP (minimum Strength 9) and fires what amounts to a directed nuclear explosion. Those without radiation protection who are nearby when a FGMP is fired will suffer a lethal dose of radiation – each firing of an FGMP emits 2d6 x 20 rads, which will affect everyone within the immediate vicinity.

#### Explosives

The Explosives skill is used with explosives – the Effect of the Explosives skill check multiplies the damage, with a minimum of x1 damage for an Effect of 0 or 1.

**Plastic**: This generic, multi-purpose plastic explosive is a favourite of military units, terrorists, demolition teams and adventurers across known space.

**TDX**: An advanced gravity-polarised explosive, TDX explodes only along the horizontal axis.

**Pocket Nuke**: Hideously illegal on many worlds, the pocket nuke is actually the size of a briefcase and so is too large to fit into a grenade launcher.

Explosives

| Weapon | Tech Level | Damage | Radius | Cost (Cr.) |
| --- | --- | --- | --- | --- |
| Plastic | 6 | 3d6 | 2d6 metres | 200 |
| TDX | 12 | 4d6 | 4d6 metres | 1,000 |
| Pocket Nuke | 12 | 2d6 x 20 | 15d6 metres | 20,000 |

### Options

**Grenade Launcher (TL 8)**: An underslung RAM grenade launcher can be added to any rifle at the cost of 1,000 Cr. This grenade launcher has a magazine of one grenade, cannot fire on automatic and takes four minor actions to reload.

**Laser Sight (TL 8)**: Integrated optics and laser sights give an extra +1 DM bonus to any attack that has been aimed. Cr 100. At TL 10, x-ray lasers and improved display technology removes the tell-tale ‘red dot’ of a vislight laser. Cr 200.

**Silencer (TL 8)**: A silencer can be added to any slug thrower with Auto 4 or less, masking the sound produced by firing. (-4 DM to detect.) Cr. 250.

**Gyrostabiliser (TL 9)**: Stabilisers can be added to any weapon with recoil, reducing the recoil by one point at the cost of 300 credits.

**Secure Weapon (TL 10)**: A secure weapon requires authentication in some fashion (scanning the user’s DNA or iris patterns, entering a password, transmission of an unlocking code from a comm) before it can be fired. Cr. 100.

**Intelligent Weapon (TL 11)**: This adds Computer/0 to any weapon. Cr 1,000. The TL 13 upgrade adds Computer/1 to any weapon. Cr 5,000.

# New Equipment

### Availability Score

All of the equipment found in this chapter has an additional statistic that was not included in previous lists. Unless a ‘-’ symbol is found, meaning the item is commonly available, there will be a difficulty number such as ‘8+’ listed for the items. This is the item’s Availability. When a character wants to purchase a piece of equipment from this chapter that has an Availability score, they will first need to succeed in a Broker or Streetwise throw made at the listed difficulty. Characters with military or mercenary career terms in their background can add their current Rank to this check as a DM. If the throw is failed, the character cannot acquire a way to purchase the equipment this month. Success means that the character has found a source and can buy a number of items in one purchase up to his Social Standing score.

## New Armour

| Armour Type | Protection | Cost | Availability | Required Skill | Mass (kg) |
| --- | --- | --- | --- | --- | --- |
| Plate Armour (TL1) | 3 | 200 | – | None | 20 |
| Protec Suit (TL9) | 4 | 350 | – | None | 2 |
| Poly Carapace (TL10) (TL11) (TL13) | 10 12 16 | 150,000 250,000 500,000 | 8+ 8+ 9+ | None None None | 12 12 12 |
| Boarding Vacc Suit (TL11) (TL12) (TL14) | 8 12 15 | 12,000 20,000 80,000 | 9+ 10+ 10+ | Vacc Suit 1 Vacc Suit 1 Vacc Suit 0 | 30 28 26 |
| Artillery Battle Dress (TL13) (TL14) | 17 20 | 2,000,000 4,000,000 | 10+ 11+ | Battle Dress 2 Battle Dress 2 | 28 14 |

**Plate Armour: (TL1):** Due to its encumbering nature, the wearer of plate armour suffers a -2DM to any sort of skill throw requiring manual dexterity, co-ordination or balance. Wt: 20, Cr. 200. **Ballistic Vest (TL8):** Wt: 1. Cr. 400. **Protec Suit (TL9):** Can be worn under other types of armour. Wt: 2. Cr. 350. **Poly Carapace (TL10):** This armour imposes a -1 DM to all Dexterity based skill rolls. Wt: 12. Cr. 150,000.

* **(TL11)** Wt: 12; Cr. 250,000
* **(TL13)** Wt: 12; Dexterity penalty is removed; Cr. 500,000

**Boarding Vacc Suit (TL11):** A boarding vac suit will have a melee weapon/pistol combination grafted to the cuffs on the suit for the wearer’s use. Wt: 30. Cr. 12,000.

* **(TL12):** Wt: 28; Cr. 20,000
* **(TL14):** Wt: 26; Cr. 80,000

**Artillery Battle Dress (TL13):** The servomotors in the suit are designed to increase the user’s stability and strength in order to fire its on-board weaponry, increasing his Strength by +6 while wearing the armour. Damage to the wearer’s Strength characteristic is calculated as normal, but the value from the armour are used for all other purposes such as hand to hand damage or skill checks. On-board computer/2 gives tactical information and communication, and the suit is frequently outfitted with numerous upgrades. The suit is fully enclosed, with a five-hour air supply and gives full protection against NBC (nuclear/biological/chemical) hazards. The right arm and shoulder area of a suit of artillery battle dress is always replaced with one of the weapon choices found in the Options section below. Adapted for computerised firing by the armour, the wearer’s right arm is used to operate the weapon system from inside the suit, and the cost for the weapon is not included in the profile of the armour. Wt. 28. Cr. 2,000,000. **(TL14):** Artillery Battle Dress This design is considerably stronger, giving Strength 16, and has upgrades to its internal systems to give it computer/3. Additionally, the suit’s left arm has an integral gauss pistol built into the forearm. Wt. 14. Cr. 4,000,000

### Options

Friend or Foe HUD (TL11): Several tiny scanners and cameras implanted in the armour keep track of registered friendly transponders (the suit comes with 100 transponders) and marks targets without transponders as enemies. This information shows up on a visor-based HUD, allowing the wearer to know the exact location of allies and enemies within his line of sight or up to a kilometre away, whichever is greater, giving a +1 DM bonus to any Tactics throws. Friend or Foe HUD costs Cr. 4,000. Additional transponders cost Cr. 100 for twenty. **Gyro-Stabiliser Rig (TL12):** This upgrade can be added to Combat Armour or Battle Dress only, adding a localised motion-pivot at the waist that counters the effects of recoil at the cost of Cr. 10,000. By spending 1d6 minutes attaching the rig’s arms to a heavy weapon or rifle, it reduces the weapon’s Recoil number by 2 (to a minimum of 0).

* **(TL14):** The TL14 version is internal, affecting any weapon the wearer is holding. Costs Cr. 50,000.

**Mounted Mortar (TL11):** This upgrade can only be added to Artillery Battle Dress armour. This adds a single Field Mortar weapon system to the suit, allowing it to hold twelve rounds for it inside of an internal feed system. Costs Cr. 800.

* **(TL13)** The TL13 version mounts the TL13 version of the Field Mortar and holds a capacitor that can fire 50 shots. Costs Cr. 30,000.

**Mounted AT Gun (TL11):** This upgrade can only be added to Artillery Battle Dress armour. This adds a single AT Gun weapon system to the suit, allowing it to hold two magazines of six rounds inside the armoured compartment. Costs Cr. 3,000.

* **(TL14)** The TL14 version mounts the TL14 version of the AT Gun and uses a capacitor that can fire 50 shots before recharging. Costs Cr. 50,000.

**Mounted Frag Cannon (TL12):** This upgrade can only be added to Artillery Battle Dress armour. This adds a single Frag Cannon weapon system to the suit, allowing it to hold twenty rounds for it along a belt-fed ammunition system. Costs Cr. 4,000.

* **(TL13)** The TL13 version mounts the TL13 version of the Frag Cannon and internalises the ammunition system, increasing capacity to forty rounds. Costs Cr. 10,000.

**Mounted MRL Pack (TL12):** This upgrade can only be added to Artillery Battle Dress armour. This adds a single MRL pack weapon system to the suit, allowing it to hold twenty-four rockets for it within an armoured drop-feed system. Costs Cr. 10,000. **Mounted Mass Driver (TL10):** This upgrade can only be added to Artillery Battle Dress armour. This adds a single Mass Driver weapon system to the suit, attaching it to a rear-feed ammunition system that comes standard with 100 shots. Costs Cr. 4,500. **Mounted MagRail Minigun (TL14):** This upgrade can only be added to Artillery Battle Dress armour. This adds a single MagRail Minigun weapon system to the suit, allowing it to hold two-hundred rounds for it inside of an armoured ammunition drum-loader. Costs Cr. 175,000.

* **(TL14)** The TL14 version mounts two of the MagRail Miniguns, allowing it to increase its Auto rating to 12. Ammunition loads are suitably doubled. Costs Cr. 400,000.

**Man-Portable Mount (TL12):** This upgrade can only be added to Artillery Battle Dress armour. This allows for a single Man-Portable weapon system (PGMP, ARMP and so on) to be attached to the suit. If ammunition is a concern, the mount holds 100 rounds in an internal storage system. The mount costs Cr. 500 plus the cost of the Man-Portable weapon.

* **(TL14)** The TL14 version is able to mount the FGMP. Costs Cr. 500.

## New Augments

**Advanced Subdermal Armour (TL12):** Advanced subdermal armour still stacks with other protection, but not other types of subdermal armour.

|  |  |  |  |
| --- | --- | --- | --- |
| TL12 | Armour 4 | Availability 10+ | Cr. 250,000 |
| TL14 | Armour 5 | Availability 11+ | Cr. 500,000 |

#### Cyber-claw (TL10)

| Weapon | Optimum Range | Damage | Wt. | Heft | Availability | Cost |
| --- | --- | --- | --- | --- | --- | --- |
| Cyber-claw | Natural Attack (Claw) | 1d6+1 | – | – | 9+ | Cr. 20,000 |

#### Assisted Ambulation Augmentation (TL13)

|  |  |  |  |
| --- | --- | --- | --- |
| TL13 | 4 hours of sleep; thrice normal dietary need | Availability 9+ | Cr. 100,000 |
| TL14 | 2 hours of sleep; twice normal dietary need | Availability 9+ | Cr. 300,000 |
| TL15 | 1 hours of sleep; half-again normal dietary need | Availability 10+ | Cr. 500,000 |

**Ballistic Tracking Lenses (TL12):** BTLs (as they are called) give the character a +1 DM on all ranged attacks. Costs Cr. 40,000 with an Availability of 10+. The character’s eyes will shine strangely in direct lighting, revealing the BTLs to observers. **Weapon Implant (TL10):** Opening in two halves, from between the middle and ring fingers to the elbow, the implant hides a small weapon that is shielded from most scanners (TL12 and lower). The weapon is modified in structure to fit in the implant and operates on nervous impulse, but is otherwise the same as its common counterpart.

| Hidden Weapon | Availability | Cost |
| --- | --- | --- |
| Dagger | 8+ | Cr. 5,000 |
| Stunstick | 8+ | Cr. 10,000 |
| Autopistol | 9+ | Cr. 12,000 |
| Laser Pistol | 10+ | Cr. 25,000 |

**Mechanostatic Scanner (TL13):** When activated, any cybernetically augmented individuals within twenty metres will give off a traceable buzz that the character can hear. Although this does not help in any way, it can help the character be aware of augmented threats nearby his location. Costs Cr. 10,000 with an Availability of 9+. **Smuggling Container (TL9):** Using a trigger that looks like a blemish or scar to open, the pocket can hold roughly 10 pounds of weight and nothing larger than eight inches in diameter. Costs Cr. 15,000 with an Availability of 11+ (due to its illegality). It would take a Life Sciences or Investigate throw 10+ to discover the container when closed.

## New Communications Gear

**Battle Computer (TL 9):** The battle computer is a man-portable system (backpack weighing 18 kilograms) capable of capturing and collating intelligence and providing approximations of enemy forces. It can be linked to untended ground sensors via communication links to increase its potential and can provide visual displays overlaid on maps when interfaced with a map box (see below). When attached to a communicator it can direct a powerful laser communication beam at one of several preprogrammed targets (such as relay satellites or tactical communication hubs) and automatically switch to back-up relays if primaries are jammed or rendered inaccessible. A battle computer system grants the commander of any battle a +2DM to all Tactics throws when dealing with a monitored area. Availability is 10+, cost is Cr. 100,000. **Gun Cam (TL8):** The camera takes several seconds of recording around the pulling of the weapon’s trigger, allowing for slow-motion playback to see what the shooter was doing right or wrong – or for the verification of kills. The gun cam costs Cr. 150 and has an Availability of 7+. **Tactical Relay Network (TL6+):** Every participating member on a tactical relay network can use the Tactics skill of the character monitoring the central hub, to a limit depending on the TL of the network.

#### Tactical Relay Network

| TL | Information Relayed | Maximum Tactics Level Used | Availability | Cost1 |
| --- | --- | --- | --- | --- |
| TL6 | Audio only | Tactics 1 | – | Cr. 50 |
| TL8 | Audio and visual | Tactics 2 | 7+ | Cr. 100 |
| TL10 | A/V, Transponder location, Computer/0 | Tactics 3 | 9+ | Cr. 200 |
| TL12 | A/V, medical readings, equipment status, Computer/1 | Tactics 5 | 10+ | Cr. 350 |

1 This cost is per member unit; the central hub costs ten times this amount. **Rescue Transponder (TL8):** Activated with a quick snap of a safety tag, normally when wounded or captured, the tracker sends out a nearly constant emergency signal across several bandwidths to let allies know where the wearer is. It has a 10 km range, lasts twelve hours, has no Availability score, and costs Cr. 50. **(TL 10):** This version is more efficient, raising the range to 200 km and the cost to Cr. 200. **(TL 13):** This version is not worn; it is swallowed and has a 1000 km range. It costs Cr. 750. **Radio Jammers (TL6):** First available in base-camp versions, and then made portable by tech level 8, the radio jammer suite is a static generator that fills the wavelengths with incomprehensible noise. The basic models make radio-wave communications impossible up to 2 km of its location. It requires an Electronics throw with a difficulty equal to the TL of the jammer to get a single transmission through. Most jammers are not effective against tight beam laser communication, however. Availability 8+, costs Cr. 500.

* **(TL 8):** This version is more efficient, raising the range to 5 km and the cost to Cr. 2,000.
* **(TL 10):** personal This version is as small as a cufflink, and has a 10 km range. It costs Cr. 5,000.
* **(TL 10):** stationary This is a huge version of a jammer attached to a power plant or starship, jamming unsanctioned radio communications up to 100 km away from its location. It costs Cr. 20,000.

## New Medical Supplies

**Adhesive Bandages (TL6):** The use of adhesive bandages while using the Medic skill halves the time it takes to perform first aid, but incurs a -1 DM to the Medic skill roll. The cost is Cr. 10 for a three-dose tube.

* **TL8:** Cr. 50 for a five use spray.
* **TL10:** Cr. 75 for a ten use roll-on.
* **TL12:** Cr. 100 for twenty use applicator wand.
* **TL14:** Cr. 500 for a hundred use gelling gun.

**Trauma Pack (TL8):** The use of a trauma pack requires a Medic throw 8+, but will give a wounded character back a temporary 1d6 Endurance. This Endurance can be used to bring a technically ‘dead’ character back from 0 or less Endurance (so long as the new total is above 0), so long as they suffered their last wound within 30 seconds. This regained Endurance lasts for 1d6 hours – at which point it vanishes, potentially killing them. A character can only benefit from one administration of a trauma pack per day. Higher technological versions of the trauma pack are not any more efficient, merely lighter. The TL8 trauma pack weighs 2 kg, has an Availability of 9+, and costs Cr. 750.

* **TL10:** Weight: 1 kg.; Availability 9+; Cr. 1,500.
* **TL12:** Weight: 0.5 kg.; Availability 9+; Cr. 3,500.
* **TL14:** Negligible Weight; Availability 10+; Cr. 7,500.

### Drugs

**Adrenaliser (TL10):** One dose of the drug is the equivalent of ten hours of sleep, after which the user will have 2d6 x 5 minutes to find someplace to lay down – because the lost amount of sleep will hit him without fail at the end of that time. The drug has an Availability of 9+, and cost Cr. 150 per dose. **Clotting Aid (TL9):** Someone currently on a daily dosage of clotting aids will give a +1 DM to other people’s Medic throws to treat them. They have an Availability of 8+, and cost Cr. 200 per 30 day bottle. **Meta-Performance Enhancer (‘Titan Drug’, TL10):** The drug kicks in 60 seconds after injection, and lasts for around fifteen minutes, adding 6 to the user’s strength (up to a maximum total strength of 16 for a human). When the drug wears off, the user’s muscles cramp painfully under the stress and fatigue. He suffers 1d6 points of damage and is instantly enfeebled (Str of 5 for 1d6 hours). Meta-Performance Enhancer costs 600 credits per dose and has an Availability of 9+. **Nervous Response Dampeners (TL9):** Taken a few hours before battle, the dampeners last for a day or so, granting the user a bonus point of Morale for 2d6 x 3 hours. They have an Availability of 8+, and cost Cr. 100 per dose. **Starlight Drops (TL12):** In darkness or near-dark environments, any DM penalty is negated, as the character can see perfectly well. The effects of the drug last for 1d6 hours, during which time the user’s eyes look silvery and cloudy. A dropper of starlight drops carries 6 doses (12 eyes), has an Availability of 8+ and costs Cr. 500.

### Medical Care

A patient undergoing regular therapy (at least one session per month) becomes immune to Suppression Fire but is unable to use the Panic Fire rule. These sessions will cost of 50 Cr. per character, per session.

## New Robots and Drones

**Loader Robot (TL9):** The robot effectively has Heavy Weapons (Field Artillery) 1. Armour 8, Hull 3. Availability 10+. Costs Cr. 80,000. **Minesweeper Drone (TL10):** The drone has Combat Engineering 2 for the purposes of finding landmines, and its weapon can set off a pressure or trip-based mine safely on a basic throw of 8+. Armour 4, Hull 2. Availability 9+. Costs Cr. 95,000. **Recon Drone (TL9):** They can be fitted with up to three additional types of sensor packages for the appropriate cost, and can be remote-linked to a battle computer (see below) or other monitors. Remote drones also come with two hardpoints where pistols or rifles could be mounted and fired by remote control as well. Availability 9+, base cost is Cr. 200,000. **Spotter Drone (TL10):** The small spheroid zooms out to where the artillery needs to fire, spends 1-6 minor actions holding a laser designator on the potential target, and waits for the attack. This requires the drone’s operator to pass a throw 9+, but will add a +4DM to the designated artillery team’s next attack roll when shooting at the target. Hull 1. Availability 8+. Cost Cr. 12,000.

### Options

#### Self-Destruct:

Explodes as per a frag grenade with a 5 metre radius when directed to do so with a Remote Operations throw 9+, but increases the drone’s cost by 25%. The high cost is to protect the drone from accidental or enemy self-destruct activation.

## New Sensors

Energy Emission Warning Beacon (TL13): Any character hooked up to an EEWB feed adds an additional -1DM to attackers using energy weaponry at Long Range or farther when they react. Weighs 4.5 kg, Availability 10+, cost Cr. 60,000. **Forensic Sweeper (TL13):** Within an hour of sweeping a twenty square metre area with the handheld wand, and succeeding in an Investigate throw 8+, the device will know all of the following pieces of information. Weighs 2 kg, Availability 10+, cost Cr. 7,500.

* The types of weapons fired in past 36 hours.
* The known species of any beings passing through the area in the past 12 hours.
* The known species of anyone injured in the area during the past 48 hours.
* If any chemicals (drugs, poisons and so on.) were in use during the past 12 hours.

**Anti-personnel Equipment Scanner (TL10):** By looking at a target with great scrutiny (1-6 minutes) within five metres, the character may make an Investigate throw 8+. If successful, the goggles penetrated the target’s clothing/armour and found all inorganic devices in or on them. Weighs 1 kg, Availability 9+, cost Cr. 10,000.

### Options

**Helmet Reader (TL9):** A single type of sensor feed can be wirelessly fed into the eyepiece HUD of a basic combat helmet with this option. Cost Cr. 250.

* **TL10:** Can receive up to three feeds at once. Cost Cr. 500.
* **TL11:** Can receive up to five feeds at once. Cost Cr. 750.
* **TL12:** Can receive up to eight feeds at once. Cost Cr. 1,000.
* **TL15:** Can receive information from unlimited feeds at once. Cost Cr. 5,000.

## New Survival Gear & Supplies

**Chemical Sniffer (TL9):** Availability 7+, costs Cr. 2,500. **Protein Tap (TL9):** The device adds a +1 DM to all Survival skill checks made to ‘find’ food in the wild. Cost Cr. 1,000. **Map Box (TL9):** Scale may be adjusted by hand using a few button presses or voice commands (TL11 or higher). Most inhabited planets have insert wafers available for Cr. 150 each that will update the box appropriately. When not available, two orbital sweeps of the world are required to obtain the necessary photographs to construct a map wafer. Blank map box wafers are available for Cr. 30. The use of a map box grants the user a +2 DM bonus to all skill throws involving direction and navigation of the mapped planet. The cost of a map box (with one planet preprogrammed) is Cr. 3,000. **Nuclear Dampers (TL13):** Any nuclear devices that are not currently already in a state of fusion (fusion cells, starship cores, etc.) will have a penalty of the Effect of the damper operator’s Computer skill throw to any attacks made. The range of the damper field is proportional to the distance separating the two stations. At tech level 13, the ratio is 100:1 (a separation of 50 metres between stations would give a field range of 5 kilometres). Each damper station weighs 75 kg, and the maximum distance the stations can be apart before the field disperses is 200 metres. Availability 11+, cost MCr. 5. **Helmet Reader (TL9):** A single type of sensor feed can be wirelessly fed into the eyepiece HUD of a basic combat helmet with this option. Cost Cr. 250.

* **(TL14):** As above, and the ratio is now 500:1. Availability 12+, cost MCr. 10.
* **(TL16):** As above, and the ratio is now 1,000:1. Availability 13+, cost MCr. 20.

**Purifier Tabs (TL6):** These small chemical tablets are dropped into potentially questionable water, turning up to one gallon of it into drinkable (perhaps not tasty) water. The process takes only a few minutes, and turns the water an off-blue colour. The tablet only purifies natural contaminants, not synthetic poisons or toxins. Cost Cr. 10 per tablet.

* **TL10:** More advanced chemicals will even isolate and purify man-made toxins and pollutants. Cost Cr. 50.

**Tent-barracks (TL8):**The pole structure requires 1-6 man hours to set up properly. Weight 10 kg. Cost Cr. 500.

* **(TL10)** The TL10 version can be effectively pressurised using a chemical seal from the inside. There is no actual airlock – the tent depressurises when it is opened. Availability 8+, cost Cr. 5,000.

### Options

**Armoured (TL9):** Survival structures (tents, habitats and so on) can be layered with the armoured option, granting Armour 5 to those inside from attacks originating outside of the structure (and vice versa). This triples the weight of the structure. Availability 9+, Cr. 2,500. **Chameleonic Fibres (TL12):** The structure gains the benefits of advanced camouflage. The TL12 version bleeds heat excesses to match the background infrared levels and effectively renders those inside invisible to IR sensors (Hard (-4) to detect with sensors). Availability 10+, cost Cr. 8,000.

* **(TL13)** The advanced TL13 version uses both the IR and Vislight camouflage technologies, adding light-bending technology to the structure, making everyone inside nearly invisible to the naked eye (Hard (-4) to spot). Availability 11+, cost Cr. 60,000.

## New Field Toolkits

Some technical and specialist skills require specific tools of various kinds. These tool kits contain everything that a character would need to fully utilise the skill. All field tool kits have an Availability of 9+ and weigh roughly 5 kg.

* Combat Engineering – cost is equal to Cr. 50 times Technology Level
* Interrogation – cost is equal to Cr. 25 times Technology Level
* Weapon Engineering – cost is equal to Cr. 100 times Technology Level

## New Weapons

### Blade Weapons

**Axe (TL1):** A heavy wedge-shaped blade at the end of a stout haft, normally wielded in two hands to deliver powerful chopping blows. **Spear (TL1):** A long haft of wood tipped with a sharp end, used to thrust into a target. Can also be used as a Thrown weapon with a +1DM to hit. **Stiletto (TL2):** A long, thin blade used to puncture rather than slice. Often 30-40 centimetres in length for reaching organs. **Spring-blade (TL4):** A thin-bladed dagger set into a spring-loaded or hydraulic sheath located on or around the forearm, used for surprise attacks. Spring-blades have a +2 DM for their initial surprise attack, but suffer a -1DM for parrying. **Monoblade (TL8):** A light one-handed sword with a polymer blade honed to a monomolecular edge by the mechanisms in the supplied scabbard.

### Bludgeon Weapons

**Mace (TL1):** A heavy weight at the end of a short haft sometimes spiked or flanged. **Sap (TL2):** This melee weapon deals 1d6+1 stun damage in addition to its normal damage. A character struck by a sap must make an Endurance check. If this Endurance check is failed, the character is knocked unconscious.

#### Melee Weapons

| Weapon | Range | Damage | Heft | Mass (kg) | Availability | Cost (Cr.) |
| --- | --- | --- | --- | --- | --- | --- |
| Axe | Melee (large blade) | 3d6 | 2 | 6 | – | 60 |
| Spear | Melee (large blade) | 2d6 | – | 2 | – | 50 |
| Stiletto | Melee (small blade) | 1d6+2 | -1 | – | 7+ | 50 |
| Spring-blade | Melee (small blade) | 1d6+1 | +0 | 0.5 | 9+ | 200 |
| Monoblade | Melee (large blade) | 2d6+5 | -2 | 1 | 10+ | 1,000 |
| Mace | Melee (bludgeon) | 2d6+2 | 3 | 5 | – | 20 |
| Sap | Melee (unarmed) | 1d6 | +0 | 1 | – | 30 |

### Primitive Projectile Weapons

Attacks with primitive projectile weapons use the Athletics (archery) skill. **Bow (TL1):** A stout but supple piece of wood carved to a specific shape and strung with a piece of cord, string or gut to increase tension. The string is pulled back and released to hurl an arrow long distances with surprising force. At higher technology levels, bows are modified with additional strings and pulley systems to add accuracy and power. **Crossbow (TL2):** A horizontal bow set into a mechanical firing mechanism and stronger-than-normal pull, crossbows are very powerful weapons that are very time consuming to reload. At higher technology levels, crossbows are built with crank and pulley systems that make the weapons easier to reload, even self-loading at TL9. Reloading a TL2 crossbow takes 6 minor actions, at TL4 this is reduced to 3 minor actions.

#### Primitive Projectile Weapons

| Weapon | TL | Range | Damage | Auto | Recoil | Mass | Magazine | Availability | Cost (Cr.) | Ammo Cost (Cr.) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Bow | 1 2 5 7 | Ranged (assault weapon) Ranged (rifle) Ranged (rifle) Ranged (rifle) | 1d6 1d6 1d6+1 2d6 | No | 1 1 1 1 | 1 1 2 2 | 1 1 1 1 | – – – – | 60 70 75 100 | 1 1 1 1 |
| Crossbow | 2 4 9 | Ranged (rifle) Ranged (rifle) Ranged (assault weapon) | 1d6+3 2d6 2d6+4 | No | 2 2 1 | 3 3 2.5 | 1 1 6 | – – 7+ | 75 100 500 | 2 2 2 |

### Slug Throwers

**Zip Gun:** A one-use pistol made from makeshift materials, the ‘zip gun’ is a catch-all title used to describe any one-shot homemade firearm. Zip guns have a -1 DM to attacks. **Flechette Pistol:** A small and light pistol that uses air pressure to all-but-silently hurl tiny slivers of metal with great accuracy. Often considered to be an assassin’s preferred sidearm due to its inherent quietness. **Cartridge Pistol:** A revolver-style pistol that fires shotgun ammunition at very close range. It comes standard with an attached arm brace to help absorb some of the considerable recoil created by the weapon’s discharge. **MagRail Pistol:** Using the basic MagRail principle of much larger weaponry, this pistol magnetically projects five-centimetre diameter alloy discs at astonishing velocity. Although it has a slower rate of fire due to the limits of its attached power pack, its munitions can cut through armour and flesh with ease. **Antique Carbine:** A breach-loading short rifle-like weapon often used by horsemen or cavalry to fill the role between pistols and rifles. Unless the weapon is especially well made, it will have a -1 DM to attacks. Antique carbines require a successful Slug Carbine check to reload. **Autocarbine:** Fast firing slug throwers that only require one hand to fire, but can be terribly inaccurate without a second hand to steady it. Autocarbines are considered to be a good standard firearm for most security forces. **Flechette Carbine:** A short-barrelled weapon capable of shooting metallic flechettes at longer ranges than the standard pistol. **Accelerator Carbine:** Also known as a gyrojet carbine, accelerator carbines are designed for zero-gravity combat. They discharge tiny missile munitions that leave the barrel with minimal velocity and recoil before accelerating to higher impact speeds. **Gauss Carbine:** Not as bulky as the gauss rifle, gauss carbines fire high-velocity projectiles using electromagnetic rails. Gauss carbines are the favoured weapon of boarding marines because of their size and ease of use. **MagRail Carbine:** Using the attached power cell to augment firing rate, this carbine projects the same five-centimetre diameter alloy discs as its pistol version. It uses a larger magazine and a more rapid fire rate, but does not increase the velocity or the ‘calibre’ of the projectiles. **Sniper Rifle:** A high-calibre rifle designed not for rapid firing, but instead for penetration and visceral damage. With its integrated silencer and magnification scope (see below), long-distance targets can be killed quietly and efficiently. **Flechette Rifle:** Much like the normal autorifle, the flechette rifle has a decent rate of fire and moderate takedown potential. Its metallic slivers punch through lightly armoured targets easily, making it a good assault weapon when dealing with common infantry. **MagRail Rifle:** With the larger frame of the rifle stock, a larger power source can allow for even larger ammunition to be hurled by this wide-barrelled weapon. Fifteen centimetres in diameter, the alloy discs shot by the MagRail rifle can tear humanoid targets apart in seconds if held on target.

### One-Handed Carbines

Carbines are designed to be fired in one hand with relative ease, but it is harder to keep them under control when doing so. Because of this, carbine weaponry has two listed Recoil numbers. The number found in parentheses is the Recoil of the weapon if being fired in one hand.

#### Slug Throwers

| Weapon | TL | Range | Damage | Recoil | Auto | Mass | Magazine | Availability | Cost | Ammo Cost |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pistols |  |  |  |  |  |  |  |  |  |  |
| Zip Gun | 3 | Ranged (pistol) | 2d6-1 | 2 | No | 0.5 | 1 | – | 80 | 5 |
| Flechette Pistol | 9 | Ranged (pistol) | 3d6-2 | 1 | 4 | 1 | 20 | 8+ | 250 | 10 |
| Cartridge Pistol | 7 | Ranged (pistol) | 2d6+3 | 4 | No | 1.5 | 6 | 8+ | 300 | 10 |
| MagRail Pistol | 14 | Ranged (pistol) | 3d6+2 | 0 | No | 1 | 10 | 9+ | 600 | 25 |
| Carbines |  |  |  |  |  |  |  |  |  |  |
| Antique Carbine | 4 | Ranged (pistol) | 3d6-3 | 2 (4) | No | 4 | 1 | – | 80 | 10 |
| Autocarbine | 5 | Ranged (shotgun) | 3d6-2 | 2 (4) | 4 | 4 | 18 | 7+ | 800 | 10 |
| Flechette Carbine | 9 | Ranged (shotgun) | 3d6 | 1 (2) | 4 | 3 | 40 | 8+ | 500 | 10 |
| Accelerator Carbine | 9 | Ranged (shotgun) | 3d6-2 | 0 (0) | 4 | 1.5 | 12 | 9+ | 750 | 30 |
| Gauss Carbine | 12 | Ranged (assault weapon) | 3d6 | 1 (2) | 4 | 3 | 60 | 10+ | 1,200 | 30 |
| MagRail Carbine | 14 | Ranged (assault weapon) | 3d6+2 | 0 (1) | 4 | 3 | 20 | 10+ | 2,000 | 40 |
| Rifles |  |  |  |  |  |  |  |  |  |  |
| Sniper Rifle | 4 8 | Ranged (rifle) | 2d6+6 3d6+3 | 3 2 | No | 5.5 5 | 1 4 | 8+ 9+ | 500 700 | 5 10 |
| Flechette Rifle | 9 | Ranged (rifle) | 3d6 | 2 | 6 | 4.5 | 60 | 8+ | 800 | 10 |
| MagRail Rifle | 13 | Ranged (rifle) | 4d6+2 | 1 | 4 | 4 | 30 | 10+ | 2,200 | 50 |

### Energy Weapons

**Fusion Pistol:** Using advanced directional gravitics, the fusion pistol projects a small blast of fusion energy from its attached power source at respectable ranges. Those without radiation protection who are in Personal range of the weapon when a fusion pistol is fired will suffer a moderate dose of radiation – each firing of a fusion pistol emits 1d6x5 rads. **Stagger Laser:** The first energy weapon designed to effectively hurl multiple shots, the stagger laser actually just uses an industrial beam splitter to create the effect of several smaller beams in place of a single solid one. **Matter Disintegrator:** This weapon was specifically designed for killing heavy infantry. The science behind the weapon is simple; causing the target to shed neutrons at an alarming rate and using its own matter against it. The larger or more dense a target is, the larger the reaction. The Effect used with a matter disintegrator is not determined by the attack roll; instead it is equal to the Armour rating of the target – meaning that the weapon will always inflict damage if it hits.

### Grenades

Useful for clearing bunkers and trenches without putting oneself in direct danger, grenades are fantastic ways of dealing with several enemies at once. All grenades (including those listed in the core rulebook) can be purchased specifically for the use in a grenade launcher. **EMP:** Electromagnetic Pulse grenades are used to knock out drones, robots, computers and electronic equipment. Any unshielded electronic technology caught in the radius of an EMP grenade will automatically shut down for 1d6 minutes unless equipped with shielding to prevent this. Few high-tech mercenaries use these devices due to the erratic nature of their effect radius – which can effect their own gear on occasion. **Incendiary:** Incendiary grenades deal 1d6 heat damage to characters within three metres of the blast; the radius is considered to be ablaze for 2d6 minutes – inflicting 2d6 fire damage to anything that enters the area. **Plasma:** Plasma grenades use two chemical agents and an electric pulse to start a massive reaction in the grenade’s shell, causing it to explode in a small orb of superheated gas.

#### Energy Weapons

| Weapon | TL | Range | Damage | Auto | Recoil | Mass | Magazine | Availability | Cost (Cr.) | Power Pack (Cr.) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pistols |  |  |  |  |  |  |  |  |  |  |
| Fusion Pistol | 17 18 19 | Ranged (pistol) Ranged (pistol) Ranged (pistol) | 4d6+2 4d6+4 4d6+6 | No | 2 2 1 | 4 3.5 3.5 | – – – | 10+ 10+ 10+ | 10,000 12,000 15,000 | 5,000 7,000 10,000 |
| Rifles |  |  |  |  |  |  |  |  |  |  |
| Stagger Laser | 12 14 | Ranged (assault weapon) Ranged (rifle) | 4d6 4d6+3 | 4 4 | 0 0 | 9 7 | 75 100 | 9+ 10+ | 7,500 10,000 | 1,500 3,000 |
| Matter Disintegrator | 18 19 | Ranged (pistol) Ranged (shotgun) | 2d6 3d6 | No | 3 | 10 | – | 13+ | 300,000 500,000 | 500,000 |

#### Grenades

| Weapon | TL | Range | Damage | Mass | Blast Radius | Availability | Cost (Cr.) |
| --- | --- | --- | --- | --- | --- | --- | --- |
| EMP | 9 | Ranged (thrown) | None | 0.5 | 2d6 metres | 10+ | 100 |
| Incendiary | 5 | Ranged (thrown) | 3d6 | 0.5 | 3 metres | 7+ | 30 |
| Plasma | 12 | Ranged (thrown) | 5d6 | 0.5 | 1.5 metres | 9+ | 50 |

### Heavy Weapons

**Flamethrower:** A pressurised tank of combustible fuel attached to a projecting nozzle, the flamethrower shoots a long stream of burning liquid and flame at its targets. When fired, the flamethrower’s stream strikes a single target and expands in all directions to consume it and the area around it. The fuel does not puncture armour like a bullet, but instead coats the target in burning fuel – which will continue to blaze for several seconds. As technology advances the type of fuel becomes more efficient, eventually reaching the heights of the blue-white plasma thrower at TL14. In game terms, a flamethrower targets a single point of contact within range, making attack rolls against everything in a straight line from the firer to that point (rolling in order) – stopping when an attack hits. When the stream hits a target however, it breaks the projection and fills a radius of 3 metres around the target, rolling the damage for the weapon as normal. Anything that suffers damage from a flamethrower will continue to suffer half (round down) the current damage value every round until the damage is halved eventually to 0. Due to the lack of penetration available to a flamethrower’s stream, armour values are doubled against flamethrower attacks. **Light Machine Gun (LMG):** A heavier belt fed version of the automatic rifle, the LMG fires standard ammunition at staggering speeds. Ammunition is provided in 100 round belts. Reloading requires six minor actions if the weapon is manned by a single individual, two minor actions if a dedicated loader is present. If a loader is present, he may choose to link two 100 round belts to form a 200 round belt on the spot as a minor action. This may not generally be done ahead of time as each belt is carried in its own ammo box. Linked 200 round belts are often provided ahead of time if the weapon is emplaced in a defensive structure or is vehicle mounted. **Light Assault Gun (LAG):** Essentially a superheavy rifle, the LAG fires a single solid slug at extreme distances with armour piercing capability. A magazine containing five rounds is inserted into the underside of the weapon, ahead of the trigger guard, and locked into place before firing. The weapon comes standard with both a manually set tripod and an over-the-back sling to assist in carrying from place to place. **Armour Rifle, Man Portable (ARMP):** Designed to be the epitome of sniper rifles, the ARMP is a single-shot, bolt action heavy rifle that can puncture the plate armour of personnel carriers. With the integrated bio-mass range finder (see below) and adjustable pivoting bipod, an ARMP properly set up with a clear line of fire can kill a target that thinks it is safe behind cover. Little can withstand a well-aimed direct hit from the ARMP’s specialised ammunition. **Auto Cannon:** A gravity fed, fully automatic weapon, the auto cannon fires a large-calibre round at amazing velocities with a practical rate of fire reaching 200 rounds per minute. Ammunition is provided in two large drums, placed to either side of the firing position. Empty drums may be changed independently of one another by a secondary loader, allowing the weapon to be fired while being reloaded. Replacing an ammunition drum requires the normal 6 minor actions, but is doubled to 12 if performed while the gun is being fired. This ammunition system is so heavy, that the weapon must be mounted on a vehicle or emplacement to be fired effectively. **VRF Gauss Rifle:** Standing for Very Rapid Fire, the gauss rifle is a shoulder-slung gauss weapon that uses an attached power backpack to accelerate hundreds of metal darts per second at targets over a hundred metres away. Generally only carried by soldiers in battle dress, the VRF gauss rifle is a heavy rig that must be set on a stationary pintle-mount if it is to be fired by any character not wearing powered armour. **MagRail Minigun:** Modified to fire steady streams of twenty-centimetre discs of sharpened metal, the MagRail minigun does not use revolving barrels like conventional slug-throwing miniguns, although it does have four individual firing ports. It uses a compartmentalised energy cell to direct the individual barrels to fire in alternating patterns, drawing from a single drum-sorted ammunition feed located under the weapon’s rear.

#### Heavy Weapons

| Weapon | TL | Range | Damage | Auto | Recoil | Mass (kg) | Magazine | Availability | Cost | Ammo Cost |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Flamethrower | 4 6 8 14 | Ranged (shotgun) Ranged (shotgun) Ranged (assault weapon) Ranged (assault weapon) | 4d6 4d6 3d6+6 8d6 | No | 3 2 1 0 | 25 20 20 8 | 30 25 25 30 | 8+ 9+ 9+ 10+ | 800 1,400 2,500 15,000 | 40 70 110 300 |
| LMG | 5 | Ranged (assault weapon) | 4d6 | 6 | 2 | 20 | 100 | 8+ | 3,000 | 80 |
| LAG | 5 8 | Ranged (rifle) Ranged (rocket) | 6d6 8d6 | No | 5 4 | 30 | 5 | 9+ 9+ | 3,500 5,000 | 100 160 |
| ARMP | 10 | Ranged (rocket) | 10d6 | No | 4 | 15 | 1 | 8+ | 10,000 | 250 |
| Auto Cannon | 8 10 | Ranged (rifle) Ranged (rifle) | 4d6 4d6+4 | 8 8 | 3 2 | 35 (50 with both drums) | 200/200 | 9+ 9+ | 7,500 10,000 | 100 140 |
| VRF Gauss Rifle | 14 | Ranged (rifle) | 5d6 | 10 | 2 | 40 | 1,000 | 10+ | 50,000 | 500 |
| MagRail Minigun | 15 | Ranged (assault weapon) | 5d6+4 | 12 | 2 | 25 | 500 | 11+ | 250,000 | 1,500 |

### Options

**Bipod/Tripod (TL4):** Any weapon that has been fitted with a stabilising bipod or tripod can be set up in two minor actions to halve the weapon’s Recoil (round down), so long as the weapon is not moved. Costs Cr. 50. **Magnification Scope (TL4):** When Aiming with a rifle, the firer can reduce the effective range of the attack for the purposes of DMs by up to 2 range bands. Costs Cr. 25. **Bio-Mass Range Finder (TL10):** Using sophisticated density and IR recognition scanning, the computerised scope draws reliable outlines of where living targets are, despite up to twelve inches of inorganic material between target and firer. This eliminates up to 2 points of DM penalty from Cover. Costs Cr. 500.

* **TL12** 3-D imaging and motion tracking is added to the scope. This eliminates up to 4 points of DM from Cover. Costs Cr. 750.

### Support Weapons (Field Artillery)

**Field Mortar:** A simple aiming and firing mechanism based on self-propelled rounds being dropped into a tube, the field mortar is primarily used to drop parabolic attacks into the rear of an enemy formation. At TL8, the fragmentation shell has been re-designed to be more aerodynamic. At TL11 the mortar actually uses a power pack to create charged balls of energy to launch into the enemy. Ammunition for the field mortar cost 50 credits per shot, except for the power pack fuelled TL11 version. **AT Gun:** The single best way to deal with an armoured target, the Anti-Tank gun is a huge cannon that fires a single armour-piercing, high-fragmentation shell that is designed to punch through armour and explode. At early technology levels, the gun is called a ‘howitzer’ and is used to lob shells in wide arcs. As technology increases, the AT Gun’s ammunition becomes more and more efficient as it is made from better materials, allowing it to be fired more like a conventional gun. At TL15 however, the AT Gun fires a directed plasma lancet of energy drawn off a huge fusion pack attached to it by cables and conduits. For the earlier versions, ammunition for the AT Gun cost 25 credits x the Technology Level. **Frag Cannon:** A high-calibre parabolic cannon, the frag cannon is used to launch special anti-personnel rounds over a battlefield. The rounds explode when they reach a certain falling velocity, hurling thousands of chunks of superheated shrapnel into the masses below. It is a weapon that cannot be used in areas where allied forces might be, as the airbursts are not easily contained. As technology increases, the frag cannon becomes more computerised and easier to manage with fewer crew. Ammunition for the frag cannon costs 50 credits x the Technology Level of the weapon. **MRL Pack:** The multiple rocket launcher pack is a rack of motorised launch tubes that uses the same ignition system to rapidly deploy payloads. Earlier versions use simple ‘aim and fire’ rockets that required several crew to load, direct and fire properly. As technology increased, the MRL becomes a radar-controlled automated system with contained loading systems and laser-guided rockets. MRL packs fire either single shots or a number of rockets as a separate attacks roll up to half (round up) the pack’s Technology Level, and have a rate of fire equal to three times the number of rockets launched. Missile reloads cost 25 credits x the TL of the MRL pack each. **Mass Driver:** This simple gravitic weapon hurls clusters of dense matter at dangerous velocities. The ammunition used in a mass driver is little more than metallic or polymer ovoid-shaped pellets the size of a human fist. Dozens of these pellets are fired in a tight grouping, striking a relatively small area with tremendous force, like an artillery shotgun of sorts. **Meson Accelerator:** Using nuclei-stripping technologies originally discovered for the nuclear dampers protecting many major population centres in the galaxy, the meson accelerator is a huge field-focussing device that disintegrates matter caught in its focused energy emissions. The ‘beam’ fired by the accelerator is actually invisible except for its effects, but the weapon’s designers added a harmless light-projection system to colour the area of effect a bright blue immediately before it fires – allowing allies to steer clear of the coloured area!

### Field Artillery Rules

**Effective Range:** Field Artillery is designed to fire at very long ranges. The number listed is the farthest the target of a Field Artillery attack can possibly be, suffering no penalties at that range. Firing at targets up to +50% of that range will suffer a -4DM to hit. Anything farther cannot be hit at all. **Minimum Range:** Either due to how difficult to physically manipulate or due to the requirement of parabolic firing arcs, some weapons are extremely difficult to fire at close ranges. For every range band closer to the firing weapon than what is listed, the attack suffers a -4 DM to hit. **Rate of Fire:** Artillery is difficult to fire rapidly due to reloading and re-aiming constraints. The number listed is the amount of minor actions that must be spent preparing the weapon before firing again; treated similar to a Reload score. **Minimum Operating Crew:** This is the number of skilled Artillerists needed on hand to ready/aim/fire the weapon properly. Each crewman contributes to the overall firing skill of the artillery piece, figured by taking the average of all crewmen’s Heavy Weapons (field artillery) skill levels. For each crewman less than the listed minimum, the weapon suffers a -2 DM to hit rolls.

#### Support Weapons

| Weapon | TL | Minimum Range | Effective Range | Damage | Radius | Rate of Fire | Minimum Operating Crew | Availability | Cost |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Field Mortar | 3 8 11 | L M M | 2,000 metres 2 kilometres 10 kilometres | 3d6 4d6 5d6 | 6 metres 9 metres 9 metres | 6 3 3 | 2 2 1 | 8+ 9+ 9+ | 600 1,250 25,000 |
| AT Gun | 6 8 12 15 | L L M M | 2 kilometres 500 kilometres 750 kilometres 1,000 kilometres | 6d6 8d6 8d6+4 10d6 | – | 9 6 6 6 | 4 4 3 2 | 8+ 8+ 9+ 10+ | 2,000 4,000 8,000 40,000 |
| Frag Cannon | 5 8 10 | M S S | 1 kilometre 600 kilometres 750 kilometres | 5d6+5 6d6+5 8d6+5 | 5 metres 5 metres 10 metres | 12 9 6 | 6 4 3 | 9+ 9+ 10+ | 2,500 5,000 8,000 |
| MRL Pack | 6 8 10 12 | L M S S | 1 kilometre 50 kilometres 75 kilometres 100 kilometres | 4d6 5d6 5d6 6d6 | 5 metres 4 metres 4 metres 3 metres | Special | 5 4 3 2 | 9+ 9+ 10+ 10+ | 3,000 10,000 15,000 20,000 |
| Mass Driver | 10 | M | 1,000 kilometres | 10d6 | 2 metres | 4 | 3 | 9+ | 3,000 |
| Meson Accelerator | 15 | L | Line of Sight | 18d6 | 10 metres | 12 | 4 | 14+ | MCr 20 |

## Vehicles

**Assault-cycle:** A semi-enclosed, one-man armoured motorcycle that moves at very high speeds while allowing the rider to fire twin LMGs at targets that it passes by. **Gunskiff:** A mobile, gravitic gun platform that lets its passengers fire their weaponry over the somewhat precarious railing. **Hovertrak:** A bit of a misnomer, the hovertrak anti-armour tank has no ‘trak’ portion of it at all. It was originally named for the tracked version of its chassis, now obsolete with the advent of its hovering capabilities. Fully enclosed and supporting a small anti-personnel weapon, the main reason the hovertrak exists is to support its powerful anti-tank cannon turret. Few mercenary units can afford these behemoths, but those who can will never be without a job. **Gravcopter:** Fast and agile, the gravcopter uses two small gravitic generators located to either side of the passenger cabin to propel itself across the sky. It is lightly armoured and armed, mainly used to deliver troops to hard-to-reach places very quickly. **Hydrofoil:** A fast-moving boat that actually lifts above the water on a set of ski-like ‘foils’, this is the best watercraft for aquatic assaults. **Carry-All:** A huge helicopter with four massive rotors positioned at the corner of its expansive crew and cargo compartment, the Carry-All is the best way to bring a single platoon to a specific point of interest safely – albeit slowly. The passenger limit listed is an utter maximum, and can be reduced by bringing other vehicles within the cargo hold of the Carry-All. Every Hull point worth of vehicle carried by the Carry-All takes up three passengers worth of room. Unfortunately, the Carry-All cannot have the Deployment Ramps/Harnesses option added to it. **Assault Capsule:** A cylindrical vehicle designed for tunnelling under enemy lines to deliver soldiers, the assault capsule can take a squad through solid rock rather quickly. Using a dozen individual and spinning plasma-cutting devices, the capsule liquefies the ground it draws itself through. It can be used above ground like a slow-moving car, but it is better suited for underground travel. The second Speed score listed is for its tunnelling rate. **ATGT:** The All Terrain Gun Transport is nothing more than a tracked weapons platform. It carries two powerful fusion cannons into battle and allows the gunner to fire them in tandem, shielding both driver and gunner from the dangerous radiation such weapons produce. Some replace these weapons with a single meson accelerator, but such weapons are still semi-experimental and too expensive to risk.

### Options

**Radiation Shielding (TL8):** By using special alloys and aerosol medications in the crew passenger compartments of a vehicle, it can render all passengers immune to radiation while on board. This adds +10% to the vehicle’s cost and can only be used on enclosed vehicles. **ECM Shielding (TL9):** Vehicles that purchase this option are immune to the effects of ECM grenades and effects. This costs 25% of the vehicle’s total cost, and can even be added to a grav belt. **Deployment Ramps/Harnesses (TL4):** The vehicle with this option can deploy all of its passengers in a single 1-6 second action if the vehicle is held steady. This costs 100 credits per passenger-capacity of the vehicle. **Reflec Covering (TL11):** The vehicle is coated with the expensive Reflec armour polymer, a plastic made with layers of reflective material and heat-dispersing gel. It is highly effective against lasers, increasing the Armour rating by +5 against laser weaponry, but provides no other protection against other attacks. Once the vehicle has taken half (round down) of its Hull points in damage, the Reflec has torn free or burnt off, and the bonus no longer applies. This costs 1,000 credits x the sum of the Armour and Hull ratings of the vehicle.

#### Vehicles

| Vehicle | TL | Skill | Agility | Speed | Crew and Passengers | Open/Closed | Armour | Hull | Structure | Weapons | Availability | Cost |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Assault-cycle | 8 | Drive (wheeled) | +2 | 180 kph | 1 driver | Open | 9 | 2 | 1 | 2 x LMG (front) | 9+ | 35,000 |
| Gunskiff | 9 | Flyer (grav) | +0 | 150 kph | 1 driver, 12 passengers | Open | 10 | 4 | 3 | LAG (turret) | 10+ | 75,000 |
| Hovertrak | 12 | Drive (hover) | +0 | 70 kph | 1 driver, 2 gunners, 5 passengers | Closed | 18 | 8 | 6 | LMG (front) and AT Gun (turret) | 11+ | 5 MCr |
| Gravcopter | 13 | Flyer (grav) | +3 | 250 kph | 1 driver, 1 gunner, 12 passengers | Closed | 10 | 8 | 3 | Twin ACRs (turret) and MRL pack (front) | 10+ | 300,000 |
| Hydrofoil | 8 | Seafarer (ocean ships) | +1 | 135 kph | 1 driver, 8 passengers | Closed | 12 | 6 | 4 | LMG (turret) | 9+ | 50,000 |
| Carry-All | 10 | Flyer (rotor) | -2 | 100 kph | 1 pilot, 1 co-pilot, 50 passengers | Closed | 20 | 15 | 8 | 2 x Auto Cannon (turret) | 12+ | 8 MCr |
| Assault Capsule | 13 | Drive (mole) | -2 | 40 kph / 10kph | 1 pilot, 8 passengers | Closed | 18 | 6 | 4 | None | 11+ | 2 MCr |
| ATGT | 15 | Drive (tracked) | +0 | 180 kph | 1 driver, 4 gunners | Closed | 22 | 8 | 8 | 2 x Fusion Gun (front) | 13+ | 12 MCr |

# Spacecraft Design

Any class A starport has a shipyard which can build any kind of ship, including a starship with Jump drives; any class B starport can build small craft and ships which do not have Jump drives.

## The Hull

| Hull | Hull Code | Price (MegaCredits) |
| --- | --- | --- |
| 100 tons | 1 | 2 |
| 200 tons | 2 | 8 |
| 300 tons | 3 | 12 |
| 400 tons | 4 | 16 |
| 500 tons | 5 | 32 |
| 600 tons | 6 | 48 |
| 700 tons | 7 | 64 |
| 800 tons | 8 | 80 |
| 900 tons | 9 | 90 |
| 1,000 tons | A | 100 |
| 1,200 tons | C | 120 |
| 1,400 tons | E | 140 |
| 1,600 tons | G | 160 |
| 1,800 tons | J | 180 |
| 2,000 tons | L | 200 |

#### Configuration

A ship may have any of three configurations – standard (a wedge, cone, sphere or cylinder), streamlined (a wing, disc or other lifting body allowing it to enter the atmosphere easily) or distributed (made up of several sections, and incapable of entering an atmosphere or maintaining its shape under gravity). Streamlining a ship increases the cost of the hull by 10%. This streamlining includes fuel scoops which allow the skimming of unrefined fuel from gas giants or the gathering of water from open lakes or oceans. Streamlining may not be retrofitted; it must be included at the time of construction. A distributed ship reduces the cost of its hull by 10%. It is completely non-aerodynamic and if it enters an atmosphere or strong gravity it will fall to the surface of the planet. It cannot mount fuel scoops. A standard-hull ship may still enter atmosphere but is very ungainly and ponderous, capable only of making a controlled glide to the surface. Getting it back into space requires an elaborate launch setup and considerable expense. A standard-hull ship may have scoops for gathering fuel from a gas giant but the process will be much more difficult and less efficient. Larger ships of this type will often carry a specialized sub-craft   to perform the actual atmospheric skimming.

#### Armour

Armour is added in 5% increments of the ship’s tonnage.

| Armor Type | Tech Level | Protection | Cost |
| --- | --- | --- | --- |
| Titanium Steel | 7 | 2 per 5% | 5% of base hull |
| Crystaliron | 10 | 4 per 5% | 20% of base hull |
| Bonded Superdense | 14 | 6 per 5% | 50% of base hull |

### Options

**Reflec (TL 10)**: Reflec coating on the hull increases the ship’s armour against lasers by 3. Adding Reflec costs 0.1 Megacredits per ton of hull and can only be added once.

**Self-Sealing (TL 9)**: A self-sealing hull automatically repairs minor breaches such as micrometeoroid impacts, and prevents hull hits from leading to explosive decompression. It costs 0.01 Megacredits per ton of hull.

**Stealth (TL 11)**: A stealth coating absorbs radar and lidar beams, and also disguises heat emissions. This gives a -4 DM on any Sensors rolls to detect or lock onto the ship. Adding Stealth costs 0.1 Megacredits per ton of hull, and can only be added once.

#### Hull and Structure

Initial damage is applied to the Hull; once the Hull is breached, further damage goes to the Structure. When all Structure Points have been lost, the ship has been smashed to pieces. A ship has one Hull Point and one Structure Point per 50 tons of displacement.

## The Engineering Section

A non-starship must have a manoeuvre drive and a power plant. A starship must have a Jump drive and a power plant; a manoeuvre drive may also be installed, but is not required.

Drive Costs

| ‎ | J-Drive |  | M-Drive |  | P-Plant |  |
| --- | --- | --- | --- | --- | --- | --- |
| Drive Code | Tons | MCr | Tons | MCr | Tons | MCr |
| ‎ A | 10 | 10 | 2 | 4 | 4 | 8 |
| ‎ B | 15 | 20 | 3 | 8 | 7 | 16 |
| ‎ C | 20 | 30 | 5 | 12 | 10 | 24 |
| ‎ D | 25 | 40 | 7 | 16 | 13 | 32 |
| ‎ E | 30 | 50 | 9 | 20 | 16 | 40 |
| ‎ F | 35 | 60 | 11 | 24 | 19 | 48 |
| ‎ G | 40 | 70 | 13 | 28 | 22 | 56 |
| ‎ H | 45 | 80 | 15 | 32 | 25 | 64 |
| ‎ J | 50 | 90 | 17 | 36 | 28 | 72 |
| ‎ K | 65 | 100 | 19 | 40 | 31 | 80 |
| ‎ L | 60 | 110 | 21 | 44 | 34 | 88 |
| ‎ M | 65 | 120 | 23 | 48 | 37 | 96 |
| ‎ N | 70 | 130 | 25 | 52 | 40 | 104 |
| ‎ P | 75 | 140 | 27 | 56 | 43 | 112 |
| ‎ Q | 80 | 150 | 29 | 60 | 46 | 120 |
| ‎ R | 85 | 160 | 31 | 64 | 49 | 128 |
| ‎ S | 90 | 170 | 33 | 58 | 52 | 136 |
| ‎ T | 95 | 180 | 35 | 72 | 55 | 144 |
| ‎ U | 100 | 190 | 37 | 76 | 58 | 152 |
| ‎ V | 105 | 200 | 39 | 80 | 61 | 160 |
| ‎ W | 110 | 210 | 41 | 84 | 64 | 168 |
| ‎ X | 115 | 220 | 43 | 88 | 67 | 176 |
| ‎ Y | 120 | 230 | 45 | 92 | 70 | 182 |
| ‎ Z | 125 | 240 | 47 | 96 | 73 | 192 |

Performance by Hull Volume

|  | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | 2 | 1 | – | – | – | – | – | – | – | – | – | – | – | – | – |
| B | 4 | 2 | 1 | 1 | – | – | – | – | – | – | – | – | – | – | – |
| C | 6 | 3 | 2 | 1 | 1 | 1 | – | – | – | – | – | – | – | – | – |
| D | – | 4 | 2 | 2 | 1 | 1 | 1 | 1 | – | – | – | – | – | – | – |
| E | – | 5 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | – | – | – | – | – |
| F | – | 6 | 4 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | – | – | – | – |
| G | – | – | 4 | 3 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | – | – | – |
| H | – | – | 5 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | – | – |
| J | – | – | 6 | 4 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | – |
| K | – | – | – | 5 | 4 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 1 | 1 | 1 |
| L | – | – | – | 5 | 4 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 1 | 1 |
| M | – | – | – | 6 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 1 |
| N | – | – | – | 6 | 5 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 2 | 2 | 2 |
| P | – | – | – | – | 5 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 2 | 2 |
| Q | – | – | – | – | 6 | 5 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 2 |
| R | – | – | – | – | 6 | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 3 | 3 | 3 |
| S | – | – | – | – | 6 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 3 | 3 |
| T | – | – | – | – | – | 6 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 3 |
| U | – | – | – | – | – | 6 | 6 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 4 |
| V | – | – | – | – | – | 6 | 6 | 6 | 5 | 5 | 5 | 5 | 4 | 4 | 4 |
| W | – | – | – | – | – | – | 6 | 6 | 6 | 5 | 5 | 5 | 4 | 4 | 4 |
| X | – | – | – | – | – | – | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 4 | 4 |
| Y | – | – | – | – | – | – | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 4 | 4 |
| Z | – | – | – | – | – | – | 6 | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 4 |

For manoeuvre drives, the potential is the Thrust number (Tn), which is the number of Gs acceleration available. For Jump drives, the potential is the Jump number (Jn), or Jump range in parsecs. The power plant rating (A-Z) must be at least equal to either the manoeuvre drive or Jump drive rating, whichever is higher.

### Fuel

Fuel needed for a Jump depends on the size of the ship and the length of the Jump and is calculated as 0.1 x tonnage x Jump distance. A single Jump of that distance consumes that much fuel. The amount of fuel required by the power plant depends on the rating of the power plant. The fuel amounts listed will power the ship for two weeks, which is the bare minimum for a Jump-capable starship.

## The Main Compartment

The ship’s main compartment contains all non-drive features of the ship, including the bridge, ship’s computer, the staterooms, the low passage berths, the cargo hold and other items.

### Bridge

The size of the bridge varies depending on the size of the ship:

| Ship Size | Bridge Size |
| --- | --- |
| 200 tons or less | 10 tons |
| 300 tons – 1000 tons | 20 tons |
| 1100 tons – 2000 tons | 40 tons |
| More than 2000 tons | 60 tons |

The cost for this bridge is MCr. 0.5 per 100 tons of ship.

#### Computer

The computer is identified by its model number; the computer table indicates details of price, capacity, and tech level available.

| Computer | Tech Level | Rating | Cost |
| --- | --- | --- | --- |
| Model 1 | 7 | 5 | Cr. 30,000 |
| Model 2 | 9 | 10 | Cr. 160,000 |
| Model 3 | 11 | 15 | MCr. 2 |
| Model 4 | 12 | 20 | MCr. 5 |
| Model 5 | 13 | 25 | MCr. 10 |
| Model 6 | 14 | 30 | MCr. 20 |
| Model 7 | 15 | 35 | MCr. 30 |

### Options

**Jump Control Specialisation (bis)**: A computer’s rating can be increased by 5 for the purposes of running Jump Control programs only. This increases the computer’s cost by 50%. **Hardened Systems (fib)**: A computer and its connections can be hardened against attack by electromagnetic pulse weapons. A hardened system is immune to EMP, but costs 50% more. Both options can be applied to the same computer by doubling its cost (+100%).

#### Electronics

A ship comes with a basic communications, sensor and emissions-control electronics suite, but more advanced systems can be installed. The Dice Modifier applies to jamming and counter-jamming attempts.

| System | TL | DM | Includes | Tons | Cost |
| --- | --- | --- | --- | --- | --- |
| Standard | 8 | -4 | Radar, Lidar | Incldued in bridge | Included in bridge |
| Basic Civilian | 9 | -2 | Radar, Lidar | 1 | Cr. 50,000 |
| Basic Military | 10 | +0 | Radar, Lidar, Jammers | 2 | MCr. 1 |
| Advanced | 11 | +1 | Radar, Lidar, Densitometer, Jammers | 3 | MCr. 2 |
| Very Advanced | 12 | +2 | Radar, Lidar, Densitometer, Jammers, Neural Activity Sensor | 5 | MCr. 4 |

#### Staterooms

Each stateroom is sufficient for one person, displaces 4 tons, and costs Cr. 500,000. No stateroom can contain more than two persons, as it would strain the ship’s life support equipment. The tonnage and cost of the staterooms includes the life support systems needed to keep the crew alive.

#### Low Passage Berths

One low passage berth carries one low passenger, costs Cr. 50,000, and displaces one-half ton. Emergency low berths are also available; they will not carry passengers, but can be used for survival. Each costs Cr. 100,000 and displaces one ton. Each holds four persons.

#### Cargo Hold

The design plan must indicate cargo capacity. There is no cost but cargo carried may not exceed cargo capacity. Any space left over after all systems have been installed may be allocated to cargo space.

#### Fuel Scoops

Fuel scoops allow an unstreamlined ship to gather unrefined fuel from a gas giant. Streamlined ships have fuel scoops built in. Adding scoops costs Cr. 1,000,000 and requires no tonnage.

#### Fuel Processors

Fuel processors convert unrefined fuel into refined fuel. One ton of fuel processors can convert 20 tons of unrefined hydrogen into refined fuel per day. A ton of fuel processing equipment costs Cr 50,000.

#### Luxuries

Luxuries cost Cr. 100,000 per ton, and make life on board ship more pleasant. Each ton of luxuries counts as one level of the Steward skill for the purposes of carrying passengers, and therefore allows a ship to carry middle and high passage passengers without carrying a trained steward on board.

#### Ship’s Locker

Every ship has a ship’s locker. Typical equipment carried aboard will include protective clothing, vacc suits, weapons such as shotguns or pistols, ammunition, compasses and survival aids, and portable shelters. The contents of the locker are defined only when they need to be but always contains vacc suits and other useful items. The ship’s locker is usually protected by a biometric lock keyed to the ship’s officers.

## Vehicles and Drones

The tonnage and cost covers minimal hangar space, indicating the vehicle is either carried on the outer hull or in a form-fitting compartment on board. For ease of access and for storage of spare parts and equipment, many ships will allocate more space to some vehicles. **Mining Drones**: Mining drones allow a ship to mine asteroids. Each set of mining drones takes up ten tons, and allows the ship to process 1d6 x 10 tons of asteroid per working day. The tonnage allocated includes ore handling machinery, allowing the ship to take on ore and transfer it to the cargo bay. **Repair Drones**: Carrying repair drones allows a ship to make battlefield repairs with the AutoRepair software or when managed by a character with Mechanic or Engineer skills. Repair drones have the same statistics as repair robots only without an Intellect program. **Probe Drones**: Probe drones are for surveying planetary surfaces. Each ton of probe drones contains five drones. Probe drones can be dropped from orbit in disposable entry shells but must be recovered manually. Probe drones are also capable of surveying orbiting satellites, derelicts and other space debris. They can also be used as communications relays. **Escape Pods**: This covers the installation of rescue bubbles and other escape pods for the entire crew. Life Boat, Ship’s Boat, Shuttle, Pinnace, Cutter: These are all small craft, hangared either in or on the ship’s hull. Air/Raft, ATV: These are vehicles, also stored in or on the ship.

## Armaments

A ship has one hardpoint per 100 tons of ship and each weapon system takes up one hardpoint. A weapon system may include multiple weapons – for example, a triple turret contains three lasers, missile launchers, sandcasters or some combination of three weapons.

### Turrets

One turret may be attached to each hardpoint on the ship. If a turret is installed, then one ton of space must be allocated to fire control systems:

| Weapon | Tech Level | Tons | Cost (MCr.) |
| --- | --- | --- | --- |
| Single Turret | 7 | 1 | 0.2 |
| Double Turret | 8 | 1 | 0.5 |
| Triple Turret | 9 | 1 | 1 |
| Pop-Up Turret | 10 | 2 | +1 |
| Fixed Mounting | – | 0 | x 0.5 |

Single, Double and Triple turrets can hold one, two or three weapons. Pop-Up is a quality that can be applied to any type of turret – the turret is concealed in a pod or recess on the hull, and is detectable only when deployed. A ship with all its weapons in pop-up turrets looks unarmed to a casual sensor scan. Fixed Mounting weapons cannot move, are limited to firing in one direction (normally straight ahead), and are found mainly on fighters. A fixed mounting costs half as much as a turret of the same type, so a single fixed mounting costs 0.1 MCr., a double fixed mounting costs 0.25 MCr., and a triple fixed mounting costs 0.5 MCr.

Turret Weapons

| Weapon | Tech level | Optimum Range | Damage | Cost (MCr.) |
| --- | --- | --- | --- | --- |
| Pulse Laser | 7 | Short | 1d6 | 0.5 |
| Beam Laser | 7 | Medium | 2d6 | 1 |
| Particle Beam | 8 | Long | 3d6 + crew hit | 4 |
| Missile Rack | 6 | Special | Depends on missile | 0.75 |
| Sandcaster | 7 | Special | Special | 0.25 |

Missile racks need ammunition – twelve missiles take up one ton of space. A sandcaster reduces the damage from a beam weapon by 1d6. Sandcasters require ammunition. Twenty sandcaster barrels take up one ton of space, and cost 10,000 credits.

#### Bays

Bay weapons are much larger than turrets, and take up 50 tons of space and one hard point, as well as one ton of space for fire control.

| Weapon | Tech level | Optimum Range | Damage | Cost (MCr.) |
| --- | --- | --- | --- | --- |
| Missile Bank | 6 | Special | Launches 12 missiles | 12 |
| Particle Beam | 8 | Long | 6d6 + crew hit | 20 |
| Fusion Gun | 12 | Medium | 5d6 | 8 |
| Meson Gun | 11 | Long | 5d6 + crew hit | 50 |

Missile banks fire flights of twelve missiles at a time. Meson weapons are unaffected by armour, as the blast only becomes harmful after it has already passed through the hull. Meson guns also inflict an automatic radiation hit on the crew of any target struck.

#### Screens

Screens are defensive systems that protect against specific attacks.

| Screen | Tech level | Effect | Tons | Cost (MCr.) |
| --- | --- | --- | --- | --- |
| Nuclear Damper | 12 | Reduces fusion gun & nuclear missile damage by 2d6. Removes automatic crew hit from nuclear missile attacks | 50 | 50 |
| Meson Screen | 12 | Protects against meson weapon damage, reducing damage by 2d6 | 50 | 60 |

A nuclear damper reduces the damage from fusion weapons and nuclear missiles by 2d6 when affected. Meson screens block attacks from meson weapons by preventing meson decay.

## Alternative Drives

Traditionally, the only form of faster-than-light movement in Traveller has been the classic Jump drive, which always takes one week to travel a number of parsecs equal to its Jump rating and consumes a vast amount of fuel. If the Referee wishes to model other science fiction settings with their own forms of stardrive, the classic Jump drive rules may not be entirely appropriate. The alternative drives below use all the same rules as the Jump drive (mass, fuel, power consumption, range) unless otherwise stated. Some of these drives consume much less fuel or allow much faster travel than the Jump drive, so introducing these drives will vastly impact the carrying capacity of a starship, the profitability of trade, the speed of communication and so forth.

**Warp Drive**: The ship warps space around it, allowing it to move faster-than-light while staying in our universe. A warp drive does not have a maximum range – instead, the ship’s drive rating indicates the number of parsecs crossed per week of travel. Warp travel consumes fuel at twice the normal rate for the ship’s power plant rather than needing a single massive expenditure in the manner of a Jump drive.

**Teleport Drive**: The ship instantaneously jumps from one point to another. This works just like the standard Jump drive without the week-long wait in hyperspace. Instead, no time whatsoever elapses during the transition from one place to another. A teleport consumes no extra fuel but jumping is a strain on the ship’s systems and multiple successive jumps can damage the drive.

**Hyperspace Drive**: The portal drive functions by opening up a gateway into hyperspace, through which the ship can pass. When in hyperspace, the ship uses its conventional engines to travel, then opens up a second gateway back to the normal universe, effectively taking a short cut through a higher dimension. A hyperspace drive is limited by the size of the spacecraft that can pass through the portal – see the Hyperspace Portal table. A hyperspace drive consumes no extra fuel, but takes up twice as much space as a jump drive. While in hyperspace, the spacecraft moves at a rate of one parsec per day per manoeuvre drive rating.

Hyperspace Portal Size | Rating | Size | |——-:|:—–| | A | 200 | | B | 400 | | C | 800 | | D | 1000 | | E | 1200 | | F | 1400 | | G | 1600 | | H | 1800 | | J | 2000 | | K | 2200 | | L | 2400 | | M | 2600 | | N | 2800 | | P | 3000 | | Q | 3200 | | R | 3400 | | S | 3600 | | T | 3800 | | U | 4000 | | V | 4200 | | W | 4400 | | X | 4600 | | Y | 4800 | | Z | 5000 |

## Alternative Power Plants

Traveller posits the development of highly efficient fusion power plants, but other settings may use different sources of power. Unless otherwise noted, these power plants use all the same rules as the standard fusion power plants.

**Fission**: A fission plant requires radioactive elements as fuel. Fission drives only produce half as much power as a fusion drive of the same type – when calculating required power plant rating, work out the required rating for a fusion drive and then find the rating for a drive that produces twice as much power. For example, a 400 ton ship with manoeuvre and jump ratings of B requires a fusion plant with rating B. Cross-referencing B and 400 tons on the Performance by Hull Volume table gives ‘1’. A fission plant for that ship would have to be rating D or higher, as that is the minimum rating to get performance level ‘2’. Fission drive fuel costs 1,000,000 Cr. per ton. Power plants use the following table to determine how many tons of fuel they consume with a year of operation:

Fission Plant Fuel

| Power Plant | Tons of Fuel |
| --- | --- |
| A | 2 |
| B | 4 |
| C | 6 |
| D | 8 |
| E | 10 |
| F | 12 |
| G | 14 |
| H | 16 |
| J | 18 |
| K | 20 |
| L | 22 |
| M | 24 |
| N | 26 |
| P | 28 |
| Q | 30 |
| R | 32 |
| S | 34 |
| T | 36 |
| U | 38 |
| V | 40 |
| W | 42 |
| X | 44 |
| Y | 46 |
| Z | 48 |

**Antimatter**: Antimatter drives work by annihilating small amounts of hydrogen and anti-hydrogen. No tonnage needs to be allocated to fuel, but the drive must be refuelled once per month, at a cost of 5,000 Cr. per ton of drive.

# Spacecraft Operations

### Airlocks

A ship has at least one airlock per 100 tons. The average airlock is large enough for three people in vacc suits to pass through at the same time. An airlock takes ten seconds to cycle. Under normal circumstances, airlocks are locked down from the bridge and require a Very Difficult (-4) Engineer (electronics) check to override. An unlocked airlock can be triggered from outside. Airlocks generally have vacc suits, rescue bubbles and cutlasses in a ship’s locker nearby. Ships with cargo space have cargo hatches, allowing up to 10% of their cargo to be transferred at any time.

### Atmospheric Operations

A streamlined ship is designed to enter a planetary atmosphere, and can function like a conventional aircraft. Pilot or Flyer (winged) checks are required in high winds and other extreme weather. A standard-configuration ship can also enter a planet’s atmosphere, but is reliant on its thrusters to keep it aloft at all times and is extremely ungainly. Pilot checks are required for all movement and suffer a -2 DM. A distributed ship must make a Pilot check at a -4 DM when it enters an atmosphere and for every minute of flight. Each check that is failed inflicts 2d6 points of damage.

### Boarding, Docking and Landing

**Landing**: Any ship with a standard or streamlined hull may land on the surface. Unstreamlined ships suffer a -2 DM to any Pilot checks made in atmosphere while a ship with a Distributed hull suffers a -4 DM to any Pilot checks, and is likely to take severe structural damage if it lands. Landing at a starport is a Routine (+2) task for most ships taking 10-60 seconds. Most ships have landing gear, allowing them to touch down ‘in the wild’, which requires an Average (+0), Difficult (-2) or even Very Difficult (-4) check, depending on local conditions. Non-distributed ships can also land on bodies of water without sinking. Failing a landing roll means that the ship has landed improperly or even crashed.

**Docking**: Two spacecraft may dock if they are close together and neither ship attempts to resist the docking manoeuvre. Many airlock designs across charted space are compatible; for incompatible airlocks, ships extend flexible plastic docking tubes that adapt to the target airlock. Docking with another vessel is a Routine (+2) Pilot task taking 1-6 minutes. If one ship is drifting or unpowered, the difficulty rises to Difficult (-2).

**Boarding**: Hostile boarding actions are safest when the enemy ship is crippled, in which case it is a standard docking procedure. If the enemy ship is still moving, then the prospective boarders must match the target’s velocity and dock with it (a Difficult (-2) Pilot task), or else just land on the hull and either make their way to an airlock or cut through from outside.

## Costs and Maintenance

| Item | Monthly Cost (Cr.) |
| --- | --- |
| Mortgage or Debts | Varies |
| Life Support | 2,000 per stateroom (3,000 for double occupancy) 100 per low berth |
| Fuel | 500 per ton of refined fuel 100 per ton of unrefined fuel |
| Maintenance | 1/12 of 0.1% of ship’s purchase price/month |

| Crew Salaries | Credits |
| --- | --- |
| Pilot | 6,000 |
| Navigator | 5,000 |
| Engineer | 4,000 |
| Steward | 2,000 |
| Medic | 4,000 |
| Gunner | 2,000 |
| Marine | 2,000 |

**Mortgage or Debts**: If the crew are paying off debts on their spacecraft, then these debts must be paid each month. The standard terms for a ship mortgage is paying 1/240th of the cash price each month for 480 months (40 years). In effect, interest and bank financing cost a simple 120% of the final cost of the ship, and the total financed price equals 220% of the cash purchase price. Ship shares are treated as reducing the cash price of the ship, and so reduce the monthly cash payments.

**Life Support and Supplies**: Each stateroom on a ship costs Cr. 2,000 per month, occupied or not. This cost covers supplies for the life support system as well as food and water, although meals at this level will be rather spartan. Each low passage berth costs Cr. 100 per month.

**Fuel**: Fuel costs Cr. 500/ton for refined fuel, or Cr. 100/ton for unrefined fuel.

**Repairs and Maintenance**: A ship needs maintenance, which costs 0.1% (1/1000th) of the total cost of the ship per year and requires a shipyard. Maintenance should be carried out each month. If maintenance is skipped or skimped on, roll 2d6 each month, with a +DM equal to the number of months skipped. On an 8+, the ship takes damage to a random system. Roll on the system degradation table for the number of hits.

System Degradation

| Roll | Number of Hits |
| --- | --- |
| 1-3 | 1 |
| 4-5 | 2 |
| 6 | 3 |

Repair supplies cost Cr. 10,000/ton.

**Crew Salaries**: Hired crew members must be paid each month.

**Berthing Costs**: Landing at a starport incurs a cost, which varies wildly from world to world.

### Fuel

Hydrogen is obtained from water or from the atmospheres of gas giants, and refined fuel costs Cr. 500 per ton. Some out-of-the-way places only offer unrefined fuel for only Cr. 100 per ton. A ship with fuel scoops may gather fuel from bodies of water using hoses. It may also scoop hydrogen from a gas giant. Scooping takes 1-6 hours. Fuel gathered ‘in the wild’ is unrefined, but a ship with fuel processors may refine it.

## Jump Travel

A ship can only safely Jump when it is more than one hundred diameters distant from any object. Gravity can cause a Jump bubble to collapse prematurely, bringing a ship back into normal space early.

### Preparing for Jump

To Jump, the following procedures must be followed:

**Astrogation**: The Jump needs to be plotted. This is an Easy (+4) Education-based Astrogation check taking 10-60 minutes, modified by the Jump distance (thus, a Jump-4 gives a -4 DM to the check). If the check is failed, then the astrogator must plot the Jump again. A Jump cannot be made until the astrogation calculations are complete. Astrogation can be done in advance.

**Divert Power**: Firing the Jump drive is an Average (+0) Education-based Engineer (Jump drive) check taking 10-60 seconds. The Effect of this check aids the Jump roll.

**Jump!**: Roll 2d6 and add the following DMs. If the result is 0 or less, the ship misjumps (see below). If the result is 8+ the Jump is accurate. Any other result is an inaccurate Jump.

* + the Effect of the divert power Engineer check
* -2 per Jump drive hit
* -2 for using Unrefined fuel
* -8 if still within the hundred-diameter limit

### Jump Travel

A Jump carries the vessel a number of parsecs equal to the Jump number. Jumps of less than one parsec (less than three light years, or one hex) are possible, and count as Jump-1 for the purposes of astrogation and fuel expenditure. Regardless of how far the ship Jumps, it always stays in Jump Space for roughly one week (148+6d6 hours).

### Misjumps

A merciful Referee may wish to subject his players to the most survivable form of misjump, where the ship ends up 1d6 x 1d6 parsecs in a random direction.

## Life Support

### Radiation

Radiation exposure is measured in rads. Once a character has absorbed a certain number of rads, he will suffer certain effects. One problem with radiation exposure is that while physical symptoms can be treated and may heal, the radiation never goes away. The character’s rads must be tracked. Further exposure adds to what the character is already carrying around until a deadly level is reached. Accumulated rads can be removed using anti-rad drugs.

### Radiation Exposure

Characters exposed to a radiation weapon will receive a one-time dose of radiation. Entering a radioactive area or being exposed to a leak or solar flare will cause exposure each round or hour.

### Suffocation

A spacecraft with power can sustain life support for one person per stateroom for one month comfortably, and for six months at a stretch (number of staterooms x 5,000 person/hours). Without power, this drops to two weeks at most. Without life support, a character begins to suffocate, suffering 1d6 damage each minute. A character who is utterly without air (such as one who is being smothered or strangled, or who has been dumped out an airlock) suffers 1d6 damage each round instead.

## Passage

Passenger travel has been standardised into four overarching categories – high, middle, working and low.

**High Passage**: The passenger receives a stateroom and one ton of cargo space for baggage, and can expect high-quality entertainment. Each level of Steward skill (including level 0) allows the steward to effectively look after two high passage passengers on board a ship (so a character with Steward 2 could care for six passengers).

**Middle Passage**: Each level of the Steward skill (including level 0) allows the steward to care for five middle passengers. A baggage allowance of 100 kg is permitted.

**Working Passage**: This is identical to middle passage but the passenger pays his way by serving on board ship in some capacity.

**Low Passage**: There is some danger to the passenger – a Medic check is required upon opening the capsule, applying the passenger’s Endurance DM to the check. If failed, the passenger does not survive. Low passage costs includes a 10 kg baggage allowance; many commercial cryoberth units have a built-in baggage compartment. The price of passage varies depending on how far you want to go:

| Parsecs Travelled | High | Middle | Low |
| --- | --- | --- | --- |
| 1 | Cr. 6,000 | Cr. 3,000 | Cr. 1,000 |
| 2 | Cr. 12,000 | Cr. 6,000 | Cr. 1,200 |
| 3 | Cr. 20,000 | Cr. 10,000 | Cr. 1,400 |
| 4 | Cr. 30,000 | Cr. 15,000 | Cr. 1,600 |
| 5 | Cr. 40,000 | Cr. 20,000 | Cr. 1,800 |
| 6 | Cr. 50,000 | Cr. 25,000 | Cr. 2,000 |

## Repairs

Damage to a ship falls into three categories – Hull Damage, Structure Damage and System Damage. A destroyed system costs 2d6 x 10% of its original cost to repair, and cannot be repaired using spare parts.

**Hull Damage**: Hull damage can be repaired with a Mechanic check taking 1-6 hours, and consumes one ton of spare parts.

**Structure Damage**: Structure damage can only be repaired at a shipyard, and requires 1-6 weeks per point of damage. It costs 500,000 Credits per point.

**System Damage**: A damaged system can be jury-rigged back to functioning, but it will stop functioning again after 1d6 hours. Repairing a damaged system requires not only an Average skill check (Mechanic, Engineer (appropriate speciality) or Science (appropriate speciality)) taking 1-6 hours but also spare parts. The Effect of the check determines how many spare parts are required. Spare parts can be purchased at the cost of Cr. 10,000 per ton.

| Effect | Spare Parts Required |
| --- | --- |
| 1 | 1 ton |
| 2 | 0.8 tons |
| 3 | 0.6 tons |
| 4 | 0.4 tons |
| 5 | 0.2 tons |
| 6+ | None |

## Sensors

Visual sensors are electronically-enhanced telescopes. Thermal sensors pick up heat emissions. EM sensors detect power flows and transmissions. Radar/Lidar detects physical objects. It can be active or passive. If a ship is using active sensors, it is easier to detect (+2 DM to Sensors checks) but detects more about its surroundings. NAS detects neural activity and intelligence. Densitometers can determine the internal structure and makeup of an object.

## Security Systems

**Alarms**: If an alarm is tripped (hull breach, fire, door being forced open, alarm button pressed) it will alert the crew. The location of the alarm will be shown on computer displays. The average passenger ship has several crew trained in combat; military ships will carry marines. Some vessels will even have security robots who respond automatically to alarms.

**Gravity**: It is possible to alter the artificial gravity on board. Reducing gravity to zero will limit actions to the level of a character’s Zero-G skill. Gravity can also safely be increased up to 3G.

**Tranq Gas**: Some ships carry tranq gas canisters in the air vents, which can be released automatically. These flood a compartment with gas that forces an Endurance check each round, with a -1 DM per previous check. Any character who fails the Endurance check is knocked unconscious.

**Venting Atmosphere**: If a compartment is connected to an airlock, then the air can be vented from that area. Characters in that area must make a Strength check to hang on and will also begin to suffocate.

# Space Combat

Each turn in space combat lasts six minutes. If two vessels randomly encounter each other while travelling, the encounter will begin at Very Long range. More often, ships engage near a planet, where the range is Short or Medium.

* **Adjacent**: <1 km
* **Close**: 1 km-10 km
* **Short**: 10-1250 km
* **Medium**: 1250 km-10,000 km
* **Long**: 10,000 km- 25,000 km
* **Very Long**: 25,000 km – 50,000 km
* **Distant**: 50,000 km+

### Range Table

| Range | Distance | Thrust to Change | Example |
| --- | --- | --- | --- |
| Adjacent | <1 km | 1 | Docked ships |
| Close | 1 to 10 km | 1 | Nearby vessels |
| Short | 10 to 1250 km | 2 | Ships in same orbital path |
| Medium | 1250 to 10,000 km | 5 | Surface to orbit |
| Long | 10,000 km to 25,000 km | 10 | Near a planet |
| Very Long | 25,000 km to 50,000 km | 25 | Within jump limit |
| Distant | 50,000 km+ | 50 | Distant ships |

### Weapon Range Modifiers

| Weapon | Adjacent | Close | Short | Medium | Long | Very Long | Distant |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Pulse Laser | -1 | -1 | +0 | -1 | -2 | -3 | Out of range |
| Beam Laser | -2 | -1 | -1 | +0 | -1 | -1 | -2 |
| Particle Beam | -3 | -2 | -1 | -1 | +0 | -1 | -1 |
| Fusion Gun | -2 | -2 | -1 | +0 | -1 | -1 | -2 |
| Meson Gun | -4 | -3 | -2 | -1 | +0 | -1 | -2 |
| Missiles (flight time) | – | – | 1 | 1 | 2 | 5 | 10 |
| Sandcaster | -2 | +0 | -2 | Out of range | Out of range | Out of range | Out of range |

## Crew Positions

At the start of an engagement, all crew must be assigned to a position on board ship. There can be only one pilot, but other than that, any number of people can occupy the same position. **Pilot**: Flies the ship, responsible for changing course and for evasive manoeuvres. **Captain**: Commands the ship, and can use Leadership and Tactics skills. **Drive Engineer**: An engineer can be assigned to each of the M-drive and the J-drive. **Turret Gunner**: Each turret has its own gunner. A character must choose which turret he is manning at the start of the combat. **Bay Gunner**: Each bay weapon has its own gunner. **Damage Control**: A character assigned to free-floating damage control can repair any system. **Marine**: Prepares to repel boarders, or to board enemy ships. **Passenger**: Passengers are all people aboard ship who are not assigned a position and are assumed to be waiting in staterooms.

#### Automated Positions

The ship’s computer can cover several positions if it is running the appropriate software: Fire Control programs can either act gunners or aid existing gunners. A ship equipped with repair drones and Auto-Repair software acts as damage control. A ship running an Intellect program and Expert Pilot can be the pilot. A ship equipped with repair drones and running an Intellect program and Expert Engineer (M-drive or J-drive) can be a drive engineer.

## Initiative

Each ship in an engagement rolls 2d6 to determine their starting Initiative score. The ship with a greater Thrust score gains a +1 DM to its roll. The commander of each spacecraft (or each fleet, if more than one ship is involved on each side) may a Tactics (naval) check. The Effect is added to the Initiative of the spacecraft (or fleet).

## Manoeuvre Phase

In each manoeuvre phase, a ship can allocate Thrust either to movement (closing or increasing the range to a target) or manoeuvring. The amount of thrust needed to close or open by one range category is given in the Range Table – the number given is the amount of thrust needed to move from that range category to either a closer or more distant one. A ship can spend thrust over multiple rounds to close or open a range category. If two ships are travelling towards each other, then add together the Thrust allocated by both ships to movement to see how close they are to changing range categories; if one ship is trying to escape from the other then subtract the lower Thrust from the higher value to work out the effective change in position – the faster ship will either gain slightly or pull away slightly. Any thrust not allocated to movement is allocated to manoeuvring, which is done in the combat phase. Manoeuvring does not change the range to the target but allows the ship to position itself better for an attack or to avoid incoming fire.

## Combat Phase

In each combat phase, a ship may manoeuvre, fire any of its weapons, or board enemy vessels.

#### Manoeuvre

A ship can manoeuvre, dodging and weaving to evade enemy fire or to position itself for a better attack. A ship may make a number of manoeuvre actions per combat phase equal to the amount of Thrust allocated to manoeuvring. A manoeuvre action can be used to: **Dock with another vessel**: The pilot must make a successful Pilot check. If the other ship does not wish to be docked with then make opposed Pilot checks; the ship trying to dock suffers a -2 DM. When docked, boarding actions can take place. **Help line up a shot**: A pilot may attempt to aid his gunners by providing a stable firing platform along an optimum attack vector. The pilot makes a Pilot check to aid his gunners as per the normal rules on task chains. **Dodge incoming fire**: Any leftover Thrust can be spent as a reaction to dodge incoming fire.

#### Firing Beam Weapons

To fire a beam weapon, the gunner must make a successful Gunner (turret) or Gunner (capital weapons) check, modified by the range to the target. When targeted by a beam weapon, the enemy ship may react by dodging, firing sand or triggering screens (see Reactions). A gunner may fire any or all of the weapons in his turret or bay but each turret or bay may only fire once per round. If the attack is successful it will inflict damage. Damage is resolved after all attacks have been made in a round.

### Launching Missiles

Unlike beam weapons, which travel at the speed of light and so hit the enemy vessel almost instantly, missile weapons take time to cross the gulf of space. Missiles travel at Thrust 5 towards their designated target and their position can either be tracked as additional craft in the battle or, for the sake of simplicity, they can be assumed to strike after a number of turns dependent on launch range:

| Range | Turns to Impact |
| --- | --- |
| Adjacent | – |
| Close | – |
| Short | 1 |
| Medium | 1 |
| Long | 2 |
| Very Long | 5 |
| Distant | 10 |

Missiles cannot be used at Adjacent or Close range. The gunner must make a Gunner (turret) or Gunner (capital weapons) check to determine how accurate the missile launch was. The effect of the Gunner check determines the chance that the missile will strike its target when it hits.

| Gunnery check | Missile to-hit roll |
| --- | --- |
| Failed With Effect -6 or less | 11+ |
| Failed With Effect -2 to -5 | 10+ |
| Failed With Effect -1 | 9+ |
| Succeeded With Effect 0 | 8+ |
| Succeeded With Effect 1-5 | 7+ |
| Succeeded With Effect 6+ | 6+ |

A target may react to incoming missiles by dodging or point defence. This reaction does not take place until the turn the missiles arrive at their destination, so any manoeuvring or shooting must wait until then.

### Smart Missiles

The missile to-hit roll for smart missiles is always 8+ and if they miss they make another attack every turn until they are destroyed with point defence, jammed with ECM or otherwise dissuaded.

### Boarding Actions

If two ships are Adjacent or docked, then a boarding action can be attempted. If the ships are docked, then the attackers may cross over safely via airlocks. If the ships are merely adjacent, then the attackers must use thruster packs or small craft to cross over. While crossing, the attackers may be attacked with point defence weapons or by firing sand. Once across, boarding actions can be resolved using the personal combat rules or the quick boarding rules.

### Special Attacks

Several types of weapons have their own rules. **Meson Guns**: Meson guns ignore armour and always roll on the Internal Damage table. Furthermore, they also automatically inflict a radiation crew hit in addition to any other damage. **Fusion Guns**: Fusion guns inflict a radiation crew hit in addition to any other damage. The bonus radiation hit suffers a -DM equal to the ship’s armour. **Particle Beams**: Particle beams inflict a radiation crew hit in addition to any other damage. The bonus radiation hit suffers a -DM equal to the ship’s armour. **Nuclear Missiles**: Nuclear missile hits inflict a radiation crew hit in addition to their normal damage. The bonus radiation hit suffers a -DM equal to the ship’s armour. **Sandcasters**: While the primary purpose of a sandcaster is to block incoming beam attacks, they can also be used as an attack. A sandcaster has a range of Close and inflicts 1 damage.

## Reactions

A ship may react to incoming attacks. The following situations allow reactions:

* **Targeted by a beam attack**
* **Incoming missile**
* **Attempted boarding**

The ship’s Initiative determines how many times it may react in a round.

| Initiative | Reactions |
| --- | --- |
| 0-4 | 1 |
| 5-8 | 2 |
| 9-12 | 3 |
| 13+ | 4 |

### Dodge

Each dodge reaction counts as a manoeuvre and so is limited by the amount of Thrust allocated to manoeuvres. One point of Thrust allows a single dodge. To dodge, the pilot must make a Pilot check. If successful, the attack suffers a -2 DM.

### Point Defence

Turret lasers can be used to destroy incoming missiles. The missiles can only be destroyed in the moments before they strike the spacecraft as they are too small and fast-moving to effectively target at greater ranges. The gunner must make a Gunner (turrets) check against the missile. If successful, the missile is destroyed. A gunner may keep making Gunner checks against missiles until he misses an attack; each attack suffers a cumulative -1 penalty. Attacks may be directed against different incoming missiles. Point defence can also be used to destroy incoming boarders in the same way.

### Fire Sand

Turrets equipped with sandcasters can fire sand at incoming beam attacks. Each reaction spent on firing sand allows the gunner to make a Gunner (turrets) roll. If successful the damage of each beam in the incoming attack is reduced by 1d6. Resolve each beam separately. Each firing of sand costs one canister of sand. Sand can also be directed against incoming boarding parties. If the sand attack is successful, each target in the boarding party takes 8d6 damage.

### Trigger Screens

Screens can be activated as long as the commander or one of the gunners has the Gunner (screens) skill at Level 0 and the ship has the required screen type (nuclear against nuclear missiles and fusion guns; meson against meson guns). Screens reduce the damage from the attack by 2d6+the operator’s Gunnery (screens) skill. Nuclear dampers also negate radiation hits against crew from nuclear missiles and fusion guns.

## Ship Action Phase

In each ship action phase, a ship may take one ship action. Ship actions are wholly internal to the ship.

### Repair Damaged System

A character on damage control may attempt to repair a damaged system by making an Education-based Mechanic check. If the check is successful, determine how many hits are repaired:

| Mechanic Check Effect | Hits Repaired |
| --- | --- |
| 0 | 1 |
| 1-5 | 2 |
| 6+ | 3 |

A ship with repair drones and the Auto-Repair software also makes one or two repair checks in the ship action phase (unless it is being used to assist other repair attempts). The standard Auto-Repair software makes the check with a +1 DM. These are battlefield repairs only and will break down as soon as the battle is over unless repaired properly.

### Sensor Lock

A ship’s sensors operator may make an Education-based Sensors check to establish a lock on an enemy vessel. Attacks made against a vessel that has been locked onto gain a +1 DM. When using missiles the initial Gunner check gets this bonus – the individual missile to hit rolls do not benefit directly. Smart missiles are unaffected.

### Electronic Warfare

A ship’s sensors operator may attempt to jam radio communications and sensor locks by making an opposed Intelligence-based Sensors check against the sensors operator of the opposing vessel. Electronic warfare can be used to break sensor locks. Alternatively, electronic warfare can be used to attack smart missiles that are targeting the ship. The sensors operator makes a Difficult (-2) Sensors check and, if successful, a single attacking smart missile ceases attacking. The sensors operator may continue making checks to disable smart missiles until he fails one, with a cumulative -1 DM each time.

### Increase Initiative

The commander of a spacecraft may make a Leadership check and increase the Initiative of his spacecraft by the Effect of the check. This increase only applies for the following round.

### Change Positions

Any characters not doing anything else may elect to swap positions during the ship action phase. As of the next round they are considered to be manning their new position rather than their previous one.

## Damage

Systems can take a variable number of hits before being destroyed, depending on the system in question. A ship can endure one Hull damage per fifty tons, rounding down. A ship that runs out of Hull Damage will rapidly be incapacitated. A ship can endure one Structure damage per fifty tons, rounding down to a minimum of one. A ship that runs out of Structure breaks up and is completely destroyed. The effects of damage are determined by subtracting the ship’s armour from the damage rolled by the weapon, then consulting the damage table to determine the number of hits inflicted. Then roll on the Location table for each hit. A double hit applies two hits to the same location. A triple hit applies three hits to the same location.

| Damage | Effect |
| --- | --- |
| 0 or less | No damage |
| 1-4 | Single Hit |
| 5-8 | Two Single Hits |
| 9-12 | Double Hit |
| 12-16 | Three Single Hits |
| 16-20 | Two Single Hits, Double Hit |
| 21-24 | Two Double Hits |
| 24-28 | Triple Hit |
| 29-32 | Triple Hit, Single Hit |
| 33-36 | Triple Hit, Double Hit |
| 37-40 | Triple Hit, Double Hit, Single Hit |
| 41-44 | Two Triple Hits |
| For every extra three points | +1 Single Hit |
| For every extra six points | +1 Double Hit |

**Hull**: Reduce the ship’s Hull by one. If a ship’s Hull is 0, then apply the hits to the location in the same row of the Internal Damage table.

**Structure**: Reduce the ship’s Structure by one. If a ship’s Structure is reduced to 0, the ship is destroyed.

**Armour**: Reduce the ship’s armour by one. If the ship’s armour is already 0, then this counts as a Hull hit.

**Turret**: A random turret is hit.

* *First Hit:* The turret’s tracking mechanism is damaged. It can still be used, but all attacks suffer a -2 DM.
* *Second Hit:* The turret and all weapons in it are disabled.
* *Third Hit:* The turret and all weapons in it are destroyed.
* *Subsequent Hits:* Count as Hull hits.

**Bay**: A random bay is hit.

* *First Hit:* The bay’s targeting mechanism is damaged. It can still be used, but all attacks suffer a -2 DM.
* *Second Hit:* The bay weapon is disabled.
* *Third Hit:* The bay weapon is destroyed.
* *Subsequent Hits:* Count as Structure hits.

**J-Drive**: The Jump drive is hit.

* *First Hit:* All attempts at Jump suffer a -2 DM to Engineering (jump) checks.
* *Second Hit:* The jump drive is disabled.
* *Third Hit:* The jump drive is destroyed.
* *Subsequent Hits:* Count as Structure hits.

**M-Drive**: The manoeuvre drive is hit.

* *First Hit:* Reduce the ship’s thrust by one.
* *Second Hit:* Reduce the ship’s thrust by 50%.
* *Third Hit:* The drive is disabled.
* *Subsequent Hits:* Count as Hull hits.

**Power Plant**: The power plant is hit.

* *First Hit:* Damaged.
* *Second Hit:* The crew suffer a Crew Hit, rolling on the Radiation Damage column.
* *Third Hit:* The Power Plant is destroyed and the ship is disabled.
* *Subsequent Hits:* Count as Structure Hits.

**Sensors**: The sensors are hit.

* *First Hit:* -2 DM to all Sensors checks.
* *Second Hit:* Sensors are disabled preventing the ship from making Sensors checks and on making attacks on targets beyond Adjacent range.
* *Third Hit:* Sensors are destroyed.
* *Subsequent Hits:* Count as Hull hits.

**Bridge**: The bridge is hit.

* *First Hit:* The crew suffer a Crew Hit, rolling on the Normal Damage column.
* *Second Hit:* The bridge is disabled. Until the bridge is repaired, the ship cannot take any Pilot or Sensor actions, it cannot jump, and any attacks suffer a -2 DM.
* *Third Hit:* The bridge is destroyed.
* *Subsequent Hits:* Count as Structure Hits.

**Fuel**: The fuel is hit.

* *First Hit:* Causes a minor fuel leak of 1d6 tons per hour.
* *Second Hit:* Destroys 1d6 x 10% of stored fuel.
* *Third Hit:* Destroys fuel tank.
* *Subsequent Hits:* Count as Structure Hits.

**Hold**: The crago hold is hit.

* *First Hit:* Destroys 1d6 x 10% of stored cargo.
* *Second Hit:* Destroys 1d6 x 10% of stored cargo.
* *Third Hit:* Destroys cargo hold and everything in it.
* *Subsequent Hits:* Count as Structure Hits.

**Crew**: Each hit on the crew indicates that radiation or flying debris has injured one or more crew. Roll 2d6 on the appropriate column on the Crew Damage table.

| Roll | Normal Damage | Radiation Damage |
| --- | --- | --- |
| 4 or less | Lucky escape – no damage | Lucky escape – no radiation |
| 5-8 | One random crew member suffers 2d6 damage | One random crew member suffers 2d6 x 10 rads |
| 9-10 | One random crew member suffers 4d6 damage | One random crew member suffers 4d6 x 10 rads |
| 11 | All crew suffer 2d6 damage | All crew suffer 2d6 x 10 rads |
| 12 | All crew suffer 4d6 damage | All crew suffer 4d6 x 10 rads |

# Psionics

### Psionic Strength

Psionics are powered by the Psionic Strength characteristic (abbreviation Psi). This characteristic cannot be rolled or bought during character creation without the Referee’s permission. To determine a character’s Psionic Strength, roll 2d6 and subtract the number of terms served by the character in any career (Psionic Strength diminishes over time unless actively used). Using a psionic talent costs a number of Psionic Strength points, temporarily reducing the character’s total. As the Characteristic DM for all Psionic skill checks is determined by the characters’ current Psionic Strength total, it gets harder and harder to use powers as the character’s strength declines. Recovering Psionic Strength Points: Expended Psionic Strength points are recovered at the rate of one point per hour, beginning three hours after the character last used a psionic talent.

### Institute Testing

The first step is testing a character’s Psionic Strength, which is determined as described above (2d6 – number of terms served). If the character still has any Psionic Strength remaining, he can be trained. Training requires four months of work, and costs Cr. 100,000. As part of training, the character may attempt to learn any of the common psionic talents on the Psionic Training table by making a Psionic Strength check. He may attempt the talents in any order, but suffers a -1 DM per check attempted. If a character learns a talent, he gains that talent at level 0.

| Talent | Learning DM |
| --- | --- |
| Telepathy | +4 |
| Clairvoyance | +3 |
| Telekinesis | +2 |
| Awareness | +1 |
| Teleportation | +0 |
| Per previous talent acquisition check | -1 |

## Psionic Talents

There are several psionic talents, each of which works like a skill for the powers in question. A character trained in the use of psionics may develop his talents over time just as if they were normal skills. Unlike other skills, psionic talents cannot be used untrained. The most common talents are:

* Telepathy – reading minds and mental communication.
* Clairvoyance – perceiving at a distance.
* Telekinesis – mind over matter.
* Awareness – control over one’s own mind and body.
* Teleportation – moving from one point to another instantly.

Each talent grants access to all of its powers – a character with Telepathy 0 can use life detection, read surface thoughts or assault as the situation demands.

### Using A Psionic Talent

To activate a talent, the psion must make a skill check using the appropriate talent (Telepathy, Telekinesis, etc), adding his Psionic Strength characteristic DM and any other DMs. He must also spend the listed number of Psionic Strength points if he succeeds, or one point if he fails. If this cost brings him below zero Psionic Strength, then any excess points are applied to his Endurance score as damage. A character with no Psionic Strength points cannot attempt to activate a power. Using a talent in combat is a significant action. Many abilities are ranged. The Psionic Range table lists the number of points to project an ability out to a given range – these must be paid as well as any points to activate the ability. Each talent has a different set of costs, with the exception of Awareness – all Awareness abilities apply to the Psion only.

### Telepathy

Telepathy is the talent of mind-to-mind contact. It is subtle by nature but can also be used to bluntly crush the wills of those who oppose the telepath.

### Life Detection

The most elementary form of telepathy is the ability to detect the presence of other minds. Life detection enables a character to sense the presence of other minds, the number of minds present, the general type of minds (animal, human, and so on) and their approximate location. Life detection is reasonably sophisticated, and can distinguish intelligent beings from bacteria or unimportant animals in the area. It functions best at detecting intelligent minds. Shielded minds are undetectable (whether the shield is natural or artificial in origin). If an individual whom the telepath knows is ‘life detected’ he or she will be recognised. Telepathy, Psionic Strength, 10-60 seconds, Easy (+4). Costs 1+Range.

### Telempathy

The communication of emotions and basic feelings is accomplished by telempathy. This ability serves well in the handling of animals and beasts of burden but may also be applied as a psychological weapon against humans. Sending of emotions such as love, hate, fear, and others may influence other beings (although not necessarily in the manner desired). Telempathy also allows the emotions and feelings of others to be read by a character. The Effect of the check determines the strength of the projected emotion. Telepaths will always recognise when someone is using telempathy to bend their emotions but others will not. The change in mood may be dramatic and inexplicable but most people will simply ascribe it to the mercurial nature of human emotions. Shielded individuals are immune to telempathy as they are all other Telepathy powers. Telepathy, Psionic Strength, 10-60 seconds, Routine (+2). Costs 1+Range.

### Read Surface Thoughts

The most widely known feature of Telepathy is the ability to read the thoughts of other individuals. Only active, current thoughts are read by this ability, with the subject (if himself not a telepath) unaware of the activity. Individuals with telepathic ability cannot be read due to the presence of their natural shields, unless they willingly lower their shielding. The Effect of the check determines the clarity of the telepath’s perceptions. Telepathy, Psionic Strength, 10-60 seconds, Average (+0). Costs 2+Range.

### Send Thoughts

Complementary to the ability to read surface thoughts is the ability to send thoughts to others. Such individuals need not themselves be telepathic to receive such thoughts. Telepathic individuals are normally open to such transmissions, but may close their shields against them if they become bothersome or threatening. Telepathy, Psionic Strength, 10-60 seconds, Difficult (-2). Costs 2+Range.

### Probe

The application of great psionic strength will enable a telepath to delve deep into the mind of a subject and to then read his innermost thoughts. Questioning can be used in the procedure to force the subject to divulge specific information. The prober can easily determine deliberate untruths told (thought) by the subject. Probe cannot be used against a shielded mind. Again, the Effect of the check determines the clarity of the telepath’s perceptions. Telepathy, Psionic Strength, 1-6 minutes, Very Difficult (-4). Costs 4+Range.

### Assault

Violence may be dealt by a telepath. An unshielded mind, when assaulted telepathically, is rendered unconscious immediately and the character suffers 2d6 + Effect damage. Unlike normal damage, assault damage is applied to Psionic Strength (if the victim has it), then Intelligence, then Endurance. Psionic Strength and Endurance return as normal. Intelligence returns at the rate of one point per day. When a shielded mind is assaulted the two telepaths make opposed Telepathy checks. If the attacker wins, the victim suffers damage as normal. Telepathy, Psionic Strength, 1-6 seconds, Formidable (-6). Costs 8+Range.

### Shield

All telepathically able characters learn how to create a mental shield which protects the mind against unwanted telepathic interference. Shield is automatically in force at all times and requires no Psionic Strength point expenditure to maintain. However, while a telepath has his shield up he cannot use any telepathic powers either. Shield can be lowered to allow telepathic contact or to use telepathic powers – this takes a mere thought (a free action in combat).

### Clairvoyance

Clairvoyance is the general talent which allows a person to sense events at some location displaced from the viewer. There are several levels of clairvoyant ability. Clairvoyance abilities allow eavesdropping activities as well as spying and detection-free exploration of situations. While telepathic life detection will determine the presence of living minds in a closed room, for example, sense will determine if a room is occupied or empty. Clairvoyant activity cannot be sensed by others, including by other psionic individuals.

### Sense

The basic ability to sense things at some point in the distance. A character will become aware of the most rudimentary characteristics of a location when applying this ability. For example, the Referee will give a basic description, without detail: ‘a room containing four dogs’ or ‘an open plain with a tree, and no animals or men present’. The clairvoyant character must state the range at which he is applying his talent, and will generally sense the most interesting or important feature at that range. The Effect of the check determines the level of accuracy and clarity. Clairvoyance, Psionic Strength, 10-60 seconds, Routine (+2). Costs 1+Range.

### Tactical Awareness

With this ability, the character can perceive dangers and foes around him using his clairvoyant abilities. This enhanced spatial perception allows him to ignore the effects of darkness, smoke, fog or other environmental effects that impede vision. He may also detect hidden foes within range. The Effect of the check how long the enhanced awareness lasts in rounds. Clairvoyance, Psionic Strength, 1-6 seconds, Average (+0). Costs 2+Range

### Clairvoyance

This specific ability allows actual remote viewing of a situation at some displaced point. Rather than the ‘snapshot’ that sense gives, clairvoyance allows the psion to observe as if he was there in person. The clairvoyant character must state the range at which he is applying his talent. The Effect of the check determines the level of detail perceived and the duration in rounds the vision can be maintained for. Clairvoyance, Psionic Strength, 10-60 seconds, Average (+0). Costs 2+Range.

### Clairaudience

This ability is identical to clairvoyance, with the exception that it allows hearing instead of seeing. Clairvoyance, Psionic Strength, 10-60 seconds, Average (+0). Costs 2+Range.

### Clairsentience

This power combines the effects of clairvoyance and clairaudience. The character is capable of both seeing and hearing a specific situation. Clairvoyance, Psionic Strength, 10-60 seconds, Difficult (-2). Costs 3+Range.

### Telekinesis

Telekinesis is the talent which allows objects to be manipulated without physically touching them. Any manipulation is treated as if the person was physically handling the item but physical danger, pain, or other stimuli are not present. Telekinesis includes a limited amount of sensory awareness, sufficient to allow actual intelligent manipulation.

#### Telekinesis

This basic form of the talent allows the character to move objects at range. The Effect of the check determines the duration of the telekinesis in rounds. The number of points spent determines the Strength of the Telekinesis. Telekinesis, Psionic Strength, 1-6 seconds, Average (+0). Costs Strength+Range.

#### Flight

By applying telekinesis to his own body the character can fly, or at least levitate over short distances. The character can fly for a number of rounds equal to the Effect of the check at a speed of six metres per round. Telekinesis, Psionic Strength, 1-6 seconds, Average (+0). Costs 5.

#### Telekinetic Punch

Telekinesis can be used as a direct attack, smashing the foe with a blast of telekinetic force. The damage inflicted is 2d6 + the Effect of the check. Telekinesis, Psionic Strength, 1-6 seconds, Average (+0). Costs 1+Range.

#### Microkinesis

This more challenging form of telekinesis allows for fine manipulation of very small or even microscopic objects. A telekinetic can use this power to pick locks, perform microsurgery, sabotage a computer system and so forth. The range is always Personal. Telekinesis, Psionic Strength, 10-60 seconds, Difficult (-2). Costs 3.

#### Pyrokinesis

By exciting the substance of an object the character can raise its temperature, possibly even causing it to burst into flames. Roll 1d6 and add the Effect of the check.

Pyrokinesis Effect  
| Roll | Target | | ——————:|:——————————————————— | | 0-4 | Becomes warmer, but is undamaged. | | 5-8 | Is burned, suffering 1d6 damage. | | 9+ | Suffers 2d6 damage and may burst into flame if flammable. |

Telekinesis, Psionic Strength, 10-60 seconds, Difficult (-2). Costs 3+Range.

### Awareness

Awareness is the psionic talent which allows control of one’s own body. Awareness powers never have a range – they are used only on yourself.

#### Suspended Animation

Personal body activity may be suspended for varying periods of time. A character with Awareness may enter a suspended animation state (similar to cold sleep but without the intrinsic danger of death) by willing himself into it. Such a state continues for 7 days without need for food or water and with minimal air needs. Such a person could effectively travel in a low passage berth without actually undergoing cold sleep and its dangers. Suspended animation may be stopped at any time previous to its duration expiring, provided external stimulus is given to awaken the sleeper (such as a friend or a mechanical alarm). Awareness, Psionic Strength, 1-6 minutes, Average (+0). Costs 3.

#### Enhanced Awareness

By focussing his mind, the character can improve his concentration and ability to perform complex tasks. While under the effects of enhanced awareness, the character may add his Psionic Strength DM (if positive) to any skill checks. Enhanced awareness lasts until the character fails a skill check or sleeps. Awareness, Psionic Strength, 1-6 seconds, Average (+0). Costs 1.

#### Psionically Enhanced Strength

Psionic Strength points may be converted to normal Strength points on a temporary basis. The character makes the commitment, reduces his Psionic Strength by a specific number of points, and increases his physical Strength characteristic by that number. In no case may the number of Strength points gained exceed the character’s current level in Awareness, and Strength may not be increased beyond the character’s racial maximum. Psionically enhanced strength reaches its new level immediately, remains at that peak for ten minutes, and then declines at the rate of 1 Strength point per minute until the normal Strength level is reached. This power works as normal on wounded characters but their Strength returns to the wounded level rather than the normal value. It cannot be used as a ‘quick heal’. Awareness, Psionic Strength, 1-6 seconds, Average (+0). Costs boosted Strength.

#### Psionically Enhanced Endurance

Psionically enhanced endurance works in exactly the same way as psionically enhanced strength except the characteristic boosted is Endurance rather than Strength, including its lack of healing ability. Awareness, Psionic Strength, 1-6 seconds, Average (+0). Costs boosted Endurance.

#### Regeneration

Wounds and injuries may be healed rapidly. Strength, Dexterity and Endurance lost to injury, disease, poison or other trauma may be healed by the application of this ability, exchanging one Psionic Strength point to regenerate one characteristic point. Any amount of Psionic Strength may be expended with a single use of regeneration but it may not be used again until all expended Psionic Strength is recovered. Regeneration may also be applied to the growing of new limbs or organs to replace lost ones or to heal unrecovered old wounds suffered prior to psionic training. Regeneration may not be used to counteract aging. Awareness is not capable of affecting others and may not be used for healing or enhancing other characters. Awareness, Psionic Strength, 10-60 seconds, Very Difficult (-4). Costs amount healed.

#### Body Armour

By channelling psionic strength to his skeletal structure and boosting his healing rate, the character can enhance his ability to absorb damage. Body armour lasts for a number of rounds equal to the Effect of the check and provides an armour rating equal to the number of Psionic Strength points expended. This armour stacks with worn armour as normal. Awareness, Psionic Strength, 1-6 seconds, Very Difficult (-4). Costs amount healed.

### Teleportation

Teleportation is a talent which allows effectively instantaneous movement from one point to another point without regard to intervening matter. Psionic teleportation is limited to the movement of the teleported character’s body and (for highly skilled teleporters) his or her clothing and weapons. Unlike the other talents, Teleportation has only a single power: the ability to teleport yourself. Teleporting without any equipment or clothing uses the Teleportation talent with the Psionic Strength DM as a modifier. The act of teleporting takes 1-6 seconds (a significant action in combat) and costs nothing except what the psion spends on range. Teleporting with up to 10 kg of equipment or clothing is Difficult (-2 DM) and costs 2 + range Psionic Strength points. Teleporting with up to 500 kg of equipment is Very Difficult (-4 DM) and costs 4 + range Psionic Strength points. Teleportation always involves the movement of one’s body to another location. Independent items or other individuals may not be moved. Teleportation involves certain requirements in order to be accurate, and to insure obedience of the laws of physics. Preknowledge of Destination: A character must always have a mental image of his or her destination before teleporting. This mental image is acquired by personally visiting the location first (or viewing it from a distance), having the mental image implanted in one’s mind (by telepathy) by another person who has visited the destination, or by viewing the location through clairvoyance. The key to remember is that someone has to actually view the location – recorded images are not enough.

**Energy and Momentum**: Teleportation involves serious restrictions on movement in order to assure the conservation of energy and momentum. On planetary surfaces, teleportation is restricted to jumps of Very Distant range or less. Jumps at Very Distant range involve disorientation for a period of 20 to 120 seconds (2d6 x 10) after arrival. This restriction results from the law of conservation of momentum: on a rotating planet, two locations will have different rotational speeds and directions. A jump from a point on the Earth’s equator to one of its poles would result in a total velocity difference between the character and his surroundings of over 3300 kph, which would lead to a messy death in short order. Teleporting to or from vehicles travelling at high speed can also result in energy gains or losses. When teleporting into, onto or out of a fast-moving vehicle the psion takes damage as if the vehicle had rammed him at its current speed. Changes in altitude (actually all movement to locations of differing gravitational potential) will result in potential energy changes, manifesting themselves as changes in body temperature. A jump of one kilometre straight down will result in a temperature increase of 2.5 degrees Celsius; this is sufficient to cause extreme fever, brain damage, and even death. A jump up will cool the body by the same amount, with equally serious results. To be safe, a jump may not involve an elevation change of more than 400 meters, and multiple jumps should not involve a cumulative elevation change or more than 600 meters in one hour. These problems may be gotten around through the use of technological devices: energy compensators, heated suits, and other means. Characters may feel driven to invent such materials, commission their invention, or seek them out from those who already have them.

## Psionic Technology

**Psi-Drugs (TL 8+)**: These drugs restore Psionic Strength if taken when the character has already spent Psionic Strength points, or temporarily increase the character’s Psionic Strength if taken when he is at full Psionic Strength.

| Drug | Tech Level | Psionic Strength Restored | Psionic Strength Boosted | Cost (Cr.) |
| --- | --- | --- | --- | --- |
| Standard | 8 | 3 | 2 | 1,000 |
| Double | 9 | 6 | 4 | 4,000 |
| Special | 10 | 9 | 6 | 10,000 |

A character who takes more than one dose of Standard or Double Psi-Drug, or a single dose of the Special drug must make an Endurance check, with a -1 DM per dose of psi-drug taken in the last week (not including the one just taken). If the check is failed the character falls ill with a serious fever, suffering 3d6 damage and permanently reducing his Psionic Strength by one.

**Inhibitor Drug (TL 9)**: Psionic inhibitors dampen the brain’s ability to generate psychic effects. A character who takes (or, more often, is forcibly injected with) an inhibitor drug suffers a -4 DM to all Psionic Strength checks and cannot regain Psionic Strength points. Each hour the character may make an Endurance check to throw off the effects of the drug with a +1 DM for every previous check. Inhibitor drugs have no effect on non-psionic individuals. The drugs cost Cr. 500 per dose.

**Psionic Shield (TL 12)**: Any armour incorporating a helmet or hood can be outfitted with a psionic shield, blocking Telepathy. Unlike the Telepathy power shield a technological shield is invulnerable to assault and blocks send thoughts. It cannot be lowered without removing the helmet or hood containing the shield. Cr. 40,000. Buildings and vehicles can also be psionically shielded, but this is much more costly, increasing the cost by 10%.

**Teleportation Suit (TL 12)**: This device can be integrated into a suit of armour or worn as a form-hugging body-suit. It rapidly cools or warms the body after a teleport, minimising the damage from sudden energy gains or losses. The suit costs Cr. 50,000 and allows a character to jump up to 600 metres up or down in a single teleport, or up to ten kilometres in a single hour when using successive jumps.

**Psionic Interface (TL 14)**: Any weapon or technological device can be outfitted with a psionic interface. A character using a device with a psionic interface can use his Psionic Strength DM instead of his Dexterity DM when using the weapon or device; a character without psionic ability cannot use the device. The character must either touch the device or use telekinesis to interact with it at range. Adding a psionic interface increases the cost of the device by 20%.

# Trade

### Freight

Freight shipments pay Cr. 1,000 per ton for shipping a ton for one parsec, +200 Cr. per additional parsec. Freight lots must be transported in their entirety, and come in three sizes:

* Major cargos are composed of 1d6 x 10 tons of freight.
* Minor cargos are composed of 1d6 x 5 tons of freight.
* Incidental cargos are composed of 1d6 tons of freight.

To determine the number of cargos available, add the destination planet’s Population value to the modifiers from the Freight Traffic table, then consult the Freight Lots Available table. A freight lot cannot be broken up. Cargo is paid for upon delivery, assuming it is delivered on time. Failing to deliver cargo on time reduces the amount paid by 1d6+4 x 10%.

### Mail

Mail is a special form of freight, consisting of large data storage drums which contain a vast amount of information that must be transported from one world to another, but is not vital enough to be entrusted to the X-Boat service or a private courier. To determine if there is mail available, determine the applicable Mail DMs, then roll on the available mail table. Mail Dice Modifiers Freight Traffic modifier of -10 or more: -2 DM Freight Traffic modifier of -9 to -5: -1 DM Freight Traffic modifier of -4 to +4: +0 DM Freight Traffic modifier of 5 to 9: +1 DM Freight Traffic modifier of 10+: +2 DM Characters’ ship is armed: +2 DM + characters’ highest Naval or Scout rank + characters’ highest Social Standing DM World has a TL of 5 or less: -4 Roll 2d6. On a 12 or more, after modifiers, the characters can transport mail to the destination world. A mail container takes up five tons of space and the characters will be paid Cr. 25,000 for transporting the mail.

## Speculative Trade and Smuggling

### Finding a Supplier

Characters can search for multiple suppliers, but there is a -1 DM per previous attempt on a planet in a given month.

**Finding a supplier**: Broker, Education or Social Standing, 1-6 days, Average (+0).

**Finding a black market supplier**: (Illegal goods only) Streetwise, Education or Social Standing, 1-6 days, Average (+0).

**Finding an online supplier**: (Worlds with TL 8+ only) Computers, Education, 1-6 hours, Average (+0). The size of the Starport provides a bonus to finding a supplier. Class A starports give a +6 DM, class B starports give a +4 DM and class C starports give a +2 DM.

#### Determine Goods Available

Goods are divided into two categories of goods – Common and Trade Goods. Common Goods can be purchased on any world. Trade Goods can usually only be found on a world with a matching trade code. The amount of each type of goods available is limited – the tons column determines how many tons of a given type of goods are available for purchase. A given supplier has all Common Goods available, the Trade Goods that match the world’s trade code, and 1d6 randomly determined goods. Roll d66 on the table to determine the goods available, ignoring results 61-65 unless dealing with a black market supplier. If you roll the same type of goods multiple times, then the supplier has extra amounts of those goods available. Some goods are illegal, and can be purchased only through a black market supplier. A black market supplier has whatever illegal goods match his world’s trade code, as well as any randomly rolled illegal goods.

#### Determine Purchase Price

To determine the purchase price, roll 3d6 and apply the following modifiers: + the character’s Broker skill (or the local broker’s skill). + the character’s Intelligence or Social Standing DM, whichever is higher. + the largest Dice Modifier from the Purchase DM column. – the largest Dice Modifier from the Sale DM column. – any Dice Modifiers from the supplier. Some especially rich or powerful suppliers can demand high prices. In cases where multiple Purchase or Sale DMs apply, use only the largest ones from each column. Next, consult the Purchase column of the Modified Price table. The trader does not have to accept this price, but if he rejects the deal, then he cannot deal with that supplier again for at least one week. After that week, he may reroll one of the dice thrown to determine the purchase price for those goods.

| Item | Credits | Purchase DM |
| --- | --- | --- |
| Basic Electronics | 25,000 | +0 |
| Basic Machine Parts | 10,000 | +0 |
| Basic Manufactured Goods | 20,000 | +0 |
| Basic Raw Materials | 5,000 | +0 |
| Basic Vehicles | 30,000 | +0 |
| Crystals and Gems | 20,000 | +1 |
| Petrochemicals | 10,000 | +2 |
| Pharmaceuticals | 100,000 | +0 |
| Precious Metals | 50,000 | +1 |
| Radioactives | 1,000,000 | +0 |
| Spices | 6,000 | +2 |
| Uncommon Raw Materials | 20,000 | +0 |

#### Selling Goods

Selling goods works just like purchasing goods, with the following changes: A character must find a buyer, instead of a supplier. The same rules apply. When selling goods, add the largest Sale DMs for the world trade code and subtract the largest Purchase DMs. If a character does not accept the price offered for his goods, he must find another buyer or wait a week, in which case he may reroll one of the dice thrown to determine the purchase price.

# World Creation

**World Occurrence**: There is a basic one-half chance normally that a world (and its attendant stellar system) will be in a hex. Systematically check each hex on the subsector map, throwing one die and marking the hex with a circle if the result is a 4, 5, or 6. This indicates that a world is present; otherwise, leave the hex blank. The Referee may elect to alter the normal chances of worlds, making them more frequent or less frequent to correspond to specific regions of the galaxy. A 50% density (no DM) is appropriate for the spiral arms of the galaxy. Apply a -2 DM for ‘rift sectors’, a -1 DM for sparse sectors and a +1 DM for densely populated sectors.

**Starport Type**: Many worlds have starports, their presence being essential to interstellar trade and commerce.

**Bases**: Stellar systems may have bases for military forces, the navy, the scouts, or for other arms of interstellar government. Bases will also help determine political boundaries in the sector. An interstellar government will place bases along its borders to guard against aggression from rival states, or to control local systems. The presence of multiple bases within a few parsecs might indicate a contested border, or a mighty stronghold.

**Gas Giants**: A star system may have one or more gas giant planets. The presence of a gas giant allows starships equipped with fuel scoops to refuel by skimming; this eliminates fuel cost for the vessel and increases profit. It also allows refuelling at systems that do not have starports. Refuelling in this fashion requires 1-6 hours per 40 tons of fuel. Gas giants are relatively common. For each system throw 10+ on 2d6 for at least one gas giant not to be present in the system.

**Travel Zones**: Most worlds are assumed to be civilized, or at least amenable to travellers and visitors. Some, however, are caught in the throes of war, plagued by disease, or simply not ready for interstellar visitors. Such worlds are classified by travel zones to denote such status. In most cases, the Referee should indicate travel zones based on the information available. Two such zone types exist: amber and red.

**Polities**: Worlds may be independent, or part of a larger polity that spans a system or more. Polities range from loose confederations of a few worlds with common trade or defence policies or cultural links, to vast star empires containing thousand of systems and trillions of citizens. Polity borders should be drawn on the map. Note that larger polities will usually have sub-domains, which should also be marked.

**Communications Routes**: Within the subsector, local governments will have established communications routes connecting some (but not all) worlds. These routes serve as a conduit for messages between businesses and between governments as well as between people. Communications routes should be carefully drawn so as to avoid making all parts of the subsector accessible; a subsector should have some areas as backwaters for exploration and adventure. Communications routes are drawn as single lines connecting hexes on the subsector grid.

**Trade Routes**: Trade routes link worlds that have strong commercial ties. Consult the table below – if any pair of worlds matching the two columns are within four parsecs of each other, and there is a Jump-1 or Jump-2 route between them, then mark a trade route connecting those two worlds.

| Column 1 | Column 2 |
| --- | --- |
| Industrial or High Tech | Asteroid, Desert, Ice Capped, Non-Industrial |
| High Population or Rich | Agricultural, Garden, Water World |

## World Creation

The basic planetary characteristics are Size, Atmosphere, Hydrology, Population, Government, Law Level, Technology Level, Starport and Bases, and are generated using two-dice throws, with DMs applied based on other characteristics. These characteristics establish the basic identity of a world, and are referred to as the Universal World Profile (UWP). Additional information can be generated, and should be, to more fully describe a world.

## Size

The Size characteristic for inhabitable worlds ranges from 0 to 10, and is determined by rolling 2d6-2.

Size Table | Digit | World Size | Surface Gravity (gs) | | ——:|:———-:|:——————– | | 0 | 800 km | Negligible | | 1 | 1,600 km | 0.05 | | 2 | 3,200 km | 0.15 | | 3 | 4,800 km | 0.25 | | 4 | 6,400 km | 0.35 | | 5 | 8,000 km | 0.45 | | 6 | 9,600 km | 0.7 | | 7 | 11,200 km | 0.9 | | 8 | 12,800 km | 1.0 | | 9 | 14,400 km | 1.25 | | 10 (A) | 16,000 km | 1.4 |

#### High and Low Gravity Worlds

Worlds where the gravity is 0.75 or less are low-gravity worlds. Common features include improbable-looking rock formations, thin and spindly life forms and flying as a common form of locomotion (assuming the atmosphere is thick enough to support flyers). Humans tend to find life on low-gravity worlds to be initially pleasant, but regular exercise regimes and medicinal supplements are required to prevent bone and muscle degradation. Those who spent too long on low-gravity worlds cannot tolerate higher gravities. Characters on low-gravity worlds suffer a -1 DM to all skill checks until they acclimatise, a process which takes 1d6 weeks. Characters with the Zero-G skill at level 0 or better acclimatise instantly. High-gravity worlds have a gravity 1.25 times or more than of Earth. They tend to be extremely dense worlds; common features include wide rocky plains, squat, muscular creatures, and plant life that spreads out like lichen instead of growing up. Crawling, burrowing or swimming are the commonest forms of locomotion. Humans find high-gravity worlds unpleasant. Especially high-gravity worlds require the use of pressured or powered suits to support the human frame. Characters on high-gravity worlds suffer a -1 DM to all skill checks until they acclimatise, a process which takes 1d6 weeks.

## Atmosphere

A planet’s Atmosphere is generated by rolling 2d6-7 and adding the planet’s Size.

#### Atmosphere Types

**Tainted**: Tainted atmospheres contain some element that is harmful to humans, such as an unusually high proportion of carbon dioxide. A character who breathes a tainted atmosphere without a filter will suffer 1d6 damage every few minutes (or hours, depending on the level of taint).

**Exotic**: An exotic atmosphere is unbreathable by humans, but is not otherwise hazardous. A character needs an air supply to breath in an exotic atmosphere.

**Corrosive**: Corrosive atmospheres are highly dangerous. A character who breathes in a corrosive atmosphere will suffer 1d6 damage each round.

**Insidious**: An insidious atmosphere is like a corrosive one, but it is so corrosive that it attacks equipment as well. The chief danger in an insidious atmosphere is that the toxic gases will destroy the seals and filters on the character’s protective gear. An insidious atmosphere worms its way past protection after 2d6 hours on average, although vigilant maintenance or advanced protective gear can prolong survival times.

Atmosphere Table

| Digit | Atmosphere | Pressure | Survival Gear Required |
| --- | --- | --- | --- |
| 0 | None | 0.00 | Vacc Suit |
| 1 | Trace | 0.001 to 0.09 | Vacc Suit |
| 2 | Very Thin, Tainted | 0.1 to 0.42 | Respirator, Filter |
| 3 | Very Thin | 0.1 to 0.42 | Respirator |
| 4 | Thin, Tainted | 0.43 to 0.7 | Filter |
| 5 | Thin | 0.43 to 0.7 |  |
| 6 | Standard | 0.71-1.49 |  |
| 7 | Standard, Tainted | 0.71-1.49 | Filter |
| 8 | Dense | 1.5 to 2.49 |  |
| 9 | Dense, Tainted | 1.5 to 2.49 | Filter |
| 10 (A) | Exotic | Varies | Air Supply |
| 11 (B) | Corrosive | Varies | Vacc Suit |
| 12 (C) | Insidious | Varies | Vacc Suit |
| 13 (D) | Dense, High | 2.5+ |  |
| 14 (E) | Thin, Low | 0.5 or less |  |
| 15 (F) | Unusual | Varies | Varies |

**Dense, High (D)**: These worlds have thick N2/O2 atmospheres, but their mean surface pressure is too high to support unprotected human life (high pressure nitrogen and oxygen are deadly to humans). However, pressure naturally decreases with increasing altitude, so if there are highlands at the right altitude the pressure may drop enough to support human life. Alternatively, there may not be any topography high enough for humans to inhabit, necessitating floating gravitic or dirigible habitats or sealed habitats on the surface.

**Thin, Low (E)**: The opposite of the Dense, High atmosphere, these massive worlds have thin N2/O2 atmospheres that settle in the lowlands and depressions and are only breathable there – the pressure drops off so rapidly with altitude that the highest topographic points of the surface may be close to vacuum.

**Unusual (F)**: An Unusual atmosphere is a catchall term for an atmosphere that behaves in a strange manner. Examples include ellipsoidal atmospheres, which are thin at the poles and dense at the equator; Panthalassic worlds composed of a rocky core surrounded by a water layer hundreds of kilometres thick; worlds wracked by storms so intense that that the local air pressure changes from dense to thin depending on the current wearther; and other planets with unusual and hazardous atmospheric conditions.

## Hydrographics

Hydrographic percentage is obtained by rolling 2d6-7 and adding the planet’s Size, modified by the planet’s atmosphere or size as described below:

|  |  |
| --- | --- |
| Size 0 or 1 | Hydrographics 0 |
| Atmosphere 0, 1, A, B or C | -4 |

If the planet’s atmosphere is not D (or a kind of F that is thick enough to retain water) then also apply DMs for temperature:

|  |  |
| --- | --- |
| Hot Temperature | -2 |
| Roasting Temperature | -6 |

Hydrographics Table

| Digit | Hydrographic Percentage | Description |
| --- | --- | --- |
| 0 | 0%-5% | Desert world |
| 1 | 6%-15% | Dry world |
| 2 | 16%-25% | A few small seas. |
| 3 | 26%-35% | Small seas and oceans. |
| 4 | 36%-45% | Wet world |
| 5 | 46%-55% | Large oceans |
| 6 | 56%-65% |  |
| 7 | 66%-75% | Earth-like world |
| 8 | 76%-85% | Water world |
| 9 | 86%-95% | Only a few small islands and archipelagos. |
| 10 (A) | 96-100% | Almost entirely water. |

## Population

Population is generated by rolling 2d6-2:

Population Table

| Digit | Population | Range | Description |
| --- | --- | --- | --- |
| 0 | None | 0 |  |
| 1 | Few | 1+ | A tiny farmstead or a single family |
| 2 | Hundreds | 100+ | A village |
| 3 | Thousands | 1,000+ |  |
| 4 | Tens of thousands | 10,000+ | Small town |
| 5 | Hundreds of thousands | 100,000+ | Average city |
| 6 | Millions | 1,000,000+ |  |
| 7 | Tens of millions | 10,000,000+ | Large city |
| 8 | Hundreds of millions | 100,000,000+ |  |
| 9 | Billions | 1,000,000,000+ | Present day Earth |
| 10 (A) | Tens of billions | 10,000,000,000+ |  |
| 11 (B) | Hundreds of billions | 100,000,000,000+ | Incredibly crowded world |
| 12 (C) | Trillions | 1,000,000,000,000+ | World-city |

If a world has a population of 0, it is uninhabited and so has a Government, Law Level and Technology Level of 0.

## Government

The Government characteristic is determined by rolling 2d6-7 and adding the planet’s Population.

Government Table | Digit | Population | | ——:|:————————— | | 0 | None | | 1 | Company/Corporation | | 2 | Participating Democracy | | 3 | Self-Perpetuating Oligarchy | | 4 | Representative Democracy | | 5 | Feudal Technocracy | | 6 | Captive Government | | 7 | Balkanisation | | 8 | Civil Service Bureaucracy | | 9 | Impersonal Bureaucracy | | 10 (A) | Charismatic Dictator | | 11 (B) | Non-Charistmatic Dictator | | 12 (C) | Charismatic Oligarchy | | 13 (D) | Religious Dictatorship |

#### Rivals, Factions, Connections and Colonies

Roll 1d3 to determine how many factions there are on the planet, with a DM of +1 if the government type is 0 or 7, and a DM of -1 if the government type is 10 or more. Determine what ‘mini-government’ each faction uses on the government table. In cases where the faction type is the same as the current government type, then it is a splinter faction within the ruling government. In cases where it is radically different, then the faction is a rebel group or movement. Roll 2d6 to determine the strength of each faction:

Faction Strength Tabl | Roll | Relative Strength | | —–:|:—————————————————————- | | 1-3 | Obscure group – few have heard of them, no popular support | | 4-5 | Fringe group – few supporters | | 6-7 | Minor group – some supporters | | 8-9 | Notable group – significant support, well known | | 10-11 | Significant – nearly as powerful as the government | | 12 | Overwhelming popular support – more powerful than the government |

## Law Level

Law level is determined by rolling 2d6-7 and adding the Government characteristic.

Law Level Table – Illegal Possessions

| Digit | Weapons | Drugs | Information | Technology | Travellers | Psionics |
| --- | --- | --- | --- | --- | --- | --- |
| 0 | No restrictions. |  |  |  |  |  |
| 1 | Poison gas, explosives, undetectable weapons, WMD | Highly addictive and dangerous narcotics | Intellect programs | Dangerous technologies such as nanotechnology | Visitors must contact planetary authorities by radio, landing is permitted anywhere | Dangerous talents must be registered. |
| 2 | Portable energy weapons (except ship-mounted weapons) | Highly addictive narcotics | Agent programs | Alien technology | Visitors must report passenger manifest, landing is permitted anywhere | All psionic powers must be registered; use of dangerous powers forbidden. |
| 3 | Heavy weapons | Combat drugs | Intrusion programs | TL 15 items | Landing only at starport or other authorised sites | Use of telepathy restricted to government-approved telepaths |
| 4 | Light assault weapons and submachine guns | Addictive narcotics | Security programs | TL 13 items | Landing only at starport | Use of teleportation and clairvoyance restricted |
| 5 | Personal concealable weapons | Anagathics | Expert programs | TL 11 items | Citizens must register offworld travel, visitors must register all business | Use of all psionic powers restricted to government psionicists |
| 6 | All firearms except shotguns and stunners; carrying weapons discouraged | Fast and Slow drugs | Recent news from offworld. | TL 9 items | Visits discouraged; excessive contact with citizens forbidden | Possession of psionic drugs banned |
| 7 | Shotguns | All narcotics | Library programs, unfiltered data about other worlds. Free speech curtailed. | TL 7 items | Citizens may not leave planet; visitors may not leave starport | Use of psionics forbidden |
| 8 | All bladed weapons, stunners | Medicinal drugs | Information technology, any non-critical data from offworld, personal media. | TL 5 items | Landing permitted only to imperial agents | Psionic-related technology banned |
| 9+ | Any weapons | All drugs | Any data from offworld. No free press. | TL 3 items | No offworlders permitted | All psionics |

#### The Law and Travellers

In each of the following situations, roll 2d6, add the listed modifiers, and if the total is lower than the planet’s Law Level, the characters are investigated or challenged by agents of planetary law enforcement.

| Situation | DM | Response |
| --- | --- | --- |
| First approach to a planet | +0 | Check |
| Offworlders wandering the streets of a city (once per day) | +0 | Check |
| Offworlders acting suspiciously | -1 | Check |
| Bar fight | -1 | Combat |
| Shots fired | -2 | Combat |
| Breaking and entering | -2 | Investigate |
| Firefight involving armoured characters and military weapons | -4 | Combat |
| Murder and carnage | -4 | Investigate |

Check means that the characters’ travel documents and identities are checked, either by a police officer or guard, or by electronically by querying the characters’ comms. A successful Admin or Streetwise roll can allay suspicion but if this check is failed the planetary authorities move on to Investigation. Investigate means that a detective or bureaucrat probes deeper into the characters’ backgrounds. If the characters have a ship, it will be searched. They may be followed, or have their communications tapped. They may also be questioned closely. Finally, Combat means that the police show up ready for a fight. Their response will generally be proportional to the threat posed by the player characters; if the characters are just making trouble in a bar, then most police forces will just use batons, stunners, tranq gas and other non-lethal weapons. On the other hand, if the characters are in Battle Dress and firing PGMPs at the palace of the planetary duke, then the police will show up with the best weapons and armour available at the planet’s TL (or even a few levels higher). Characters arrested for a crime will face punishment, determined by rolling 2d6+DMs on the Sentencing table. For crimes involving smuggling banned goods, the DM is equal to the difference between the planet’s law level and the banned goods in question. Other crimes have a set DM:

|  |  |
| --- | --- |
| Assault | Law level -5 |
| Destruction of Property | Law level -3 |
| False Identity | Law level -2 |
| Manslaughter | Law level -1 |
| Murder | Law level +0 |

A character with the Advocate skill may attempt to reduce the severity of sentencing by making a check. If successful, reduce the Sentencing DM by the Effect of the check.

| Sentencing Roll | Sentence |
| --- | --- |
| 0 or less | Dismissed or trivial punishment |
| 1-2 | Fine of 1d6 x 1,000 credits |
| 3-4 | Fine of 2d6 x 5,000 credits |
| 5-6 | Exile or a fine of 2d6 x 10,000 credits |
| 7-8 | Imprisonment for 1d6 months or exile or fine of 2d6 x 20,000 credits |
| 9-10 | Imprisonment for 1d6 years or exile |
| 11-12 | Imprisonment for 2d6 years or exile |
| 13-14 | Life imprisonment |
| 15+ | Death |

A result of Exile means that the character must leave the planet immediately and never return. Fines for smuggling goods are per ton of goods seized – gun running can be an extremely risky proposition.

## Starport

To determine the level of a starport on a planet, roll 2d6:

Starport Table | Roll | Starport Class | | ———:|:————– | | 2 or less | X | | 3 | E | | 4 | E | | 5 | D | | 6 | D | | 7 | C | | 8 | C | | 9 | B | | 10 | B | | 11+ | A |

## Technology Level

The Technology Level of the planet is determined by rolling 1d6 and adding DMs as follows:

| Rating | Starport DM | Size DM | Atmosphere DM | Hydro DM | Population DM | Government DM |
| --- | --- | --- | --- | --- | --- | --- |
| 0 |  | 2 | 1 | 1 |  | 1 |
| 1 |  | 2 | 1 |  | 1 |  |
| 2 |  | 1 | 1 |  | 1 |  |
| 3 |  | 1 | 1 |  | 1 |  |
| 4 |  | 1 |  |  | 1 |  |
| 5 |  |  |  |  | 1 | 1 |
| 6 |  |  |  |  |  |  |
| 7 |  |  |  |  |  | 2 |
| 8 |  |  |  |  |  |  |
| 9 |  |  |  | 1 | 1 |  |
| 10 (A) | 6 |  | 1 | 2 | 2 |  |
| 11 (B) | 4 |  | 1 |  | 3 |  |
| 12 (C) | 2 |  | 1 |  | 4 |  |
| 13 (D) |  |  | 1 |  |  | -2 |
| 14 (E) |  |  | 1 |  |  | -2 |
| 15 (F) |  |  | 1 |  |  |  |
| X | -4 |  |  |  |  |  |

## Bases

**Naval**: A naval base is a supply depot, refuelling station, repair yard or fortress of the Navy. Naval vessels can obtain refined fuel and supplies here.

**Scout**: A scout base offers refined fuel and supplies to scout ships.

**Research**: A Research base is dedicated to a particular field of research.

**Consulate**: A consulate is an administration office for various departments such as commerce, justice and foreign affairs. Characters wishing to report significant crimes or obtain various permits will need to visit a consulate.

**Pirate**: The presence of a pirate base in a system indicates that a group of thieves is active in the area. Pirates are unlikely to be operating out of the starport itself (except on a Law Level 0 world), but no doubt have agents at the port on the look-out for likely prey.

## Travel Codes

There are two travel codes – Amber and Red. An Amber world has been deemed dangerous, and travellers are warned to be on their guard. Amber worlds are often undergoing upheaval or revolution, or else are naturally hazardous environments. Red worlds are interdicted and travel to them is forbidden. A world might be Red because the world is too dangerous to allow visitors. Interdictions are enforced by the Navy. A world with an Atmosphere of 10+, a government of 0, 7 or 10, or a Law Level of 0 or 9+ should be considered for Amber status. Red codes are given out at the discretion of the Referee.

## Variations

The preceding world creation system is geared towards the default Traveller setting of the Third Imperium. Interstellar empires are centrally planned and locally managed, travel between worlds take days rather than minutes or years, and life is everywhere with just enough intelligent alien species to be interesting. However, there are two other common milieus for science fiction roleplaying: ‘space opera’ and ‘hard science’. Space opera campaigns tend to focus on fewer key worlds and so randomly generated worlds are less likely to be habitable. Hard science campaigns tend to require a rugged individuality and a frontier spirit; slower travel times bleed over to require more generally self-sufficient worlds. In hard science settings, starports are typically built, owned and operated by the host world rather than some central governing power.

#### Space Opera World Creation

When generating a mainworld for a space opera setting, generate Size and Atmosphere as normal then consult the following if Size is 4 or less:

* If Size is 0-2, Atmosphere is set to 0. The world is too small to retain an atmosphere.
* If Size is 3-4 and Atmopshere is 0-2, set Atmosphere to 0.
* If Size is 3-4 and Atmosphere is 3-5, set Atmosphere to 1.
* If Size is 3-4 and Atmopshere is 6+, set Atmosphere to A.

Hydrographics is also affected. Apply the following DMs to rolls on the Hydrographics Table:

* If Size is 3-4 and Atmosphere is A the DM is -6.
* If Atmosphere is 0-1 the DM is -6.
* If Atmosphere is 2-3, B or C the DM is -4.

#### Hard Science World Creation

Hard science worlds use the space opera modifiers above, plus additional Dice Modifi ers to Population based on the Size and Atmosphere as follows:

* If Size is 0-2 (low gravity world) then the DM is -1.
* If Size is A (high gravity world) then the DM is -1.
* If Atmosphere is not 5, 6 or 8 then the DM is -1.
* If Atmosphere is 5, 6 or 8 then the DM is +1.

In addition, the population of a world has an affect on the class of the local starport. Instead of rolling 2d6 on the Starport Table, roll 2d6-7 and add the Population value.

## Trade Codes



Trade Codes Table | Classifification | Code | Size | Atmos | Hydro | Pop. | Gov. | Law | TL | |—————–:|:—-:|:—-:|:————:|:—–:|:—-:|:—-:|:—:|:—:| | Agricultural | Ag | | 4-9 | 4-8 | 5-7 | | | | | Asteroid | As | 0 | 0 | 0 | | | | | | Barren | Ba | | | | 0 | 0 | 0 | | | Desert | De | | 2+ | 0 | | | | | | Fluid Oceans | Fl | | 10+ | 1+ | | | | | | Garden | Ga | | 5+ | 4-9 | 4-8 | | | | | High Population | Hi | | | | 9+ | | | | | High Technology | Hi | | | | | | | 12+ | | Ice-Capped | Ic | | 0-1 | 1+ | | | | | | Industrial | In | | 0-2, 4, 7, 9 | | 9+ | | | | | Low Population | Lo | | | | 1-3 | | | | | Low Technology | Lt | | | | | | | 5- | | Non-Agricultural | Na | | 0-3 | 0-3 | 6+ | | | | | Non-Industrial | Ni | | | | 4-6 | | | | | Poor | Po | | 2-5 | 0-3 | | | | | | Rich | Ri | | 6, 8 | | 6-8 | | | | | Water World | Wa | | | 10 | | | | | | Vacuum | Va | | 0 | | | | | |

## Battle System – Large Scale Conflict in Traveller

There are eight types of units in the Battle System engagement rules. They are as follows:

* **Infantry** – Any basic combat unit made up of men on foot or single-driver vehicles (bikes, sleds and so one) equipped with rifles, energy weapons and other automatic firepower.
* **Heavy Infantry** – Any combat unit wearing Battle Dress and equipped with Heavy Weapons.
* **Close Quarters** – Any combat unit equipped solely with pistols, melee or natural weaponry.
* **Vehicle** – Any unit consisting of a small number of individual multi-crew vehicles (AFVs, hovertraks, etc.) or single larger vehicles (tanks, grav carrier, etc.).
* **Artillery** – Any unit of long-range weaponry used to attack the enemy from the farthest limits of the battlefield; also a unit of Artillery Battle Dress soldiers.
* **Ortillery** – Space based artillery, normally only available to one side in a battle. Less accurate than regular artillery, but deadly and immune to enemy fire from the ground.
* **Close Air Support (CAS)** – Aircraft of any sort that support land troops. These can include aeroplanes, helicopters and grav vehicles designed for this role.
* **Command** – The primary leadership centre of the entire force.

### Creating A Military Force

### Unit Statistics

Once the make up of an army is decided there are a number of statistics for each unit that need to be noted. They are as follows:

* **Unit Type (Infantry, Artillery and so on)**
* **Unit Strength (numbers of men)**
* **Unit Rating**
* **Morale**
* **Tech Level**

#### Unit Strengths

| Init Size | Maximum Members in Unit |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Infantry | Heavy Infantry | Close Quarters | Vehicle | Artillery | Ortillery1 | CAS | Command |  |
| 1 Fire Team | 10 | 5 | 20 | 1 | 1 | 1 | 1 | 5 |
| 2 Squad | 20 | 10 | 50 | 2 | 2 | 1 | 2 | 8 |
| 3 Platoon | 40 | 20 | 100 | 4 | 3 | 1 | 4 | 10 |
| 4 Company | 100 | 50 | 500 | 12 | 4 | 1 | 8 | 15 |
| 5 Battalion | 500 | 100 | 1000 | 36 | 5 | 1 | 12 | 20 |
| 6 Regiment | 1000 | 200 | 1500 | 72 | 6 | 1 | 16 | 35 |

1 Ortillery normally takes the form of a starship in orbit and can represent anything from a small patrol ship to a squadron of cruisers to a huge dreadnought.

#### Unit Skill

| Skill Rating | Description | Average Skill |
| --- | --- | --- |
| 1 | Raw (militia, untrained conscripts) | 0 |
| 2 | Trained (unbloodied troops) | 0 |
| 3 | Regular (professional soldiers with a smattering of troops with combat experience) | 1 |
| 4 | Veteran (experienced troops, most with plenty of combat experience) | 2 |
| 5 | Elite (special forces) | 3 |

#### Unit Type

This is simply determined by what manner of members make up the unit; Infantry, vehicles and so on.

#### Member Strength

This is the effective number of members in the unit. This is also the number of ‘hits’ the unit can withstand before being destroyed.

#### Unit Rating

The unit rating also reflects the average skill levels of the troops. Raw troops will have a few individuals with skill 0, but many without any skill whatsoever. Trained will all be of skill 0, whilst elites will have a skill of 3, on average (and on very rare occasions, even more than this). Different units are specialised in different skills, as shown below. The defining skill of the units is calculated using the base average of the unit members.

* Infantry – Gun Combat (any non-pistol)
* Heavy Infantry – Heavy Weapons
* Close Quarters – Melee (any) or Gun Combat (any pistol)
* Vehicle – Drive, Flyer or Seafarer (depending on the type of vehicles)
* Artillery – Heavy Weapons (field artillery)
* Ortillery – Gunner (any)
* Close Air Support – Flyer (any)
* Command – Tactics and Leadership

#### Unit Morale

Unlike personal Morale (see earlier in this chapter), this statistic is based partially on the skill of the unit and their faith in the commands of the force commander. The Unit Morale of each unit is calculated by adding the Unit Rating number to the Unit Size plus the Leadership skill of the primary Command unit of the army. If, during battle, a unit’s morale reaches 0 it is broken and will attempt to flee the field or surrender, depending on the circumstances on the battlefield.

#### Tech Level

All units equipped to Tech Level 3 or less are considered to be Close Quarters units.

#### Deployment Zone

Each force has three deployment zones in which to place its forces. These are named Front Line, Reserves and Support, any unit may be placed in any of these zones, apart from Close Air Support and Ortillery, which are always assumed to start in the Support zone.

#### Placing the Units on the Battlefield

Once all of an army’s units have been formed, rated and recorded in order to keep track of their statistics, the force commander (or the commanding player) will decide where exactly on the battlefield the units will begin. They, of course, will be allowed to move once a battle has begun. Ortillery units are not considered to be on the battlefield, as such, bringing their devastating firepower down upon their enemies from the safety of orbit. They are, for convenience, positioned in the Support Zone of their army. Close Air Support units are held in reserve, they do not enter the battlefield until their commander decides they are required and when they do appear it will be in their own Support zone.

### Execution of Battle

The Execution of Battle phase comprises of the following phases.

* **Command Phase** – Deciding which and how many units will act this round
* **Action Phase** – Giving units their actions and recording the results
* **Morale Phase** – Recording the Morale losses or gains of each unit, recording broken units
* **Withdrawal Phase (optional)** – Force commanders may decide to flee from combat

### Command Phase

Both sides’ primary Command Units must roll a Leadership throw 8+ to determine the number of Unit Actions the army will receive this round. If successful, the army is allowed the Command Unit’s Tactics level plus the Effect of the throw in Unit Actions. If a failure, the army simply receives the Command Unit’s Tactics level in actions instead. This is a very important throw for the army, and the primary Command Unit should be protected because of it. A Command Unit will receive a +1DM to the Leadership roll if they are situated within their Reserves zone, being closer to the action they will be able to judge the situation on the ground that much more clearly. However being closer to the front lines also means that they are more likely to become subject to enemy attacks. The Command Unit can choose to use these Unit Actions as it sees fit during the Action Phase. Unused Unit Actions are not carried over from round to round, and must be used or wasted. If an army is without a Command Unit at all during the Command Phase, every unit in the army immediately loses one point of Unit Morale and must each pass a Unit Morale test in order to take a Unit Action with a -1 DM. Losing the command element of an army is often the breaking point of the conflict, and few armies last long after that happens. The Command Unit can also try call up any CAS units he wishes to use during his Command Phase, needing to roll Tactics 8+. The Effect of the roll should be noted, this is how many Battle Rounds the CAS can stay before they have to leave the battlefield to replenish fuel and munitions. A failed roll means the unit is delayed and the Command unit can try again the following Battle Round.

### Secondary Command Units

Should the primary Command Unit be destroyed or broken, the secondary Command Unit takes control and becomes primary. However, the unexpected re-structuring process is harmful to the chain of command, and the Tactics and Leadership skills of the unit are reduced by 1 (minimum of 0).

### Action Phase

The Action Phase begins with each commander choosing to spend Unit Actions on their army’s individual units. Each unit may accept up to 2 Unit Actions in this manner, each one chosen as an Attack or Manoeuvre action. A unit may only use one Manoeuvre action each round, but is not limited on its Attack capability. Thus, a unit could Attack twice with two Unit Actions, Manoeuvre and Attack with two Unit Actions, or Manoeuvre or Attack with one Unit Action. The force commander with the most Unit Actions rolled (or the highest Tactics level in the case of a tie) chooses one of his units with Unit Actions this round and activates them. Once they have finished their first (or only) Unit Action, the enemy commander may then do the same. This order continues until all Unit Actions have been taken. Once the Unit Actions have been spent or assigned, the force commanders can take turns performing them. It is important to note that all units that have been given two Unit Actions cannot perform their second Unit Action until after all other units with Unit Actions have performed their first.

#### Range Attack Modifiers

|  |  |  | Range |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Unit Type | 0 | 1 | 2 | 3 | 4 | 5 |
| Infantry | +0 | +1 | -1 | -2 | – | – |
| Heavy Infantry | +1 | +1 | +2 | +0 | +0 | – |
| Close Quarters | +1 | +0 | – | – | – | – |
| Vehicle | -1 | +0 | +2 | +1 | +0 | -1 |
| Artillery | – | -1 | +1 | +2 | +2 | +2 |
| Ortillery | +1 | +1 | +1 | +1 | +1 | +1 |
| CAS | +2 | +2 | +1 | +1 | +0 | -1 |
| Command | +1 | +1 | +1 | +0 | +0 | – |

#### Attack Difficulty (Unit vs. Unit)

|  |  |  |  |  | Defending | Unit |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Attacking Unit |  | Infantry | Heavy Infantry | Close Quarters | Vehicles | Artillery | Ortillery | CAS | Command |
| Infantry | 8+ | 9+ | 8+ | 10+ | 8+ | – | 9+ | 9+ |  |
| Heavy Infantry | 7+ | 8+ | 8+ | 9+ | 8+ | – | 10+ | 9+ |  |
| Close Quarters | 8+ | 9+ | 9+ | 10+ | 8+ | – | 11+ | 8+ |  |
| Vehicles | 8+ | 8+ | 7+ | 9+ | 8+ | – | 10+ | 9+ |  |
| Artillery | 7+ | 8+ | 8+ | 9+ | 10+ | – | 11+ | 10+ |  |
| Ortillery | 8+ | 9+ | 9+ | 10+ | 11+ | – | – | 11+ |  |
| CAS | 7+ | 8+ | 7+ | 9+ | 8+ | – | 9+ | 8+ |  |
| Command | 9+ | 10+ | 8+ | 10+ | 8+ | – | 11+ | 9+ |  |

#### Unit Damage

| Attacking Unit |  | Target Unit |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Infantry | Heavy Infantry | Close Quarters | Vehicles | Artillery | Ortillery | CAS | Command |  |
| Infantry | +0 | -2 | +1 | -3 | -1 | – | -3 | +0 |
| Heavy Infantry | +4 | +1 | +3 | -1 | +0 | – | -2 | +2 |
| Close Quarters | +2 | -3 | +3 | -4 | -5 | – | -5 | +1 |
| Vehicles | +5 | +2 | +5 | -1 | +0 | – | -3 | -3 |
| Artillery | +15 | +8 | +15 | -1 | -3 | – | -2 | +3 |
| Ortillery | +20 | +10 | +20 | -2 | -2 | – | – | +2 |
| CAS | +10 | +4 | +10 | +1 | +2 | – | +0 | +1 |
| Command | +3 | +1 | +4 | -3 | -2 | – | -2 | +2 |

### Manoeuvre Actions

When a unit is given a Manoeuvre as its Unit Action, it can move into an adjacent deployment zone. Ortillery is unable to move, Close Air Support can move through up to three zones in a single manoeuvre action. This is to symbolise the unit making headway or taking a withdrawal on the battlefield. It is possible that a unit will not be able to enter a deployment zone as it may be locked by enemy forces. Each unit can effectively block one enemy unit from entering the deployment zone it occupies, as long as it has morale greater than 0. Infantry and Heavy Infantry units can block two units from entering their zone, Ortillery and Close Air Support are unable to block enemy units, and no unit can block an enemy Close Air Support unit. When a non-broken (see Unit Morale above, and the Morale Phase below) unit uses a Manoeuvre action to move away from the enemy (making the number higher), they are considered to be tactically withdrawing, and regain 1 point of Unit Morale. A unit that moves out of its support deployment zone away from the enemy is considered to have retreated from the battlefield and takes no further part in the battle.

### Attack Actions

When a unit decides to make its Attack action, it must first pass an immediate Unit Morale test by rolling equal to or under the unit’s current Unit Morale on 1d6 in order to take action. It is possible for a unit with high morale to automatically pass this test. Once the unit has verified its ability to perform an Attack action, the unit chooses a valid target unit for its attack. Each type of unit gets a different DM for attacking enemy units different distances away, showing its ability to inflict damage upon targets that are close or far away. This DM is then used to modify the Attack Skill throw made to attack that target, added to which is the skill of the attacking unit. The distance modifiers and the unit’s difficulty to inflict damage upon the enemy are found on the preceding tables. A listing of ‘-’ means the unit is unable to attack effectively at anything at that range. Once the unit has declared a valid target for its Attack action, the unit then makes its Unit Skill throw at the difficulty listed on the preceding table. If it fails, the unit’s attack was ineffectual and no actual damage is inflicted (but the target’s Unit Morale still suffers). If successful, there is the potential of inflicting casualties upon the enemy unit. The Effect from a successful Attack action helps determine how much damage is inflicted upon the target unit. The Effect is added (or subtracted) to the modifier listed on the preceding table. These modifiers show how easy or difficult it is for a specific type of unit to harm another type of unit. Particularly hard-to-damage units like vehicles or artillery tend to have much smaller numbers, so inflicting even a single casualty upon them is a success for an attack.

#### Additional Modifiers

* For each point of unit size +1 to the casualties inflicted.
* Technology level has a huge effect on casualty results. Deduct the difference between the tech levels from the casualties inflicted upon a unit with a higher technology level, and add the difference to any casualties inflicted upon a unit with a lower technology level.

A unit that manoeuvres into an enemy zone and attacks that turn doubles the amount of casualties it inflicts for that attack upon any enemy unit within the same deployment zone, representing the bonus that the attacking force gets from flanking fire. CAS units do not benefit from this bonus, nor can they be subjected to it. A maximum of two units are able to attack a single enemy unit in a single Battle Round. However they can attack that unit up to two times each if they have enough actions allocated to them. Ortillery and Artillery units require forward observers to plot out enemy positions and call down fire upon the enemy. This takes one action, leaving these units only able to fire once per Battle Round, and then only if they have been assigned two actions during the Command phase.

### Rally Action

Additionally, the Command Unit of an army may perform a special type of action that boosts Unit Morale called a Rally action. This costs a Unit Action, and functions otherwise like a Manoeuvre action. The Command Unit chooses a single unit in his force that has lost Unit Morale to send a communiquÃ© to and makes a Leadership throw 9+. Failure means that the unit is even more confused by the communication, losing another point of Unit Morale. If successful, the targeted unit regains lost Unit Morale equal to the Effect of the throw. Once all units in the army that received any Unit Actions have taken their first one, no matter the status of the enemy army’s progression, units that received a second Unit Action may begin to take them. The phase continues back and forth until one side has no more Unit Actions to take, at which point the other side takes all remaining actions in rapid succession. When all Unit Actions have been used and resolved, the Action Phase ends.

### Morale Phase

At the beginning of the Morale Phase the army units must check to see if they qualify for any Unit Morale loss or gain. The following are the ways a Battle Unit loses or gains Unit Morale.

* All units that were attacked in some way (successfully or not) immediately lose one point of Unit Morale.
* Any unit that shared a deployment zone with a friendly unit that was utterly destroyed this turn loses one point of Unit Morale.
* Any unit that shared a deployment zone with a friendly unit that routed this turn loses one point of Unit Morale.
* Any unit reduced to less than half of its starting Member Strength loses one point of Unit Morale.
* All units in an army that has a Command Unit destroyed or broken this turn loses 2 points of Unit Morale.
* Any unit whose attack destroys an enemy unit gains 2 points of Unit Morale.
* Any unit whose attack destroys an enemy Command Unit gains 3 points of Unit Morale.
* Any unit that attacks an enemy unit which then routs this turn gains 1 points of Unit Morale.

Once all of the units have had their Unit Morale adjusted for whatever reason, any units that have fallen to 0 Unit Morale are now considered to be broken. Broken units are no longer capable of engaging the enemy and are removed from the army’s roster. Once all units have taken stock of their new Unit Morale values and whether or not they have broken, the Morale Phase ends.

### Withdrawal Phase (optional)

A commander can decide to withdraw his forces from battle, either piecemeal or all at once (conceding defeat in the latter case). If neither force commander wishes to use the Withdrawal Phase, the round ends and a new Battle Round begins with a new Command Phase. If both force commanders decide to use the Withdrawal Phase, all units leave the battle without suffering any further casualties or damage. The battle ends immediately. If one force commander chooses to use the Withdrawal Phase and the other does not, the withdrawing army will be subjected to one last volley of attacks as they flee the battle. Every non-withdrawing unit can make a single Attack action at one enemy unit. The Referee can choose to create further scenes of chasing down the fleeing units as they scatter away from the battlefield, seeking refuge from the enemy. In many cases however, even the victorious units will want to take count of their own wounded and casualties, leaving the routed forces to their own. Ortillery and CAS units are unable to act on the field of battle on their own, if all ground forces of their army are withdrawing or have been routed or destroyed they will automatically be assumed to have withdrawn from the battle, leaving their enemies victorious.

## Mercenary Headquarters and Military Bases

The following bonuses apply to a unit that has an operational base or headquarters.

* Any Admin or Advocate skill throws made on behalf of the unit have a +1DM
* Mercenary administrators gain one additional Ticket Adjustment if negotiations take place inside their HQ
* Any Engineer, Mechanic, Medic or Weapon Engineering skill throws made within the base/HQ can have a +1DM if they have sufficient facilities
* Rolls made to acquire equipment using the Availability rules gain +1DM if the base/HQ is the delivery point

# Vehicles

Vehicles

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## Spaces

Spaces indicate the usable internal volume of a vehicle. Items like engines, transmission and fuel are part of the chassis.

## Structure and Hull

When calculating Structure and Hull Values, always round Structure up and Hull down.

## Crew Sizes

Non-powered vehicles have crew requirements based on Str, along with a few other factors.

### Wagon/Rickshaw

Any wagon or rickshaw requires a crew of 1.

### Sailboats

Sailboats require a fairly large crew. Subtract the Tech Level of the sailboat from 10 (minimum 1). Ships with less than 10 Spaces require half this amount. Ships with 10 or more Spaces require this amount for every 20 Spaces or part of.

### Powered Vehicles

Light vehicles never require more than a crew of one, though military vehicles may carry more. Heavy vehicles require crew based on type and function.

| Chassis Type | Civilian Crew | Military Crew |
| --- | --- | --- |
| Light Ground | 1 | 1 |
| Heavy Ground | 1 | 2 + 1 per main weapon |
| Light Hover | 1 | 1 |
| Heavy Hover | 3 | 2 + 1 per main weapon |
| Light Grav | 1 | 1 |
| Heavy Grav | 1 | 2 + 1 per main weapon |
| Airship | 3 | 4 |
| Light Helicopter | 1 | 1 |
| Heavy Helicopter | 2 | 2 + 1 per main weapon |
| Light Airplane | 1 | 1 |
| Heavy Airplane | 2 | 2 + 1 per main weapon |
| Light Aerodyne | 1 | 1 |
| Heavy Aerodyne | 2 | 2 + 1 per main weapon |
| Light Jet | 1 | 1 |
| Heavy Jet | 2 | 2 + 1 per main weapon |
| Boat | 1 | 2 |
| Light Ship | 5 | 20 + 5 per main weapon |
| Heavy Ship | 20 | 40 + 5 per main weapon |
| Train (any) | 2 | 4 + 1 per weapon |

## Vehicle Movement

The listed movement rate for any ground vehicle is its on-road movement. If a ground vehicle goes off-road, it suffers a -2 DM to Agility, Movement rate is reduced to 25% of normal and rough terrain cannot be crossed. A vehicle that is off-road capable does not suffer the -2 DM to Agility, and the Movement rate is not reduced. It can cross rough terrain with a -2 DM to Agility.

### Speed

Range will show the distance they can travel while at this maximum speed. The cruising speed of a vehicle is assumed to be 75% of the vehicle’s Speed and if it maintains this rate of movement, its Range will increase by 50%.

### Animal-powered Vehicles

An animal-powered vehicle requires an amount of Strength (Str) per Space, as detailed in the relevant Chassis section, to move at the animal’s base walking speed. The Str requirement is lower at higher Tech Levels as lighter but stronger materials are used.

| Gait | Speed Modifier | Range |
| --- | --- | --- |
| Walk | Walk x 1 | Endurance x 30 minutes |
| Trot | Walk x 2 | Endurance x 15 minutes |
| Canter | Walk x 3 | Endurance x 2 minutes |
| Run | Walk x 4 | Endurance x 1 Minutes |

Larger animals modify their Str rating based on their size. For each point of Str less than what is required, Speed and Range decrease by 10%. There is no lower limit and Speed can be reduced to 0 so the vehicle cannot move at all.

| Animal | Str | Speed Walk/Run (km/h) | End |
| --- | --- | --- | --- |
| Horse | 10 (20) | 7 / 28 | 12 |
| Mule | 11 (22) | 6 / 24 | 14 |
| Ox | 18 (54) | 5 / 20 | 18 |

### Wind-powered Vehicles

| TL | Speed (Small vehicles) | Speed (Large Vehicles) |
| --- | --- | --- |
| 0-1 | 20% of wind | 30% of wind |
| 2-3 | 25% of wind | 35% of wind |
| 4-5 | 30% of wind | 40% of wind |
| 6-7 | 35% of wind | 45% of wind |
| 8-9 | 45% of wind | 55% of wind |
| 10-11 | 55% of wind | 65% of wind |
| 12+ | 65% of wind | 75% of wind |

The Speed listed is for the default sailing medium – water (or similar fluids). Ground-based sailing vehicles use this Speed for small vehicles but reduce it by 15% for large vehicles. Air-based sailing vehicles increase the Speed of small vehicles by +15% and large vehicles by +10% When adding the Increased Speed modification, each 10% of Speed increase adds +10% to the scores on this table.

## Aircraft

All aircraft can only work properly for world size and atmosphere type UWP codes within 1 of their homeworld. Aircraft operating outside of their design codes suffer a -1 to Agility if they are within 1 of their home UWP codes for atmosphere and/or size, and cannot fly at all if they are operating beyond this, unless they are designed with a wider operation range. In any case, all aircraft require a minimum atmosphere code of 1 in order to function. Aircraft descriptions should include the world size and atmosphere codes.

## Mounted Weapons

| Range Band | Distance |
| --- | --- |
| Distant | 501-5,000 metres |
| Very Distant | 5,001-25,000 metres |
| Extreme | 25,001-50,000 metres |
| Continental | 50-500 kilometres |
| Orbital | 501+ kilometres |

## Sensors, Stealth and Electronic Warfare

| Hull Rating | Size DM |
| --- | --- |
| 1-10 | +0 |
| 11-25 | +1 |
| 25-50 | +2 |
| 51-150 | +3 |
| 151+ | +4 |

The difference in Tech Level between vehicles is used as a negative or positive DM for Sensors checks and rolls related to electronic warfare.

## Vehicle Hit Locations

When using the armour allocation rule, there is a need to determine where on a vehicle a successful hit will strike.

### Non-turreted vehicles

For vehicles without a turret, incoming fire hits the targeted side.

### Turreted vehicles

If a vehicle has small turrets, incoming fire will hit the targeted side of a roll of 1-5, and the turret on a 6. If a vehicle has large turrets, incoming fire will hit the targeted side of a roll of 1-4, and the turret on a 5-6.

### Ring Mounts and Pintle Mounts

If a vehicle has ring and/or pintle mounts with gun shields, treat them as small turrets.

## Vehicle Mass

A Hull score of 1 is roughly equal to 500kg. Open Vehicles weigh half this amount, and those with the Open Frame modification only 10% of this amount.

## Modifications

When applying modifications to a vehicle, prices are based upon the Base Cost. Modifications that decrease the cost of a vehicle cannot lower it below 25% of the Base Cost. Chassis Type: Bicycle, Rickshaw, Wagon and Cart Going over the maximum Speed for the vehicle will result in damage to the vehicle, at the rate of one Structure point per minute.

## Bicycles and Rickshaws

At base Str, the Speed of a bicycle or a rickshaw is equal to twice the walking speed of the character peddling the machine. Athletics (co-ordination) can be used to go faster, travelling at twice the Speed a character would move when sprinting. **Str Required**

| Tech Level | Str/Space | Maximum Speed (km/h) |
| --- | --- | --- |
| 5- | 6 | 20 |
| 6-8 | 5 | 50 |
| 9-11 | 4 | 100 |
| 12+ | 3 | 150 |

## Bicycle & Rickshaw Construction

|  |  |
| --- | --- |
| Skill | Drive (wheeled) |
| Number of Spaces | 1-5 |
| Cost per Space | 200 |
| Structure | 1 per 5 Spaces |
| Hull | 1 per 4 Spaces |
| Agility | -1 |
| Tech Level | 1 |
| Shipping Size | 1/10 ton per Space |

### Wagons and Carts

Carts (1-4 spaces), typically have two wheels, while larger wagons will have four.

## Str Required

| Tech Level | Str/Space | Maximum Speed |
| --- | --- | --- |
| 1-3 | 6 | 10 |
| 4-6 | 5 | 20 |
| 7+ | 4 | 30 |

**Wagon & Cart Construction**

|  |  |
| --- | --- |
| Skill | Animals (riding) |
| Number of Spaces | 1-20 |
| Cost per Space | 200 |
| Structure | 1 per 5 Spaces |
| Hull | 1 per 4 Spaces |
| Agility | -1 |
| Tech Level | 1 |
| Shipping Size | 1/2 ton per Space |

### Rail Wheels (TL3)

Human and animal-powered vehicles can also be designed to run on rails rather than roads. This reduces the Str requirement for the vehicle by 50%, though the cost remains the same. Chassis Type: Non-powered Boat and Ship

### Str Required (rowing only)

| Tech Level | Str/Space |
| --- | --- |
| 0-1 | 5 |
| 2-4 | 5 |
| 5-7 | 4 |
| 8-11 | 4 |
| 12+ | 3 |

### Boat Construction

|  |  |
| --- | --- |
| Skill | Seafarer (sail) |
| Number of Spaces | 1-10 |
| Cost per Space | 200 |
| Structure | 1 per 6 Spaces |
| Hull | 1 per 6 Spaces |
| Agility | -1 |
| Tech Level | 0 |
| Shipping Size | ½ ton per Space |

## Modifications

### Outboard Motor (TL 3)

These have a speed of 10 km/h, a range of 100 kilometres, and cost Cr. 100 per space.

## Ships

This is usually a sailing ship, capable of making long ocean voyages. At early Tech Levels, however, they usually stay in sight of land.

### Str Required (rowing only)

| Tech Level | Str/Space |
| --- | --- |
| 1-2 | 5 |
| 3-4 | 5 |
| 5-6 | 4 |
| 7-8 | 4 |
| 9-10 | 3 |
| 11+ | 3 |

**Ship Construction**

|  |  |
| --- | --- |
| Skill | Seafarer (sail) |
| Number of Spaces | 10-500 |
| Cost per Space | 5,000 |
| Structure | 1 per 5 Spaces |
| Hull | 1 per 4 Spaces |
| Agility | -2 |
| Tech Level | 1 |
| Shipping Size | 1/2 ton per Space |

Chassis Type: Balloon

## Balloon Construction

|  |  |
| --- | --- |
| Skill | Flyer (airship) |
| Number of Spaces | 1-6 |
| Cost per Space | 200 |
| Structure | 1 per 5 Spaces |
| Hull | 1 per 5 Spaces |
| Structure (Envelope) | 1 per Space |
| Agility | -2 |
| Tech Level | 3 |
| Shipping Size | 1/10 ton per Space |

## Speed

| Tech Level | Speed as % of wind speed |
| --- | --- |
| 3-5 | 30% |
| 6-8 | 50% |
| 9+ | 80% |

### Duration

Hydrogen and helium balloons can stay aloft almost indefinitely. Hot-air balloons have a duration equal to their tech level x 2 hours.

## Ballon Envelopes

Envelope Structure measures the amount of damage the lift envelope can sustain before losing integrity. All non-explosive weapons inflict only 1 point of damage to the envelope for each hit. Automatic weapons inflict damage equal to their Auto Rating.

### Envelope Size

Multiply world size by number of Spaces and then multiply by 200 for Very Thin atmospheres, 50 for Thin atmospheres, 20 for Standard atmospheres and 10 for Dense atmospheres. This is the size of the lift envelope in displacement tons. Hot air balloons must multiply this size by 2. In order to transport an airship, the envelope can be drained and deflated. This reduces its size to only 1% of the inflated size. Chassis Type: Light Ground Vehicle

## Light Ground Vehicle Construction

|  |  |
| --- | --- |
| Skill | Drive (wheeled) |
| Number of Spaces | 1-20 |
| Cost per Space | 1,200 |
| Structure | 1 per 2 Spaces |
| Hull | 1 per 2 Spaces |
| Agility | 0 |
| Tech Level | 4 |
| Shipping Size | ½ ton per Space |

**Speed and Range**

| Tech Level | Speed | Range |
| --- | --- | --- |
| 4 | 50 | 100 |
| 5-6 | 100 | 200 |
| 7-8 | 160 | 400 |
| 9-10 | 200 | 500 |
| 11+ | 250 | 600 |

## Motorcycles

Motorcycles have 1-3 spaces and two or three wheels. Cost per space is doubled and Agility is +1. Speed is increased by 50%. Motorcycles are Open Frame vehicles with Armour 0, though they can be enclosed at a cost of 25% of the Base Cost. An enclosed motorcycle can be armoured to twice its Base Armour Rating .

### Monowheel (TL 9)

A monowheel would cost four times normal, with a maximum of two spaces. Speed is doubled and Agility is +2 on roads. Off-road Agility is -2. Monowheels are always Open Frame and cannot be enclosed.

## Modifications

### Wheels

Unless otherwise specified, all ground vehicles start with four wheels. Additional wheels are required for larger vehicles and can also be added to improve cross-country mobility. Each additional pair of wheels costs 25% of the vehicle’s Base Cost. Each set of additional wheel after the minimum reduces any terrain-based Agility penalties by 1. This cannot be used to provide a bonus, only negate a penalty.

| Hull | Minimum Number of Wheels |
| --- | --- |
| 1 | 2 (1 at TL 9) |
| 2-30 | 4 |

### Tracks

Any ground vehicle with at least two wheels can be equipped with tracks instead. This increases cross-country mobility at the expense of road speed, cost and complexity. Adding tracks costs 100% of the vehicle’s Base Cost, halves Speed and changes the required skill to Drive (tracked). Tracks grant a +3 DM for Drive checks when off-road.

### Off-road Capability

Any ground vehicle can be purpose designed for off-road use. This modification costs 50% of the Base Cost, and Speed is lowered by 10%.

### Towing Limits

Towing reduces Agility by 2 for light ground vehicles. It is possible to take this modification more than once. A light ground vehicle has a penalty of -25% to its Speed every time it is taken.

| Towing Capacity | Spaces \* |
| --- | --- |
| 1,000 kg | 5 |

\* This is the Spaces available in the trailer being towed, not how many Spaces are used in the vehicle.

## Railed

As a modification, the ability to perform rail travel takes 1 Space and costs 50% of the Base Cost. This allows rail travel at 75% of the vehicle’s Speed. If the vehicle is designed to run on rails only, it take no Spaces, and costs 25% of the Base Cost. A rail-only vehicle adds 50% to its Speed. They can also be designed to operate on air film tracks, which requires 1 Space, and costs 100% of the Base Cost. This doubles the vehicle’s Speed. A maglev version would require 2 Spaces, and costs 200% of the Base Cost. This triples the vehicle’s Speed. Finally, the vehicle can be designed to ride a grav rail. This requires 3 Spaces, and costs 300% of the Base Cost. This multiples the vehicle’s Speed by four. Chassis Type: Heavy Ground Vehicle

## Heavy Ground Vehicle Construction

|  |  |
| --- | --- |
| Skill | Drive (wheeled) |
| Number of Spaces | 20-200 |
| Cost per Space | 3,000 |
| Structure | 1 per 2 Spaces |
| Hull | 1 per 2 Spaces |
| Agility | -1 |
| Tech Level | 4 |
| Shipping Size | ½ ton per Space |

## Speed and Range

| Tech Level | Speed | Range |
| --- | --- | --- |
| 4 | 50 | 200 |
| 5-6 | 100 | 300 |
| 7-8 | 125 | 400 |
| 9-10 | 150 | 500 |
| 11+ | 175 | 600 |

### Modifications

### Wheels

Unless otherwise specified, all ground vehicles start with four wheels. Additional wheels are required for larger vehicles and can also be added to improve cross-country mobility. Each additional pair of wheels costs 25% of the vehicle’s Base Cost. Each set of additional wheel after the minimum reduces any terrain-based Agility penalties by 1. This cannot be used to provide a bonus, only negate a penalty.

| Hull | Minimum Number of Wheels |
| --- | --- |
| 1 | 2 (1 at TL 9) |
| 2-30 | 4 |
| 31-50 | 6 |
| 50+ | 8 |

### Tracks

This increases cross-country mobility at the expense of road speed, cost and complexity. Adding tracks costs 100% of the vehicle’s Base Cost, halves Speed and changes the required skill to Drive (tracked). Tracks grant a +3 DM for Drive checks when off-road.

### AFV (Armoured Fighting Vehicle)

A heavy ground vehicle may be designated an AFV. This costs 100% of the Base Cost, and reduces the vehicle’s Spaces by 10% (round up). AFVs use modified rules for armour. In addition, an AFV automatically has the Off-road Capability modification.

### Off-road Capability

Any ground vehicle can be purpose designed for off-road use. This modification costs 50% of the Base Cost, and Speed is lowered by 10%.

### Towing Limits

Towing reduces Agility by 1 for heavy ground vehicles. It is possible to take this modification more than once. A heavy vehicle has a penalty of -10% to its Speed every time it is taken, to a maximum of -70%.. Each additional selection of the towing option doubles the towing capacity, including the approximate number of Space in the trailer and increases the Base Price of the vehicle by 10%. Note that the Towing modification used no Spaces; the Spaces noted below is approximately how much the vehicle can tow. All ground vehicles can be equipped for towing. Towing reduces Agility by 1 for heavy ground vehicles. It is possible to take this modification more than once. A light ground vehicle has a penalty of -10% to its Speed every time it is taken, to a maximum of -70%. Each additional selection of the towing option after the first doubles the Towing Capacity, including the approximate number of Spaces in the trailer and costs 10% of the Base Cost.

| Towing Capacity | Spaces \* |
| --- | --- |
| 2,000 kg | 10 |

\* This is the Spaces available in the trailer being towed, not how many Spaces are used in the vehicle.

### Tunnelling Machines

Any heavy tracked vehicle can be made a tunnelling machine. This costs Cr. 25,000 per Space of vehicle and changes the skill required to Drive (mole). It allows movement through solid earth of TL x 10 metres per hour. Speed through dense rock is only TL x 1 metres per hour.

## Railed

Ground vehicles can be designed to run on rails, either as an addition to their normal road movement, or instead of it. As a modification, the ability to perform rail travel takes 2 Spaces and costs 50% of the Base Cost. This allows rail travel at 75% of the vehicle’s Speed. If the vehicle is designed to run on rails only, it take no Spaces, and costs 25% of the Base Cost. A rail-only vehicle adds 25% to its Speed. They can also be designed to operate on air film tracks, which requires 3 Spaces, and costs 100% of the Base Cost. This doubles the vehicle’s Speed. A maglev version would require 4 Spaces, and costs 200% of the Base Cost. This triples the vehicle’s Speed. Finally, the vehicle can be designed to ride a grav rail. This requires 5 Spaces, and costs 300% of the Base Cost. This multiples the vehicle’s Speed by four. Airfilm, maglev and grav rail systems have to be the only propulsion system on a Heavy Ground Vehicle, and cannot be used as add-ons. Chassis Type: Train

## Locomotive Construction

|  |  |
| --- | --- |
| Skill | Drive (wheeled) |
| Number of Spaces | 34-4500 |
| Cost per Space | Cr4000 per Space Pulled |
| Structure | 1 per 10 Spaces Pulled |
| Hull | 1 per 10 Spaces Pulled |
| Agility | -4 |
| Tech Level | 3 |
| Shipping Size | 1 ton per 10 Spaces Pulled |

The engine itself can have up to 30 Spaces, which is taken from the total being pulled. Engines can have any applicable vehicle modification.

## Speed and Range

| Tech Level | Speed | Range | Max. Spaces |
| --- | --- | --- | --- |
| 3 | 40 | 200 | 600 |
| 4-5 | 80 | 400 | 1,200 |
| 6-7 | 120 | 600 | 2,400 |
| 8-9 | 140 | 800 | 3,600 |
| 10+ | 160 | 1,000 | 4,500 |

### Range Increases

Increased range for trains usually comes in the form of extra fuel, which can be stored in towed rail cars. Each doubling of range requires an extra 30 Spaces dedicated to fuel storage. Fuel cars cost the same as rail cars, below.

## Train Cars

Train cars can be any size, but are usually between 20 and 40 Spaces. Cars cost Cr2000 per space. Any applicable vehicle modification can be added to train cars, like life support, hostile environment protection, armour and weapons. Cargo cars can be designed with Open Cargo Beds.

### Airfilm Train (TL 9)

First available at TL 9, the airfilm train uses a high-pressure cushion of air to achieve very high loads on its monorail track. It is unable to handle steep gradients, however. Power is obtained from a turbine or compact fusion plant on the locomotive, which feeds high pressure air to the attached cars. Airfilm cars have to be enclosed. Airfilm trains are faster than conventional trains but pull fewer cars. Double Speed and halve the number of Spaces. Cost is 50% higher for the locomotive and 100% higher for the cars.

### MagLev Train (TL 8)

The maglev train uses electromagnets to support the train above its monorail track. Power is provided by induction via the track and so range is effectively unlimited. Due to the speed of a maglev, the cars have to be enclosed. Maglev trains are faster than conventional trains, and they triple Speed. Range, however, is unlimited so long as the monorail can continue to supply power. Cost is 100% higher for the locomotive and 100% higher for the cars.

### Grav Rail Train (TL 13)

Grav rail uses weak grav modules to support the train at high speed along the power and guide rail. At high Tech Levels, the grav train floats clear of the rail, supported and guided by repulsors along its length. The front and rear cars, generally labelled ‘the locomotives’ have both gravitic lift and thrust, while the intervening cars have only lift modules. Power is supplied via the rail for effectively unlimited range. Grav rail trains are faster than any other train type and can pull as many cars as a conventional engine. Multiply Speed by five. Range is unlimited so long as the monorail can continue to supply power. Cost is three times higher for the locomotive and double the price for the cars.

## Track Costs

Conventional train track costs Cr. 100,000 per kilometre on flat, open land. In heavy, mountainous terrain it can rise up to MCr. 1 per kilometre. Airfilm track is twice this cost. Maglev and Grav Rail track is three times this cost

### Light Duty Rails (TL 2)

These rails are designed to support the relatively light loading common in muscle-powered rail systems. That cannot support the weight of conventional powered locomotives and rail cars. They can also support Light Ground Vehicles, but not Heavy vehicles. These rails cost Cr. 5,000 per 100 meters.

## Modifications

### Additional Spaces

Locomotives can add space, at a cost of 10% of the Base Cost per added Space. Up to 4 Spaces can be added this way.

### Subways

Subways are simply conventional trains operating underground. Track cost is MCr. 1 extra per kilometre.

### Tube Trains

Tube trains are airfilm, maglev or grav rail trains that travel underground in excavated tunnels. The trains and cars must have the Vacuum Environment Protection and Life Support modifications. The tunnels cost MCr. 10 extra per kilometre and are only available at TL 12 and higher. Speed is multiplied by 10, however. Chassis Type: Light Hovercraft

## Light Hovercraft Construction

|  |  |
| --- | --- |
| Skill | Drive (hover) |
| Number of Spaces | 1-10 |
| Cost per Space | 20,000 |
| Structure | 1 per 4 Spaces |
| Hull | 1 per 4 Spaces |
| Agility | +1 |
| Tech Level | 5 |
| Shipping Size | 1/2 ton per Space |

| Tech Level | Speed | Range |
| --- | --- | --- |
| 5 | 100 | 300 |
| 6-7 | 150 | 400 |
| 8-9 | 200 | 500 |
| 10-11 | 250 | 600 |
| 12+ | 300 | 700 |

## Modifications

### Jump Jets

Jump jets are used for crossing obstacles but can be used to allow the hovercraft to fly, albeit no higher than 100 metres. Operating the hovercraft in this way would require Flyer (aerodyne), rather than Drive (hovercraft). Just using it to cross small obstacles, less than five metres tall, only requires the Drive (hovercraft) skill. Jump jets cost 50% of the Base Cost, and each 100 metres travelled in jump jet mode uses 500 meters (0.5 kilometres) of range, with Speed reduced to 25% of normal. Chassis Type: Heavy Hovercraft

## Heavy Hovercraft Construction

|  |  |
| --- | --- |
| Skill | Drive (hover) |
| Number of Spaces | 10-400 |
| Cost per Space | 40,000 |
| Structure | 1 per 3 Spaces |
| Hull | 1 per 3 Spaces |
| Agility | +1 |
| Tech Level | 5 |
| Shipping Size | ½ ton per Space |

## Range and Speed

| Tech Level | Speed | Range |
| --- | --- | --- |
| 5 | 100 | 600 |
| 6-7 | 150 | 800 |
| 8-9 | 200 | 1,000 |
| 10-11 | 250 | 1,200 |
| 12+ | 300 | 1,400 |

## Modifications

### AFV (Armoured Fighting Vehicle)

Large hover vehicles may be designated as AFVs at time of construction. This doubles the Base Cost and complexity, and takes up 10% (round up) of the vehicle’s Spaces. Range and Speed are reduced by 25%. AFVs use modified rules for armour.

### Jump Jets

Jump jets are used for crossing obstacles but can be used to allow the hovercraft to fly, albeit no higher than 100 metres. Operating the hovercraft in this way would require Flyer (aerodyne), rather than Drive (hovercraft). Just using it to cross small obstacles, less than five metres tall, only requires the Drive (hovercraft) skill. Jump jets cost 50% of the Base Cost, and each 100 metres travelled in jump jet mode uses 500 meters (0.5 kilometres) of range, with Speed reduced to 25% of normal. Chassis Type: Light Grav Vehicle

## Light Grav Vehicle Construction

|  |  |
| --- | --- |
| Skill | Flyer (grav) |
| Number of Spaces | 1-10 |
| Cost per Space | 50,000 |
| Structure | 1 per 2 Spaces |
| Hull | 1 per 2 Spaces |
| Agility | +1 |
| Tech Level | 8 |
| Shipping Size | ½ ton per Space |

## Speed and Range

| Tech Level | Speed | Range |
| --- | --- | --- |
| 8 | 300 | 1,000 |
| 9-10 | 400 | 2,000 |
| 11-12 | 500 | 3,000 |
| 13-14 | 600 | 4,000 |
| 15+ | 700 | 5,000 |

## Streamlined

Any closed grav vehicle can be designed with a high-speed Streamlined hull. This costs 300% of the Base Cost, loses 10% of the vehicle’s Spaces and multiplies Speed by 5. Chassis Type: Heavy Grav Vehicle

## Heavy Grav Vehicle Construction

|  |  |
| --- | --- |
| Skill | Flyer (grav) |
| Number of Spaces | 10-100 |
| Cost per Space | 100,000 |
| Structure | 1 per 2 Spaces |
| Hull | 1 per 2 Spaces |
| Agility | +1 |
| Tech Level | 8 |
| Shipping Size | ½ ton per Space |

## Speed and Range

| Tech Level | Speed | Range |
| --- | --- | --- |
| 8 | 300 | 1,000 |
| 9-10 | 350 | 2,000 |
| 11-12 | 400 | 3,000 |
| 13-14 | 500 | 4,000 |
| 15+ | 600 | 5,000 |

### AFV (Armoured Fighting Vehicle)

A heavy grav vehicle may be designated an AFV at time of construction. This costs 100% of the Base Cost and takes up 10% (round up) of a vehicle’s Spaces. It also decreases the grav vehicle’s Range by 50%.

## Airframe

Any closed grav vehicle can be designed with a high-speed Streamlined hull. This costs 300% of the Base Cost, loses 10% of the vehicle’s Spaces and multiplies Speed by 5. Chassis Type: Light Helicopter

### Light Helicopter Construction

|  |  |
| --- | --- |
| Skill | Flyer (rotor) |
| Number of Spaces | 1-10 |
| Cost per Space | 25,000 |
| Structure | 1 per 4 Spaces |
| Hull | 1 per 4 Spaces |
| Agility | +1 |
| Tech Level | 5 |
| Shipping Size | 1 ton per Space |

### Speed and Range

| Tech Level | Speed | Max Speed | Range | Take-off Radius |
| --- | --- | --- | --- | --- |
| 5-6 | 100 | 300 | 1,000 | 30m |
| 7-8 | 150 | 400 | 2,000 | 26m |
| 9-10 | 200 | 500 | 3,000 | 22m |
| 11-12 | 250 | 600 | 4,000 | 20m |
| 13+ | 300 | 700 | 5,000 | 18m |

## Modifications

### Extended Operational Environment Range

It is possible to design aircraft with a wider operational environment range. This costs 100% of the Base Cost of the aircraft but allows it to be used within two digits of the UPP size and atmosphere values instead of just one. These aircraft also suffer a -1 to Agility in all environments.

### Water Landing Ability

This allows the aircraft the ability to land and take-off from water, usually by adding floats or pontoons. This is a removable option and can be added at any time. It costs 10% of the Base Cost, reduces Speed by 10% and reduces Agility by 1.

### Folding Wings/Rotors

Aircraft can be designed with folding wings and/or rotors to allow them to be stored more efficiently. Cost is 25% of the Base Cost. The Shipping Size of the aircraft is reduced by 25%. Chassis Type: Heavy Helicopter

### Heavy Helicopter Construction

|  |  |
| --- | --- |
| Skill | Flyer (rotor) |
| Number of Spaces | 11-80 |
| Cost per Space | 50,000 |
| Structure | 1 per 3 Spaces |
| Hull | 1 per 3 Spaces |
| Agility | -1 |
| Tech Level | 6 |
| Shipping Size | 2 tons per Space |

### Speed and Range

| Tech Level | Speed | Max Speed | Range | Take-off Radius |
| --- | --- | --- | --- | --- |
| 6 | 80 | 300 | 1,000 | 80m |
| 7-8 | 120 | 400 | 2,000 | 70m |
| 9-10 | 160 | 500 | 3,000 | 60m |
| 11+ | 200 | 600 | 4,000 | 50m |

## Modifications

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This allows the aircraft the ability to land and take-off from water, usually by adding floats or pontoons. This is a removable option and can be added at any time. It costs 10% of the Base Cost, reduces Speed by 10% and reduces Agility by 1.

### Folding Wings/Rotors

Aircraft can be designed with folding wings and/or rotors to allow them to be stored more efficiently. Cost is 25% of the Base Cost. The Shipping Size of the aircraft is reduced by 25%. Chassis Type: Airship

### Airship Construction

|  |  |
| --- | --- |
| Skill | Flyer (airship) |
| Number of Spaces | 10-1,000 |
| Cost per Space | 20,000 |
| Structure (Gondola) | 1 per 5 Spaces |
| Hull | 1 per 5 Spaces |
| Structure (Envelope) | 1 per Space |
| Agility | -4 |
| Tech Level | 4 |
| Shipping Size | 1/2 ton per Space + Envelope |

### Speed and Range

| Tech Level | Speed | Range |
| --- | --- | --- |
| 3 | 80 | 2,000 |
| 4-5 | 100 | 4,000 |
| 6-7 | 120 | 6,000 |
| 8-9 | 140 | 8,000 |
| 10-11 | 160 | 10,000 |
| 12+ | 180 | 12,000 |

## Airship Envelopes

Envelope Structure measures the amount of damage the lift envelope can sustain before losing integrity. All non-explosive weapons inflict only 1 point of damage to the envelope for each hit. Automatic weapons inflict damage equal to their Auto Rating.

### Envelope Size

Envelope size is a function of world size, world atmosphere and number of Spaces of the airship. Multiply world size by number of Spaces and then multiply by 200 for Very Thin atmospheres, 50 for Thin atmospheres, 20 for Standard atmospheres and 10 for Dense atmospheres. This is the size of the lift envelope in displacement tons. A drained and deflated is reduced to only 1% of the inflated size.

## Weathervaning

Avoiding drifting and possible damage will require a Flyer (airship) check. Failure causes Structural damage to the envelope, as shown in the table below.

| Wind Speed km/h | Agility Penalty | Skill Check/Damage |
| --- | --- | --- |
| 20-40 | -1 | – |
| 41-60 | -2 | Routine, 2 |
| 61-80 | -3 | Hard, 4 |
| 81-100 | -4 | Difficult, 8 |
| 101+ | -5 | Impossible, 16 |

There is a bonus of +1 per 2 Tech Levels above TL 3 on the check to avoid damage. So +1 at TL 5, +2 at TL 7, +3 at TL 9, and +4 at TL 11

## Modifications

### Lifting Body Hull

This modification costs 300% of Base Cost and doubles Speed. Lifting body designs need twice their internal Spaces (in metres) to take-off and land when fully-loaded. Lifting body designs reduce Weathervaning Agility penalties by 2 (minimum zero) and add +2 DM to the Flyer (airship) check to avoid damage.

### Magnus Effect

A Magnus Effect airship is a sphere, with a gondola hanging underneath. The sphere rotates backwards as the airship moves forward, generating lift. It is a compact design not subject to weathervaning like large, cigar-shaped airships. Magnus Effect airships cost and additional 50% of the Base Cost, have Agility +2 and add 30 km/hr to their Speed.

### Cyclo-crane

The Cyclo-crane is designed to carry all of its cargo externally and is little more than a rigid envelope, a cruciform set of airfoils midship and lines extending down from the nose and stern to the slung cargo below. Like the lifting body, the Cyclo-crane’s envelope can support the entire weight of the crane. The spinning airfoils provide additional lift to hoist cargo. A Cyclo-crane design can lift an additional 5 Spaces of external cargo (500 kg) per internal design Space not used for crew, amenities or internal cargo. Cyclo-cranes cost 50% of the Base Cost and reduce Speed by 90%.

### Vacustat (TL 12)

The lift envelope can be replaced with a much smaller rigid shell, which is constructed of a very light-weight, but extremely strong, material like a fullerene. Instead of being filled with a gas, the shell contains pockets of pure vacuum, held by the super-strong material of the shell. This virtually eliminates the envelope. The vacustat is only possible at TL 12 and higher. Vacustats are much smaller and faster than other airships. A vacustat costs 400% of the Base Cost, doubles its Speed and the shell size, in displacement tons, is equal to the number of internal Spaces. Unlike other airships, though, the rigid shell of a vacustat is not collapsible for transport. Chassis Type: Light Aeroplane

### Light Aeroplane Construction

|  |  |
| --- | --- |
| Skill | Flyer (wing) |
| Number of Spaces | 1-10 |
| Cost per Space | 20,000 |
| Structure | 1 per 4 Spaces |
| Hull | 1 per 4 Spaces |
| Agility | +1 |
| Tech Level | 4 |
| Shipping Size | 1 ton per Space |

### Speed and Range

| Tech Level | Speed | Range | Take-off/Landing |
| --- | --- | --- | --- |
| 4 | 150 | 300 | 400m/500m |
| 5-6 | 250 | 600 | 300m/500m |
| 7-8 | 350 | 1,200 | 300m/400m |
| 9-10 | 450 | 2,400 | 200m/400m |
| 11+ | 550 | 4,800 | 200m/300m |

## Modifications

### Tilt Rotor

When the Tilt Rotor modification is added to an aircraft, it gains the ability to takeoff vertically and hover like a helicopter. Once the rotors rotate forward to become propellers, the aircraft flies normally. As the technology becomes more advanced, the prop sizes become smaller, transitioning to ducted fans.

| TL | Take-off Radius | Cost | Agility |
| --- | --- | --- | --- |
| 8-9 | 32m | +300% | +0 |
| 10-11 | 26m | +300% | +1 |
| 12-13 | 15m | +200% | +2 |
| 14+ | 9m | +200% | +3 |

### STOL

STOL (Short Take-Off and Landing) can be added to any aeroplane or jet, and allows the aircraft to take off and land in only 50% of the normal distance. STOL costs 50% of Base Cost .

### Extended Operational Environment Range

It is possible to design aircraft with a wider operational environment range. This costs 100% of the Base Cost of the aircraft but allows it to be used within two digits of the UPP size and atmosphere values instead of just one. These aircraft also suffer a -1 to Agility in all environments.

### Water Landing Ability

This allows the aircraft the ability to land and take-off from water, usually by adding floats or pontoons. This is a removable option and can be added at any time. It costs 10% of the Base Cost, reduces Speed by 10% and reduces Agility by 1.

### Folding Wings/Rotors

Aircraft can be designed with folding wings and/or rotors to allow them to be stored more efficiently. Cost is 25% of the Base Cost. The Shipping Size of the aircraft is reduced by 25%. Chassis Type: Heavy Aeroplane

### Heavy Aeroplane Construction

|  |  |
| --- | --- |
| Skill | Flyer (wing) |
| Number of Spaces | 10-200 |
| Cost per Space | 30,000 |
| Structure | 1 per 3 Spaces |
| Hull | 1 per 3 Spaces |
| Agility | -1 |
| Tech Level | 4 |
| Shipping Size | 2 tons per Space |

### Speed and Range

| Tech Level | Speed | Range | Take-off/Landing |
| --- | --- | --- | --- |
| 4 | 100 | 1,000 | 3,000/1,500 |
| 5-6 | 200 | 2,000 | 2,500/1,250 |
| 7-8 | 300 | 3,000 | 2,000/1,000 |
| 9-10 | 400 | 4,000 | 1,500/750 |
| 11+ | 600 | 5,000 | 1,000/500 |

## Modifications

### Tilt Rotor

When the Tilt Rotor modification is added to an aircraft, it gains the ability to takeoff vertically and hover like a helicopter. Once the rotors rotate forward to become propellers, the aircraft flies normally. As the technology becomes more advanced, the prop sizes become smaller, transitioning to ducted fans.

| TL | Take-off Radius | Cost | Agility |
| --- | --- | --- | --- |
| 8-9 | 88m | +300% | +0 |
| 10-11 | 60m | +300% | +1 |
| 12-13 | 33m | +200% | +2 |
| 14+ | 20m | +200% | +3 |

### STOL

STOL (Short Take-Off and Landing) can be added to any aeroplane or jet, and allows the aircraft to take off and land in only 50% of the normal distance. STOL costs 50% of Base Cost .

### Extended Operational Environment Range

It is possible to design aircraft with a wider operational environment range. This costs 100% of the Base Cost of the aircraft but allows it to be used within two digits of the UPP size and atmosphere values instead of just one. These aircraft also suffer a -1 to Agility in all environments.

### Water Landing Ability

This allows the aircraft the ability to land and take-off from water, usually by adding floats or pontoons. This is a removable option and can be added at any time. It costs 10% of the Base Cost, reduces Speed by 10% and reduces Agility by 1.

### Folding Wings/Rotors

Aircraft can be designed with folding wings and/or rotors to allow them to be stored more efficiently. Cost is 25% of the Base Cost. The Shipping Size of the aircraft is reduced by 25%. Chassis Type: Light Jet

### Light Jet Construction

|  |  |
| --- | --- |
| Skill | Flyer (wing) |
| Number of Spaces | 2-20 |
| Cost per Space | 100,000 |
| Structure | 1 per 4 Spaces |
| Hull | 1 per 4 Spaces |
| Agility | +1 |
| Tech Level | 5 |
| Shipping Size | 1 ton per Space |

### Speed and Range

| Tech Level | Speed | Range | Take-off/Landing |
| --- | --- | --- | --- |
| 5 | 300 | 1,000 | 3,000/1,500 |
| 6-8 | 500 | 2,000 | 2,500/1,250 |
| 9-11 | 700 | 4,000 | 2,000/1,000 |
| 12+ | 900 | 7,000 | 1,500/750 |

## Modifications

### Supersonic

This multiples Speed by 4, and costs 300% of the Base Cost.

### Tilt Jet

When the Tilt Jet modification is added to an aircraft, it gains the ability to takeoff vertically and hover like a helicopter. Once the jets rotate forward the aircraft flies normally. Tilt-jets are much more compact than tilt-rotors This is distinct from VTOL aircraft, which are jet aircraft with variable thrust nozzles to achieve VTOL and forward flight.

| TL | Cost | Agility |
| --- | --- | --- |
| 8-9 | +300% | +0 |
| 10-11 | +300% | +1 |
| 12-13 | +200% | +2 |
| 14+ | +200% | +3 |

Take-off Radius is based on that of a helicopter in the same size category (light or heavy) as the aircraft.

### VTOL

VTOL (Vertical Take-Off and Landing) is a modification to a jet aircraft to enable vertical take-off and landing by vectored thrust. The use of vectored thrust also makes these aircraft very manoeuvrable. However, VTOL aircraft have a decreased Range when compared to a similar non-VTOL aircraft, and are more complex and expensive

| TL | Cost | Agility | Range |
| --- | --- | --- | --- |
| 6 | +100% | +1 | -50% |
| 7-8 | +100% | +2 | -40% |
| 9-10 | +100% | +3 | -30% |
| 11-12 | +100% | +4 | -20% |
| 13+ | +100% | +5 | -10% |

### STOL

STOL (Short Take-Off and Landing) can be added to any aeroplane or jet, and allows the aircraft to take off and land in only 50% of the normal distance. STOL costs 50% of Base Cost .

### Extended Operational Environment Range

It is possible to design aircraft with a wider operational environment range. This costs 100% of the Base Cost of the aircraft but allows it to be used within two digits of the UPP size and atmosphere values instead of just one. These aircraft also suffer a -1 to Agility in all environments.

### Water Landing Ability

This allows the aircraft the ability to land and take-off from water, usually by adding floats or pontoons. This is a removable option and can be added at any time. It costs 10% of the Base Cost, reduces Speed by 10% and reduces Agility by 1.

### Folding Wings/Rotors

Aircraft can be designed with folding wings and/or rotors to allow them to be stored more efficiently. Cost is 25% of the Base Cost. The Shipping Size of the aircraft is reduced by 25%. Chassis Type: Heavy Jet

|  |  |
| --- | --- |
| Skill | Flyer (wing) |
| Number of Spaces | 20-800 |
| Cost per Space | 200,000 |
| Structure | 3 per 4 Spaces |
| Hull | 3 per 4 Spaces |
| Agility | -1 |
| Tech Level | 5 |
| Shipping Size | 2 ton per Space |

| Tech Level | Speed | Range | Take-off/Landing |
| --- | --- | --- | --- |
| 5 | 300 | 1,000 | 5,000/4,000 |
| 6-8 | 400 | 4,000 | 4,500/3,500 |
| 9-11 | 600 | 7,000 | 4,000/3,000 |
| 12+ | 800 | 10,000 | 3,500/2,000 |

## Modifications

### Supersonic

Jets can be designed as supersonic aircraft. This multiples Speed by 4, and costs 300% of the Base Cost.

### Tilt Jet

When the Tilt Jet modification is added to an aircraft, it gains the ability to takeoff vertically and hover like a helicopter. Once the jets rotate forward the aircraft flies normally. Tilt-jets are much more compact than tilt-rotors This is distinct from VTOL aircraft, which are jet aircraft with variable thrust nozzles to achieve VTOL and forward flight.

| TL | Cost | Agility |
| --- | --- | --- |
| 8-9 | +300% | +0 |
| 10-11 | +300% | +1 |
| 12-13 | +200% | +2 |
| 14+ | +200% | +3 |

### VTOL

VTOL (Vertical Take-Off and Landing) is a modification to a jet aircraft to enable vertical take-off and landing by vectored thrust. The use of vectored thrust also makes these aircraft very manoeuvrable. However, VTOL aircraft have a decreased Range when compared to a similar non-VTOL aircraft, and are more complex and expensive

| TL | Cost | Agility | Range |
| --- | --- | --- | --- |
| 6 | +100% | +1 | -50% |
| 7-8 | +100% | +2 | -40% |
| 9-10 | +100% | +3 | -30% |
| 11-12 | +100% | +4 | -20% |
| 13+ | +100% | +5 | -10% |

### STOL

STOL (Short Take-Off and Landing) can be added to any aeroplane or jet, and allows the aircraft to take off and land in only 50% of the normal distance. STOL costs 50% of Base Cost .

### Extended Operational Environment Range

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### Water Landing Ability

This allows the aircraft the ability to land and take-off from water, usually by adding floats or pontoons. This is a removable option and can be added at any time. It costs 10% of the Base Cost, reduces Speed by 10% and reduces Agility by 1.

### Folding Wings/Rotors

Aircraft can be designed with folding wings and/or rotors to allow them to be stored more efficiently. Cost is 25% of the Base Cost. The Shipping Size of the aircraft is reduced by 25%. Chassis Type: Light Aerodyne

### Light Aerodyne Construction

|  |  |
| --- | --- |
| Skill | Flyer (rotor) |
| Number of Spaces | 2-10 |
| Cost per Space | 30,000 |
| Structure | 1 per 4 Spaces |
| Hull | 1 per 4 Spaces |
| Agility | +2 |
| Tech Level | 7 |
| Shipping Size | 1 ton per Space |

### Speed and Range

| Tech Level | Speed | Range |
| --- | --- | --- |
| 7 | 200 | 300 |
| 8-9 | 300 | 450 |
| 10-11 | 400 | 600 |
| 12+ | 500 | 750 |

## Modifications

### Extended Operational Environment Range

It is possible to design aircraft with a wider operational environment range. For aerodynes this costs 200% of the Base Cost of the aircraft but allows it to be used within two digits of the UPP size and atmosphere values instead of just one. Aerodynes do not suffer Agility penalties for the Extended Operational Range Modification. Chassis Type: Heavy Aerodyne

### Heavy Aerodyne Construction

|  |  |
| --- | --- |
| Skill | Flyer (aerodyne) |
| Number of Spaces | 10-50 |
| Cost per Space | 60,000 |
| Structure | 1 per 3 Space |
| Hull | 1 per 3 Space |
| Agility | +1 |
| Tech Level | 7 |
| Shipping Size | 1 ton per Space |

### Speed and Range

| Tech Level | Speed | Range |
| --- | --- | --- |
| 7 | 200 | 400 |
| 8-9 | 300 | 600 |
| 10-11 | 400 | 800 |
| 12+ | 500 | 1,000 |

## Modifications

**Extended Operational Environment Range** It is possible to design aircraft with a wider operational environment range. For aerodynes this costs 200% of the Base Cost of the aircraft but allows it to be used within two digits of the UPP size and atmosphere values instead of just one. Aerodynes do not suffer Agility penalties for the Extended Operational Range Modification. Chassis Type: Light Walker

## Light Walker Construction

|  |  |
| --- | --- |
| Skill | Drive (walker) |
| Number of Spaces | 2-10 |
| Cost per Space | 10,000 |
| Structure | 1 per 4 Spaces |
| Hull | 1 per 4 Spaces |
| Agility | +1 |
| Tech Level | 8 |
| Shipping Size | 1 ton per Space |

## Speed and Range

| Tech Level | Speed | Range |
| --- | --- | --- |
| 8 | 50 | 150 |
| 9-10 | 100 | 300 |
| 11-12 | 150 | 450 |
| 13-14 | 200 | 600 |
| 15+ | 250 | 750 |

### Legs

All walkers are assumed to have two legs. A walker can have up to 8 legs. Each extra pair of legs costs 50% of the Base Cost of the vehicle, and consumes 10% of available Spaces (minimum of 1 Space). Each set of additional legs add a +1 DM for manoeuvres on Rough or Uneven ground. Having four or more legs also grants a +1 DM on To Hit rolls conducted by that vehicles weapons.

### Walker Height

Two-legged walkers are 1.5 meters tall per point of Hull. Each additional set of legs subtracts 1 meter from that height, with a minimum height equal to the Hull Rating. Chassis Type: Heavy Walker

## Heavy Walker Construction

|  |  |
| --- | --- |
| Skill | Drive (walker) |
| Number of Spaces | 10-50 |
| Cost per Space | 20,000 |
| Structure | 1 per 3 Spaces |
| Hull | 1 per 3 Spaces |
| Agility | -1 |
| Tech Level | 10 |
| Shipping Size | 1.5 tons per Space |

## Speed and Range

| Tech Level | Speed | Range |
| --- | --- | --- |
| 8 | 50 | 150 |
| 9-10 | 100 | 300 |
| 11-12 | 150 | 450 |
| 13-14 | 200 | 600 |
| 15+ | 250 | 750 |

**Legs** All walkers are assumed to have two legs. A walker can have up to 8 legs. Each extra pair of legs costs 50% of the Base Cost of the vehicle and consumes 10% of available Spaces (minimum of 1 Space ) Each set of additional legs add a +1 DM for manoeuvres on Rough or Uneven ground. Having four of more legs also grants a +1 DM on To Hit rolls conducted by that vehicles weapons. **Walker Height** Two-legged walkers are 1.5 meters tall per point of Hull. Each additional set of legs subtracts 1 meter from that height, with a minimum height equal to the Hull Rating. Chassis Type: Boat

|  |  |
| --- | --- |
| Skill | Seafarer (motorboats) |
| Number of Spaces | 1-20 |
| Cost per Space | 2,000 |
| Structure | 1 per 3 Spaces |
| Hull | 1 per 3 Spaces |
| Agility | 0 |
| Tech Level | 4 |
| Shipping Size | ½ ton per Space |

| Tech Level | Speed | Range |
| --- | --- | --- |
| 4-5 | 40 | 200 |
| 6-8 | 60 | 400 |
| 9-11 | 90 | 800 |
| 12+ | 120 | 1,200 |

## Modifications

Only one of these may be chosen for a boat.

### Hydrofoil

Adding Hydrofoils to a surface vessel triples its Speed. The Hydrofoil will rise up out of the water on its foils at the vehicle’s normal top Speed and can then go up to three times faster. Cost is 300% of Base Cost.

### Wave-piercing Hull

The Wave-piercing Hull puts the payload on streamlined pillars above the water that connect to power/fuel modules that run underwater. Interface friction is much reduced, allowing the Wave-piercing Hull to be much more efficient and stable. This increases its Speed by 10% and Range by 50%. It uses 5% of a vehicle’s Spaces (round up) and costs 200% of the Base Cost.

### Multi-hull

A catamaran or trimaran hull increases speed and stability. The cost is 50% of the Base Cost. Multi-hull vessels grant a +1 DM to checks made to land aircraft and other vehicles upon them. They also negate up to a -2 penalty to weapon fire due to Speed and/or rough seas. Chassis Type: Small Ship

## Small Ship Construction

|  |  |
| --- | --- |
| Skill | Seafarer (ocean ships) |
| Number of Spaces | 20-200 |
| Cost per Space | 4,000 |
| Structure | 1 per 2 Spaces |
| Hull | 1 per 2 Spaces |
| Agility | -3 |
| Tech Level | 3 |
| Shipping Size | ½ ton per Space |

## Speed and Range

| Tech Level | Speed | Range |
| --- | --- | --- |
| 3-4 | 20 | 1,000 |
| 5-6 | 40 | 2,000 |
| 7-8 | 60 | 3,000 |
| 9-10 | 80 | 4,000 |
| 11-12 | 100 | 5,000 |

## Modifications

Only one of these may be chosen for a ship.

### Hydrofoil

Adding Hydrofoils to a surface vessel triples its Speed. The Hydrofoil will rise up out of the water on its foils at the vehicle’s normal top Speed and can then go up to three times faster. Cost is 300% of Base Cost.

### Wave-piercing Hull

The Wave-piercing Hull puts the payload on streamlined pillars above the water that connect to power/fuel modules that run underwater. Interface friction is much reduced, allowing the Wave-piercing Hull to be much more efficient and stable. This increases its Speed by 10% and Range by 50%. It uses 5% of a vehicle’s Spaces (round up) and costs 200% of the Base Cost.

### Multi-hull

A catamaran or trimaran hull increases speed and stability. The cost is 50% of the Base Cost. Multi-hull vessels grant a +1 DM to checks made to land aircraft and other vehicles upon them. They also negate up to a -2 penalty to weapon fire due to Speed and/or rough seas. Chassis Type: Large Ship

## Large Ship Construction

|  |  |
| --- | --- |
| Skill | Seafarer (ocean ships) |
| Number of Spaces | 200-1,000 |
| Cost per Space | 8,000 |
| Structure | 1 per 2 Spaces |
| Hull | 1 per 2 Spaces |
| Agility | -6 |
| Tech Level | 3 |
| Shipping Size | 1 ton per Space |

## Speed and Range

| Tech Level | Speed | Range |
| --- | --- | --- |
| 3-4 | 20 | 2,000 |
| 5-6 | 40 | 4,000 |
| 7-8 | 60 | 6,000 |
| 9-10 | 80 | 8,000 |
| 11-12 | 100 | 10,000 |

## Modifications

Only one of these may be chosen for a ship.

### Hydrofoil

Adding Hydrofoils to a surface vessel triples its Speed. The Hydrofoil will rise up out of the water on its foils at the vehicle’s normal top Speed and can then go up to three times faster. Cost is 300% of Base Cost.

### Wave-piercing Hull

The Wave-piercing Hull puts the payload on streamlined pillars above the water that connect to power/fuel modules that run underwater. Interface friction is much reduced, allowing the Wave-piercing Hull to be much more efficient and stable. This increases its Speed by 10% and Range by 50%. It uses 5% of a vehicle’s Spaces (round up) and costs 200% of the Base Cost.

### Multi-hull

A catamaran or trimaran hull increases speed and stability. The cost is 50% of the Base Cost. Multi-hull vessels grant a +1 DM to checks made to land aircraft and other vehicles upon them. They also negate up to a -2 penalty to weapon fire due to Speed and/or rough seas. Chassis Type: Light Submersible

|  |  |
| --- | --- |
| Skill | Seafarer (submarine) |
| Number of Spaces | 1-10 |
| Cost per Space | 50,000 |
| Structure | 1 per 2 Spaces |
| Hull | 1 per 2 Spaces |
| Agility | -2 |
| Tech Level | 4 |
| Shipping Size | 2 tons per Space |

| Tech Level | Speed | Range | Safe Dive Depth | Crush Depth | Life Support |
| --- | --- | --- | --- | --- | --- |
| 4-5 | 15 | 50 | 50 | 150 | 50 |
| 6-8 | 25 | 100 | 200 | 600 | 100 |
| 9-11 | 60 | 150 | 600 | 1,800 | 200 |
| 12-14 | 80 | 200 | 2,000 | 6,000 | 400 |
| 15+ | 120 | 250 | 4,000 | 12,000 | Indefinite |

In addition to the information used by other vehicles, submersibles are rated by their Safe Dive Depth and Crush Depth, which are listed in metres and derived from Tech Level. Submersible Safe Dive and Crush Depth scores are calculated for a size 8 world, like Earth. For each point of size difference, up or down, add or subtract (respectively) 10% from the Safe Dive and Crush Depth scores. Life Support lists the number of days a submersible can support its crew without resurfacing for air. An Open light submersible is a vehicle like a dive sled, un-pressurised, with a place for divers and air connections for long-distance travel.

## Modifications

### Supercavitating Drive

The Supercavitating Drive consists of a blower to surround the submersible with a bubble of atmosphere and a rocket to propel it. Supercavitating Drives can power a submersible to up to 1,000 km/h under water, depending on Tech Level.

| TL | % of Spaces Used | Min # of Spaces | Speed | Range | Cost |
| --- | --- | --- | --- | --- | --- |
| 8-9 | 40% | 10 | 700 | 700 | 800% of Base |
| 10-11 | 30% | 7 | 800 | 1,600 | 600% of Base |
| 12-13 | 20% | 5 | 900 | 1,800 | 400% of Base |
| 14+ | 10% | 2 | 1,000 | 2,000 | 200% of Base |

### Increased Safe Depth/Crush Depth

Each 50% increase in both Safe Depth/Crush Depth costs 100% of the Base Cost of the submersible. All submersibles already have the Life Support and Hostile Environment Protection options. Extended or Advanced Life Support must be purchased separately. Chassis Type: Heavy Submersible

|  |  |
| --- | --- |
| Skill | Seafarer (submarine) |
| Number of Spaces | 11-500 |
| Cost per Space | 100,000 |
| Structure | 1 per Space |
| Hull | 1 per Space |
| Agility | -4 |
| Tech Level | 4 |
| Shipping Size | 3 tons per Space |

| Tech Level | Speed | Range | Safe Dive Depth | Crush Depth | Life Support |
| --- | --- | --- | --- | --- | --- |
| 4-5 | 10 | 500 | 50 | 150 | 50 |
| 6-8 | 20 | 1000 | 200 | 600 | 200 |
| 9-11 | 50 | 1500 | 600 | 1,800 | 500 |
| 12-14 | 70 | 2000 | 2,000 | 6,000 | 1,200 |
| 15+ | 100 | 2500 | 4,000 | 12,000 | Indefinite |

In addition to the information used by other vehicles, submersibles are rated by their Safe Dive Depth and Crush Depth, which are derived from Tech Level. Submersible Safe Dive and Crush Depth scores are calculated for a size 8 world, like Earth. For each point of size difference, up or down, add or subtract (respectively) 10% from the Safe Dive and Crush Depth scores. Life Support lists the number of days a submersible can support its crew without resurfacing for air. An Open light submersible is a vehicle like a dive sled, un-pressurised, with a place for divers and air connections for long-distance travel.

## Modifications

### Supercavitating Drive

The Supercavitating Drive consists of a blower to surround the submersible with a bubble of atmosphere and a rocket to propel it. Supercavitating Drives can power a submersible to up to 1,000 km/h under water, depending on Tech Level.

| TL | % of Spaces Used | Min # of Spaces | Speed | Range | Cost |
| --- | --- | --- | --- | --- | --- |
| 8-9 | 40% | 10 | 700 | 700 | 800% of Base |
| 10-11 | 30% | 7 | 800 | 1,600 | 600% of Base |
| 12-13 | 20% | 5 | 900 | 1,800 | 400% of Base |
| 14+ | 10% | 2 | 1,000 | 2,000 | 200% of Base |

### Increased Safe Depth/Crush Depth

Each 50% increase in both Safe Depth/Crush Depth costs 100% of the Base Cost of the submersible. All submersibles already have the Life Support and Hostile Environment Protection options. Extended or Advanced Life Support must be purchased separately. Adding Armour and Weapons

## Base Armour Ratings

All vehicles have a Base Armour Rating based on their Tech Level. This is the Armour the vehicle comes with as standard, as part of its construction.

| Tech Level | Base Armour Rating | Typical Material | Alternative Material |
| --- | --- | --- | --- |
| 0-2 | 1 | Wood |  |
| 3-5 | 2 | Iron | Steel |
| 6-8 | 3 | Steel | Composites |
| 9-11 | 4 | Crystaliron Steel | Synthetics, fullerenes |
| 12-14 | 5 | Superdense | Advanced Composites, cast diamond |
| 15-17 | 6 | Bonded Superdense | Cerametals, spun diamond |
| 18+ | 7 | Coherent Superdense |  |

## Adding Armour to Vehicles

It costs 10% of the Base Cost of a vehicle to increase its Armour by an amount equal to its Base Armour Rating. The maximum Armour score for a vehicle is five times its Base Armour Rating. For every increase in Armour equal to the Base Armour Rating, the Speed of the vehicle is reduced by 10 kph for ground and sea vehicles, 25 kph for hover craft and grav vehicles, and 100 kph for all aircraft, including helicopters and aerodynes. For sailing vehicles, speed is reduced by 10% for every increase. **Retro-fitting Armour** If Armour is added after construction, each increase in Armour equal to the Base Armour Rating for the Tech Level of the world doing the retrofitting costs an additional 100% of the Base Cost. Each increase in armour equal to the Base Armour Rating, the Speed of the vehicle is reduced by 20 kph for ground and sea vehicles, 50 kph for hover craft and grav vehicles, and 200 kph for all aircraft, including helicopters and aerodynes. Agility is also decreased by 1 for each increase equal to the base armour rating. The maximum Armour added in this way can be no more than three times the Base Armour Rating.

### Armoured Fighting Vehicles

AFVs (Armoured Fighting Vehicles) are designed a little differently. As they are designed for combat, their chassis incorporates composite armours, cavity armour, sloped hulls and whatever else is appropriate for their Tech Level. The Base Armour Rating for AFVs is doubled, and they can have a maximum amount of Armour equal to fifteen times their Base Armour Rating. AFVs reduce their top speed by 5 km/h per increase for ground vehicles, 15 kph per increase for hover craft, and 20 kph per increase for grav vehicles.

### Armour Allocation (Optional Rule)

AFVs can allocate Armour to separate locations. There are six separate locations: Front, Rear, Right, Left, Top and Bottom. Vehicles with turrets have additional faces of Turret Front and Turret Side/Rear. Armour can be reallocated from one location to another, with the only caveat that Right and Left Armour have to be equal. Any location can have its Armour changed by no more than +/- 50% Turrets will either have the Base Armour Rating for both locations, or else the Turret Front will equal the Front Armour and Turret Side/Rear will equal the Side Armour scores. The TL maximum for Base Armour Ratings does not apply to Armour allocated in this way.

## Weapon Mounts

To use weaponry with this design system, simply divide a weapon’s Mass by 250 and round up to determine the number of Spaces it requires.

### Fixed Mount

A fixed mount has no cost and must simply be noted at time of construction. A fixed mount can be made to be modular, allowing a suitably equipped garage or hangar to change weapons according to mission profiles. A modular fixed mount will cost Cr. 5,000 per Space of the largest weapon that can be mounted upon it.

### Pintle Mount and Ring Mount

Ring mounts and Pintle mounts can both hold weapons up to half a Space in size. Neither type is stabilised or offers any sort of fire control. Both pintle and ring mounts can be equipped with gun shields, which provide protection equal to 2 x the tech level of the vehicle, in the direction the weapon is facing. Weapon mounts do not add any Spaces to a vehicle. Weapons in a mount still count against the available Spaces in a vehicle. A weapon mount itself doesn’t take up any extra space, though there has to be Space for the crewmember at the mount. A vehicle can have 1 Ring or Pintle mount per 5 points of Hull Value, with minimum of 1. Pintle mounts cost Cr. 500, while ring mounts are Cr. 750. Gunshields for both cost Cr. 200 per point of armour

### Powered Pintle Mount and Ring Mount (TL7)

Pintle and ring mounts are also available in powered versions at TL7, which can hold up to one Space worth of weapons and are stabilised so that there is no penalty to fire while moving. Powered versions cost Cr. 1,500 for the pintle mount, and Cr. 2,150 for the ring mount. A Gunshield can be added to either as normal.

### Gun Ports

Gun ports are mounts for small arms. Gun ports cost Cr250 each, and require no Spaces. Gun Ports are used at Personal Weapon Ranges only, and do not benefit from stabilization or fire control.

### Missile Bay/Bomb Bay/Torpedo Bay

Dedicated bays that carry just one type of weapon cost Cr. 5,000 per Space of weapon that they are designed to hold. Rate-of-fire is equal to the number of weapons in the bay, and bays can be reloaded. General purpose bays able to hold different types of weapon cost Cr. 10,000 per Space of weapon they are designed to hold. They can launch one missile or torpedo per round, or drop up to half their Space capacity in bombs.

### Hard Points

The maximum amount of external ordnance that can be carried is equal to half of the vehicle’s Spaces. The number of hard points and capacity per hard point has to be declared at time of construction. Weapons on external hard points lower the vehicle’s Stealth by one class (Class I goes to no Stealth, class II goes to class I). Hard points cost Cr. 5,000 per Space of weapon that can be mounted.

### Turrets

A small turret is only big enough to fit the weapons installed within it and is remotely controlled. Large turrets hold their installed weapons along with one or two operators. Small turrets cost Cr. 25,000 per Space of installed weaponry, plus the cost of the actual weapon. Small turrets can only hold up to five Spaces worth of weapons at TL 5, 6 Spaces at TL 7 and 7 Spaces at TL 9. At Tl 10 and higher they can hold 10 Spaces of weapons. A small turret takes up one additional Space itself. Large Turrets cost Cr. 50,000 per Space of installed weaponry, plus Cr. 20,000 per crew member. They take up 4 Spaces plus the number of Spaces used by weapons, along with 2 Spaces for every crew member. All turrets can be made into pop-up turrets. This doubles their cost and Space requirements, and gives a -2 penalty to any Recon or Investigate checks to determine if a vehicle is armed.

### Pop-up Turrets

A turret can be concealed within a vehicle until required. A pop-up turret can be small or large, requires a number of Spaces equal to the size of the turret, and costs Cr10,000 per Space, in addition to the price of the turret.

### Increased Ammunition

The extra ammunition itself must be purchased separately but the vehicle itself need only set aside 1 Space for every *extra* ‘magazine/clip’ of ammunition.

## Improved Fire Control

Improved Fire Control can represent anything from gyro-stabilisation to laser-rangefinders and enhanced targeting sensors. Improved Fire Control provides a DM to hit when attacking with the weapon.

| Fire Control DM | Cost | Minimum TL |
| --- | --- | --- |
| +1 | Cr. 10,000 | 6 |
| +2 | Cr. 25,000 | 8 |
| +3 | Cr. 50,000 | 10 |
| +4 | Cr. 100,000 | 12 |

## Weapons

| Weapon | TL | Cost | Damage | Auto | Spaces | Range | Ammo /Space |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 120mm Cannon | 8 | Cr. 400,000 | 10D6 Super-AP | No | 10 | Distant | 30 |
| 12mm Light Gauss Cannon | 12 | MCr. 3 | 10D6 Mega-AP | No | 4 | Very Distant | 300 |
| 22mm Heavy Gauss Cannon | 12 | MCr. 10 | 14D6 Mega-AP | No | 18 | Very Distant | 100 |
| 35mm Rail Gun | 9 | Cr. 100,000 | 12D6 Super-AP | No | 28 | Very Distant | 200 |
| 60mm Antitank Gun | 6 | Cr. 56,000 | 7D6 Super-AP | No | 4 | Distant | 80 |
| 70mm Strafing Rocket Pod (7pack) | 6 | Cr. 4,000 | 8D6 | 14 | 1.5 | Very Long | 7 |
| 75mm Cannon | 7 | Cr. 160,000 | 8D6 Super-AP | No | 6 | Distant | 40 |
| 9lb Cannon | 3 | Cr. 2,600 | 9D6 | No | 2 | Very Long | 60 |
| Advanced Flamethrower | 8 | Cr. 2,500 | 3D6+6 Flame | N/A | ½ | Medium | 20 |
| Advanced Light Autocannon | 10 | Cr. 10,000 | 6D6+4 SAP | 8 | 1 | Very Long | 5,000 |
| Advanced Support Weapon | 10 | Cr. 2,750 | 4D6SAP | 4 | ½ | Rifle | 10,000 |
| Artillery Rocket Pod | 5 | Cr. 52,000 | 16D6 | 12 | 1.5 | Distant | 12 |
| Blue-green Laser Cannon | 10 | MCr. 1.2 | 7D6 | No | 1 | Very Long | N/A |
| Disposable MLR Pod | 10 | Cr. 15,000 | 16D6 | 6 | 1 | Distant | 6 |
| Fusion Z Gun | 14 | MCr. 8 | 28D6 Ultra-Destructive | No | 16 | Distant | N/A |
| Gatling Laser | 8 | Cr. 750,000 | 6D6 | 2 | 8 | Distant | N/A |
| Gatling Laser | 12 | MCr. 1.25 | 6D6 | 6 | 12 | Distant | N/A |
| Heavy Autocannon | 6 | Cr. 95,000 | 8D6 SAP | No | 3 | Distant | 3,000 |
| Heavy Bomb | 5 | Cr. 4,000 | 14D6 AP | No | ½ | Very Distant |  |
| Heavy Hypervelocity Cannon | 13 | MCr. 26 | 18D6 Ultimate AP | No | 72 | Very Distant | 100 |
| Heavy Machinegun | 5 | Cr. 10,000 | 5D6 AP | 6 | 1 | Rifle | 7,000 |
| Heavy Rotary Machinegun | 8 | Cr. 25,000 | 5D6 AP | 10 | 1.5 | Very Long | 7,000 |
| Heavy Torpedo | 6 | Cr. 2,200 | 14D6 | No | 8 | Very Distant | N/A |
| Hypervelocity Orbital Defence | 14 | MCr. 40 | 20D6 Ultimate AP | No | 140 | Orbital | 50 |
| Improved Flamethrower | 6 | Cr. 1,400 | 4D6 Flame | N/A | ½ | Medium | 20 |
| Laser Cannon | 9 | MCr. 1 | 8D6 | No | 24 | Distant | N/A |
| Light Autocannon | 6 | Cr. 7,500 | 6D6 SAP | 6 | 1 | Very Long | 5,000 |
| Light Hypervelocity Gun | 13 | MCr. 14 | 16D6 Ultimate AP | No | 40 | Very Distant | 200 |
| Light Machinegun | 5 | Cr. 3,000 | 3D6 SAP | 6 | ½ | Rifle | 12,000 |
| Light Rotary Autocannon | 7 | Cr. 65,000 | 6D6 SAP | 10 | 1 | Very Long | 5,000 |
| Light Tac Missile (Anti-Air) | 9 | Cr. 3,000 | 9D6 | No | ½ | Extreme |  |
| Light Tac Missile (Anti-Armour) | 9 | Cr. 4,000 | 9D6 Super AP | No | ½ | Very Distant |  |
| Light Tac Missile (Anti-Personnel) | 9 | Cr. 1,800 | 9D6 | No | ½ | Very Distant |  |
| Medium Bomb | 4 | Cr. 1,200 | 12D6 | No | ½ | Very Distant |  |
| Medium Machinegun | 6 | Cr. 2,500 | 3D6+3 SAP | 6 | ½ | Rifle | 10,000 |
| Medium Missile | 7 | Cr. 2,000 | 8D6+4 AP | No | 1 | Extreme |  |
| Medium Mortar | 5 | Cr. 5,000 | 4D6 | No | ½ | Distant | 10 |
| Medium Rotary Machinegun | 6 | Cr. 5,000 | 3D6 | 10 | ½ | Rifle | 10,000 |
| Meson Accelerator | 14 | MCr. 20 | 18D6 | No | 240 | Very Distant | N/A |
| Plasma A Gun | 10 | MCr. 1 | 14D6 Destructive | No | 16 | Very Long | N/A |
| Plasma Missile | 12 | Cr. 3,200 | 8D6 Mega-AP | No | ½ | Extreme |  |
| RF Plasma B Gun | 12 | MCr. 1.5 | 14D6 Destructive | 4 | 16 | Distant | N/A |
| Smart Torpedo | 8 | Cr. 2,800 | 12D6 | No | 5 | Very Distant | N/A |
| Sonic Cannon | 10 | Cr. 20,000 | Stun | No | 5 | Long | N/A |
| Super Heavy Bomb | 6 | Cr. 10,000 | 16D6 Super-AP | No | 6 | Very Distant |  |
| VRF Gauss Gun | 12 | Cr. 200,000 | 5D6 AP | 12 | 4 | Distant | 20,000 |

Universal Modifications

### Increased Speed

Each 10% increase in a vehicle’s Speed costs 10% of the Base Cost and uses 1 Space. The maximum Speed increase possible is 200% and requires 20 Spaces.

### Decreased Speed

Each 10% decrease in a vehicle’s Speed reduces the final cost of the vehicle by 10% of its Base Cost and adds 1 Space to the design. The maximum Speed decrease is 30% for aeroplanes and jets, and 50% for everything else.

### Increased Agility

Each +1 to Agility costs 50% of the Base Cost. The maximum increase to a vehicle’s Agility is +3.

### Decreased Agility

Vehicles can also be built with lowered Agility, normally done for reasons of cost. Each reduction of -1 Agility reduces the final cost of the vehicle by 25% of its Base Cost. The maximum decrease to a vehicle’s Agility is -2.

### Increased Structure

This involves reinforcing the vehicle’s structure with roll cages and strengthened beams. Each additional point of structure costs 20% of the Base Cost, with a maximum increase possible of 10% of the vehicle’s Structure.

### Decreased Structure

This represents cheaper materials or poorer construction. Each point of Structure removed reduces the final cost of the vehicle by 10%. The maximum decrease possible is 25% of the vehicle’s Structure.

### Increased Hull

This involves reinforcing the vehicle’s outer skin through stronger materials and superior design. Each additional point of Hull costs 20% of the Base Cost, with a maximum increase possible of 3 points.

### Decreased Hull

This represents cheaper materials or poorer construction. Each point of Hull removed reduces the final vehicle cost by 10%. The maximum decrease possible is 3 points, with a minimum of one.

### Increased Range

* **Greater Fuel Capacity**: Every 33% added to a vehicle’s original Range subtracts 10% of available Spaces.
* **More Fuel Efficient**: Every 10% added to a vehicle’s original Range costs 20% of the Base Cost.

### Decreased Range

* **Lower Fuel Capacity**: Smaller fuel tanks will free up Space at the cost of Range. Each 10% reduction in a vehicle’s original Range frees up half a Space.
* **Reduced Fuel Efficiency**: Reduced fuel efficiency, from lower technology or less efficient engines, reduces the final cost of the vehicle. Each 25% reduction in a vehicle’s original Range lowers the vehicle’s cost by 10%.

### Open Top

This is an open passenger area, which reduces the final cost by 10% of the Base Cost. Aeroplanes and jets cannot have an Open Top.

### Open Cargo Bed

Reduces the final cost by 20% of the Base Cost. Aeroplanes and jets cannot have Open Cargo Beds. Open Top and Open Cargo Bed combined reduce the base price by 25%.

### Open Frame

Selecting Open Frame means that no Armour can be fitted aside from sheets of cloth armour (Armour 1). However, this reduces the final cost by 50% of the Base Cost.

## Universal Control Modifications

### Primitive Controls (TL 2)

Primitive controls give a -1 penalty to Agility. Primitive controls subtract 20% from the base cost of the vehicle. Vehicles with primitive controls can go no faster then 50 km/h.

### Basic Controls (TL 4)

This is the default control set-up, with no modifiers.

### Advanced Controls (TL 8)

This is usually advanced drive-by-wire systems with heads-up displays. Costs Cr. 10,000 plus 10% of Base Cost. Adds +1 to Agility.

### Exo-skeleton Linkage (TL 10)

The exo-link is a system for translating body movements into vehicle actions. Exo-controls cost Cr. 100,000, plus 50% of the Base Cost. Exo-rigs add +1 to Agility and +1 DM to Initiative checks.

### Neural Link (TL 12)

The neural link is a true mind-machine linkage and allows an operator to control the vehicle with their mind alone. This gives a +2 DM to Initiative and a +2 bonus to Agility. A Neural Link costs Cr. 50,000, plus 100% of the Base Cost.

### Autopilot

Autopilots are available for aircraft and sea vessels starting at TL 5 and other ground vehicles at TL 9. Autopilot systems are at skill level 0 at their Tech Level of introduction and increase their skill level by 1 for every two Tech Levels thereafter, to a maximum of 3. Autopilots cost Cr. 2,000 + Cr. 5,000 per skill level.

## Power Modifications

### Additional Drive System Modifications

This adds a secondary drive system or an alternate environment capability to the vehicle. Improvements can be made to secondary drive systems as normal though Speed can only be doubled, and Agility can only be increased by +1 maximum. Cost multiples for performance improvements are based on the Base Cost as normal. **Aquatic Drive:**This includes such things as a water-tight hull, props or water-jets for propulsion, and a snorkel. This modification can be added to ground vehicles, helicopters, grav vehicles, airships, aircraft and jet aircraft. It cannot be used with tilt-jet, VTOL jet, or aerodyne aircraft, hovercraft, or vehicles that can already traverse water. It costs 100% of the Base Cost. A vehicle with Aquatic Drive has the base same movement as an equivalent sea vehicle (Boat, Light Ship or Heavy Ship) of the same TL. Agility has an additional -1 penalty, and Range in Aquatic mode is 10% of the equivalent sea vehicle. **Ground Drive**: This is more than just a set of wheels for operating at an airport. It is a modification that makes an aerial vehicle properly road-worthy. At higher Tech Levels this includes an interface to local traffic control systems. It can be added to any Light Aeroplane, Light Helicopter, Light Grav Vehicle or Light Aerodyne. It costs 50% of the Base Cost. A vehicle with Ground Drive has the base same movement as an equivalent Ground Vehicle (Light or Heavy) of the same TL. Agility has an additional -1 penalty, and range in Ground Drive mode is half that of the equivalent ground vehicle. **Wind Power**: Any vehicle can also be designed to use wind power. This costs 10% of the Base Cost, and lowers the Agility by -1 for Light vehicles and -2 for Heavy vehicles. While under sail, the vehicle uses the rules for wind-powered vehicles. **Grav Drive**: Any vehicle can have a secondary grav drive added to it. This costs 150% of the Base Cost. A vehicle with Grav Drive has the same movement as an equivalent Grav Vehicle (Light or Heavy) of the same TL. Agility has an additional -1 penalty, and range in Grav Drive mode is half that of an equivalent grav vehicle.

## External Power

| *Vehicle Type* | TL | Spaces | Cost |
| --- | --- | --- | --- |
| Trains, Ground Vehicles on Rails | 4 | 1 per 10 hull | 5,000 per Hull |
| Ground Vehicles | 8 | 1 per 10 hull | 2,000 per Hull |
| Light Aircraft and Light Helicopters | 9 | 1 per 5 Hull | 10,000 per Hull |
| Light Grav Vehicles | 11 | 1 per 5 Hull | 10,000 per Hull |

External power is already included in maglev and grav rail vehicles.

### Fission Plants (TL 6)

A Fission Plant uses  ½ of a vehicle’s Spaces, with a minimum requirement of 10 Spaces. It costs Cr. 100,000 per space. A vehicle fitted with a Fission Plant requires no fuel for a year, has unlimited Range, but also requires the Hostile Environment Protection modification.

### Fusion Plants (TL 9)

A Fusion Plant uses  ¼ of a vehicle’s Spaces, with a minimum requirement of 10 Spaces. It costs Cr. 125,000 per space. A vehicle fitted with a Fusion Plant requires no fuel for a year and has unlimited Range.

## Armour and Defensive Modifications

### Explosive Reactive Armour (ERA)

Reactive armour is a set of explosive charges that detonate in opposition to shaped-charge warheads and high energy weapons. It has no effect on lasers or heavy kinetic weapons like mass drivers and railguns. ERA adds Armour to each face of the vehicle. When the vehicle is hit by HEAP, plasma or fusion gun fire, the ERA will completely absorb the hit on a 2D roll of 2+. Every time the ERA system detonates to protect the vehicle, a cumulative DM of -1 is applied to subsequent checks. Replacing expended charges costs Cr. 5,000 for every -1 DM applied to the ERA check.

| ERA Type | Tech Level | Armour | Cost |
| --- | --- | --- | --- |
| I | 7 | +7 | 50,000 |
| II | 9 | +9 | 75,000 |
| III | 11 | +11 | 100,000 |
| IV | 13 | +13 | 125,000 |

### Electrostatic Armour (TL 9)

A person or animal entering the field will likewise trigger a discharge from the armour, suffering 6d6 damage. This system provides additional Armour equal to twice the vehicle’s TL against HEAP rounds and high energy weapons and Armour equal to the vehicle’s TL versus other kinetic rounds. Electrostatic Armour can be overwhelmed. They will protect against two attacks every round at TL 9 and one additional attack per TL thereafter. ESA systems consume one Space per 10 Hull points of the vehicle and cost Cr. 10,000 per Space.

### Nuclear Damper (TL 12)

The nuclear damper projects a wave that modifies the strong nuclear force and can thus either prevent nuclear weapons from operating or else detonate them prematurely. They cannot detonate weapons stored in damper boxes, however. It takes up 12 Spaces and costs Cr. 500,000.

## Anti-missile Systems

These systems will negate an incoming missile, rocket, launched grenade or mortar round on the roll of 8+. Some systems have Target DMs that modify this, and every system will suffer a -1 DM for every additional target it is forced to engage in each round.

### Explosive Belt (TL 8)

An Explosive Belt system is an array of explosive mine blocks attached to the exterior of the vehicle. They require no Spaces. This system uses the vehicle’s sensor system to detect incoming warheads. They detonate an outward-facing charge loaded with hundreds of small steel and ceramic buck shot. The explosive belt can also be detonated manually, often for defence against infantry in close quarters. In such cases, the Explosive Belt causes 4D damage up to Short Range and is treated like a giant shotgun. The belt can target any threat fired from Short Range or longer. Each facing has enough mines to defend against 10 attacks each. The Explosive Belt costs Cr. 15,000, and reloads cost Cr. 800 per shot.

| Damage | Shots | Target DM |
| --- | --- | --- |
| 4D | 10/facing | +0 |

### Laser Anti-Missile System (TL10)

Laser-based anti-missile systems come in two varieties, based on Tech Level. The first, available at TL 10, uses a relatively low-powered laser to damage or destroy the seeker heads of missiles, sending them off-course. It is only effective against guided weapons and smart weapons. The second is available at TL 13 and uses a high-powered laser to damage or destroy missiles in flight. It cannot engage anything fired from Short Range or closer. The Laser Anti-Missile System takes up 4 Spaces and costs Cr. 250,000.

| Weapon | DAM | DM |
| --- | --- | --- |
| TL10 | – | +1 |
| TL13 | 2D | +2 |

### Projectile-Anti-Missile System (TL8)

This system uses a small-calibre, very high rate of fire minigun to intercept and destroy incoming projectiles. It is first available at TL 8, with a gauss version available at TL 11. These systems cannot target anything fired from Short Range or closer. This system takes up 3 Spaces and costs Cr. 200,000.

| Weapon | TL | DAM | Shots | DM |
| --- | --- | --- | --- | --- |
| Minigun | 8 | 1D | 10 | +0 |
| VRF gauss | 11 | 4D | 15 | +1 |

## Decoy Systems

Each decoy system takes up half a Space and has six uses.

### Smoke Dischargers (TL 3)

Smoke Dischargers render the vehicle difficult to see, giving a -2 DM all to hit rolls. At TL 7, radar-based targeting renders smoke dischargers largely ineffective. They remain effective against laser weapons, reducing damage by 3D.

### Flares (TL 6)

These blind thermal-seeking weapons with intensely-hot flares, giving a -2 DM on to hit rolls for TL 6-9 missiles.

### Chaff Dispensers (TL 4)

These use dozens of reflective strips to confuse radar-seeking weapons, giving a -2 DM on to hit rolls for all radar-guided missiles.

### Prismatic Aerosols (TL 9)

Prismatic Aerosols use hundreds of fine crystal spheres, finer than sand, to refract and deflect laser light. They have the effect of attenuating laser fire to a certain amount, reducing damage by 2D.

### Decoys (TL 7)

This is an acoustic/optical decoy that is designed to confuse smart weapons that home in on silhouettes or shapes, or, for underwater weapons, acoustic signatures.

| Decoy System | Spaces | Cost (Cr.) | Reload Cost | Effect |
| --- | --- | --- | --- | --- |
| Smoke | ½ | 1,000 | 100 | -2 DM vs. visual attacks |
| Flares | ½ | 1,200 | 150 | -2 DM vs. thermal-guided attacks |
| Chaff | ½ | 2,000 | 200 | -2 DM vs. radar-guided attacks |
| Prismatic Aerosol | ½ | 4,000 | 500 | -2 DM vs. laser-guided attacks |
| Decoy | 2 | 8,000 | 1,000 | -2 DM vs. smart missile attacks |

## Environmental Modifications

### Life Support, Short Term (TL 4)

Life Support uses one Space for every 20 people on the Vehicle. The system costs Cr. 10,000 per Space.

### Life Support, Long Term (TL 7)

Long Term Life Support requires one Space per five people on the vehicle, round up and costs Cr. 50,000 per Space used. Long Term Life Support is good for 90 days.

### Air Lock (TL 6)

An Air Lock uses two Spaces and costs Cr. 2,000.

### Hostile Environment Protection (TL 7)

Hostile Environment Protection will safeguard the vehicle and its crew in dangerous, but still marginally-habitable, environments. This includes protection against very hot or very cold environments, radiation, poisons and bacteriological threats. Hostile Environment Protection costs Cr5000 x Spaces and uses one Space.

### Corrosive Environment Protection (TL 9)

This includes the use of ceramic and other corrosion-resistant materials integrated into the hull and control systems of the vehicle. Some form of Life Support must be purchased separately, though this modification includes the benefits of Hostile Environment Protection. This costs Cr10,000 x Hull Rating, and uses two Spaces.

### Insidious Environment Protection (TL 11)

Insidious atmospheres will eventually find their way through any protection. The Insidious Environment Protection provides time; the vehicle and its occupants will be kept safe for a number of days equal to the TL of the vehicle, minus 6, plus the Hull Value of the vehicle. After this has elapsed, the vehicle will start taking Hull and then Structure damage at the rate of one point per day. Some form of Life Support must be purchased separately, though this modification includes the benefits of Hostile Environment Protection. This costs Cr 50,000 x Hull Rating and uses two Spaces.

### Vacuum Environment Protection (TL 6)

Vacuum Environment Protection provides complete protection against vacuum conditions. It requires some sort of Life Support Modification and includes the benefits of Hostile Environment protection. Vacuum Protection costs Cr10,000 x Spaces..

## Electronic Modifications

### Computers

Computers use the rules the *Traveller Main Rulebook*. Double costs for vehicular use, but they take no Spaces

### Navigation

| Type | TL | Navigation | Cost (Cr.) |
| --- | --- | --- | --- |
| Basic | 5 | +1 DM | 2,000 |
| Standard | 9 | +2 DM | 10,000 |
| Advanced | 13 | +3 DM | 50,000 |

### Communications

| Tech Level | Base Range | Base Cost (Cr.) | Spaces | Features |
| --- | --- | --- | --- | --- |
| 4 | Distant | 500 | 0 | Boosted range |
| 6 | V. Distant | 1,000 | 0 | Satellite uplink |
| 8 | Extreme | 2,000 | 0.5 | Tight beam |
| 10 | Continental | 4,000 | 1.0 | Encryption |

### Meson Communicators (TL 10)

Meson comms require two Spaces for a system with a range of Distant and a cost of Cr 50,000. Each range band increase adds an additional Space and doubles the base cost. **Communications Modifications**

| Modification | TL | Range | Spaces | Cost |
| --- | --- | --- | --- | --- |
| Boosted Range | 4 | +1 range band |  | x2 per range band |
| Tightbeam | 8 | – | +1 | x3 |
| Uplink | 6 | Orbital | +1 | x3 |
| Encrypted | 10 | – | – | x2 |

### Boosted Range

Each additional range band doubles the cost of the communicator.

### Satellite Uplink

This allows a communications system to communicate with a satellite or ship in orbit. It includes the necessary tracking equipment to stay locked on and is often combined with a tight-beam system.

### Tightbeam

Tightbeam uses a laser or maser instead of a radio to precisely aim the signal so it cannot be intercepted.

### Encrypted

At the same Tech Level, Encrypted Communications are almost impossible to crack, requiring an Formidable penalty on all Comms checks to try. A Tech Level difference between broadcaster and interceptor represents a bonus or penalty.

### Electronic Countermeasures

Like most electronics and their counter-measures, relative Tech Levels are critically important. Basic communications and sensors are relatively easy to intercept and/or jam, while Standard and Advanced become increasingly more difficult. Tightbeam communications cannot be intercepted, save by pure luck, but they can be jammed, with difficulty. The TL difference is a negative or positive DM in all attempts to intercept, decrypt or jam communications **Countermeasures Tasks**

| Type | TL | Range | Bonus | Cost (Cr) |
| --- | --- | --- | --- | --- |
| Basic | 5 | Distant | +1 | 10,000 |
| Standard | 8 | Very Distant | +2 | 20,000 |
| Advanced | 11 | Continental | +3 | 40,000 |

| Sensor/Comm Class | Basic | Standard | Advanced |
| --- | --- | --- | --- |
| Task | Difficult | Hard | Formidable |

**Sensors**

| Class | Bonus | Space | Range | Cost (Cr) |
| --- | --- | --- | --- | --- |
| Basic | 0 | 0 | Very Long | 5,000 |
| Standard | +1 | ½ | Distant | 15,000 |
| Advanced | +2 | 1 | Very Distant | 25,000 |

The base Tech Level for all sensors is TL 5. For every three levels beyond that, cost increases by 50% Sensors are rated within their Tech Level. The difference in Tech Levels is a negative or positive DM for Sensor rolls.

### Range Increase

Sensor range can be increased. Double the cost per extra range band and it uses half a Space per range band.

### Underwater Sensors

|  | Bonus | Space | Range | Cost (Cr) |
| --- | --- | --- | --- | --- |
| Basic | +1 | 1 | Long | 5,000 |
| Standard | +2 | 1  ½ | Very Long | 15,000 |
| Advanced | +3 | 2 | Distant | 25,000 |

The Tech Level for underwater sensors is also 5 and they have the same modifications as standard sensors. Surface sensors cannot be used underwater, and vice versa.

### Range Increase

Underwater Sensor range can be increased. Double the cost per extra range band and it uses one Space per range band.

## Stealth Modifications

The Tech Level difference between the stealth vehicle and the detector is a DM on detection rolls, positive if the detector is a higher Tech Level, negative if is lower Tech Level. The listed bonus is applied as a DM against sensors of the same Tech Level. Cost is based on the Base Cost.

| Stealth Class | Stealth Bonus | Cost |
| --- | --- | --- |
| I | -1 | Cr50,000 x Hull |
| II | -2 | Cr100,000 x Hull |
| III | -3 | Cr200,000 x Hull |

Stealth is first available at TL 7.

### Camouflage

Camouflage is distinct from stealth. Stealth is all about hiding a vehicle electronically. Camouflage, however, is about hiding it visually. In this context, that includes its infrared signature. It is less dependent on Tech Level differences, though all the camouflage in the world will not help you if you can be spotted by radar.

### Infrared Masking

| IR Mask Class | TL | Bonus | Cost |
| --- | --- | --- | --- |
| I | 7 | +1 | Cr 25,000 x Hull |
| II | 9 | +2 | Cr 50,000 x Hull |
| III | 11 | +3 | Cr 100,000 x Hull |

### Visual Camouflage

| Stealth Class | TL | Stealth Bonus | Cost |
| --- | --- | --- | --- |
| I | 7 | +1 | Cr50,000 x Hull |
| II | 11 | +2 | Cr150,000 x Hull |
| III | 15 | +3 | Cr300,000 x Hull |

## Accommodation Modifications

| Item | TL | Spaces | Cost |
| --- | --- | --- | --- |
| Ejection Seat | 5 | 2 | Cr. 5,000 |
| Ejection Cocoon | 9 | 3 | Cr. 30,000 |
| Double Capacity seating | 2 |  | Cr2,000 per Space |
| Triple Capacity Seating | 2 |  | Cr5,000 per Space |
| Bunks | 3 | 1 | Cr. 200 |
| Galley, mini | 5 | 2 | Cr. 1,000 |
| Galley, full | 4 | 6+1/10 catered for | Cr. 2,000+500/person |
| Fresher | 4 | 2 | Cr. 1,500 |
| GP Lab | 7 | 2 per person | Cr. 5,000 per Space |
| Lab Space | 9 | 1 Space per level per person | Cr. 10,000 per Space |
| Living Space | 3 | Varies | Cr. 1,000 per space |
| Rappelling Gear | 5 | – | Cr. 500 |

**Ejection Seat (TL 5)** The ejection seat takes up two Spaces and is designed to blast the occupant clear. At lower Tech Level this means a suitable height to open a parachute but at higher Tech Levels it is merely sufficient to get clear of the vehicle until a grav chute can deploy. This costs Cr. 5,000. **Ejection Cocoon (TL8)** The cocoon takes up three Spaces and seats one (included within the Space requirement). It costs Cr. 30,000. **High Capacity Seating** The normal standard of one Space per passenger or crew allows some elbow-room and limited room to move about. High-capacity seating greatly increases the seating density but takes away from room to move. High-capacity seating can be either double or triple. High-capacity seating cannot be used for troop seating, or for control areas. Frequent flyers will be well aware of what it entails. Double capacity costs Cr. 2000 per Space of the vehicle, while triple capacity costs Cr. 5,000 per Space **Bunks** Bunks can accommodate up to two people, take up one Space and cost Cr. 200.

### Galley

A Mini-galley takes up two Spaces, serves up to five people and costs Cr. 1,000. A Full Galley take up six Spaces, plus one Space per 10 people served. It costs Cr. 2,000 + Cr. 500 per person served.

### Fresher (TL 7)

A Fresher, complete with toilet, sink and shower, takes up two Spaces and costs Cr. 1,500.

### General Purpose Lab (TL 7)

A General Purpose Lab provides no bonuses but allows tasks to be performed with no penalty for missing tools/equipment. General Purpose Labs consume two Spaces per researcher using the lab and cost Cr. 5,000 per Space.

### Lab Space (TL 9)

Lab Space includes analytic equipment, computer workstations and equipment appropriate to the discipline it is focussed on, defined during construction. Lab Space grants a skill DM equal to +1, +2 or +3 and take up one Spaces per bonus per researcher using it. A +3 DM lab, used by 3 researchers, would take up 9 Spaces. Cost is Cr. 10,000 per Space used. Types of lab include: Physics, chemistry, biology, psychology, structures and materials. Other types are possible.

## Additional Equipment and Tools

### Autodoc

The Autodoc is a whole-body automated treatment system. At TL 10, the Autodoc has Medic 1, which increases by 1 at TL 12 and TL 14. Its effective Edu for diagnostic purposes is 10, while Dex for surgical treatment is 8. The Autodoc takes up two Spaces and costs Cr. 10,000.

### Operating Theatre

An Operating Theatre is a room equipped for use as an emergency medical clinic. Until TL 10, the vehicle must remain stationary in order for the Operating Theatre to be used. After that, the theatre can be built on a stabilised bed that allows it to be used while the vehicle is in motion.

| TL | Spaces | Cost |
| --- | --- | --- |
| 7-10 | 4+3 per patient | Cr. 20,000 + Cr. 10,000 per patient capacity |
| 11+ | 8+5 per patient | Cr. 50,000 + Cr. 20,000 per patient capacity |

### Low Berth (TL 10)

The Low Berth is a standard hibernation unit, common for steerage-class interstellar transport. In vehicles, they are often part of an emergency response system, where accident victims can be placed into hibernation to prevent their condition from getting even worse. A Low Berth takes 4 Spaces and costs Cr. 50,000.

### Emergency Low Berth (TL 12)

A conventional Low Berth takes several minutes to induce hibernation and lower core temperature. The Emergency Low Berth can do a ‘crash’ induction, plunging a person into deep hibernation in a fraction of the time. It takes up 6 Spaces, and costs Cr. 100,000.

### Fire Extinguishers

Fire Extinguishers are designed to put out fires internal to the vehicle. They take up no space and cost Cr. 500.

### Water Cannon

Water Cannon are used for fire suppression, riot control and dispersal of chemicals. A water cannon costs Cr. 2,000, takes up one Space and requires one Space per minute’s firing duration of liquid carried. Water Cannon have a maximum range of Medium.

### Survey Sampling Equipment

This covers several different types of equipment that act to sample atmosphere, ground and any water or other fluids.

### Atmosphere Samplers

A system of collectors, pipes and filters for atmosphere sampling, including any particulates, taints and organic matter. It takes up 3 Spaces and costs Cr. 10,000.

### Geology Samplers

An array of scooping devices for shallow ground testing along with a hollow-core drills capable of drilling down one kilometre. It takes up 15 Spaces and costs Cr. 100,000. Geology Samplers add a +1 DM to all geology-based checks at TL 10 and a +2 DM at TL 14.

### Hydrology Sampler

This is a set of liquid sampling equipment, holding tanks and testing equipment. It costs Cr. 10,000, and takes up 5 Spaces. Hydrology Samplers add a +1 DM to all hydology-based checks at TL 10 and a +2 DM at TL 14.

### Holding Tank (TL 8)

Holding tanks can be built to any size, at the cost of Cr. 5,000 per Space.

### Digging Equipment (TL 5)

External digging and scooping equipment, costing Cr. 25,000 and taking up 10 Spaces.

### Cutting Equipment (TL 5)

External heavy duty saws, water knives or plasma cutters, depending on Tech Level. These cost Cr. 10,000, and take up 5 Spaces.

### Manipulator Arms

Manipulator Arms are remote appendages with claws or hands. Manipulator arms vary in Strength and Dexterity. Arms have a Str of 2 and a Dex of 1, with a cost of Cr 10,000. Increasing Str or Dex costs Cr. 5,000 per point, to the maximum indicated in the table below.

| TL | Max. Str | Max. Dex |
| --- | --- | --- |
| 5 | 6 | 4 |
| 8 | 12 | 8 |
| 11 | 18 | 12 |
| 14 | 24 | 16 |

### Light Crane

Light Cranes can lift up to 400 kg and can be used as rescue equipment. Light cranes cost Cr. 2,500 and take up 1 Space.

### Medium Crane

Medium Cranes can lift up to 2,000 kg. They cost Cr. 40,000, and take up 4 Spaces.

### Heavy Crane

Heavy Cranes can lift up to 10,000 kg. They cost Cr. 100,000 and take up 8 Spaces.

### Cargo Arm

This is a heavy-duty manipulator arm used for lifting cargo in confined spaces. Cargo Arms have a base Str of 30 and a Dex of 0, and cost Cr. 50,000.

### Internal Vehicle Bays

These take up a number of Spaces equal to the Shipping Size, multiplied by 10. This allows a small amount of room for maintenance purposes. Tighter stowage can be had for 5 Spaces per ton but the carried vehicles have to be removed by a crane or similar apparatus before use or maintenance.

### Refrigeration (TL 5)

Takes up one space for every 10 Spaces that are to be refrigerated. This costs Cr. 1,500 per space.

### Wet Bar (TL 2)

A basic wet bar, usually species-specific. It takes up half a Space and costs Cr. 2,000.

### Entertainment System (TL 5)

Both audio and visual, this takes up no Space, and costs at least Cr. 200. Players intending to impress may want to spend more. Much more.

### Holo-suite (TL10)

This is advanced holographic projection suite. Often used on exploration vehicles as a large display unit, it has other, less wholesome, uses. It takes up 1 Space and costs Cr. 15,000.

### Hot tub/pool (TL 6)

This takes up 1-3 Spaces per person capacity, depending on the luxury sought after, and costs Cr. 3,000 per Space.

### Refuelling Station (TL 9)

The refuelling station is designed to turn water into hydrogen fuel, using the sun as a power source. It requires a significant amount of space, and access to both water and sun. At TL 9, it requires a vehicle’s Hull value multiplied by 3 hours to crack sufficient fuel to completely refuel the vehicle. At TL 12 this is reduced to the vehicle’s Hull score alone in hours. Refuelling stations require 4 Spaces plus 1 Space per 10 points of Hull (of the vehicle to be refuelled). They cost Cr. 15,000 per space.

## Aliens

Humans of all types require one Space per person, whether they are passenger or crew. Alien races, however, may require more. Battle Dress **Characteristics** Character wearing battle dress are treated as having enhanced characteristics for the purposes of carrying and combat, but not for taking damage. Battle dress protects against environmental hazards in the same way as a Hostile Environment Vacc Suit. All battle dress provides effectively unlimited Endurance for purposes of determining fatigue.

## Battle Dress Design

### Ultra-light Chassis

The ultralight chassis is little more than a light-weight powered exoskeleton. It is primarily used at lower Tech Levels to provide mobility to paralysed and otherwise incapacitated people before the advent of nerve fusion. It is sometimes used by soldiers and hikers as a load-bearing system, allowing them to carry a large-than-normal allotment of gear for long periods of time.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | TL 9-10 | TL 11-12 | TL 13-14 | TL 15-16 |
| Slots | 4 | 6 | 8 | 10 |
| Str Modifier | +0 | +1 | +2 | +3 |
| Dex Modifier | +0 | +2 | +4 | +6 |
| Base Damage | D6 | D6 | D6 | D6 |
| Max. Armour | 10 | 12 | 14 | 16 |
| Duration | 12 hours | 24 hours | 36 hours | 48 hours |
| Cost (Cr.) | 10,000 | 20,000 | 30,000 | 40,000 |
| Speed (Walk/Run) | 6/30 | 12/60 | 25/125 | 50/250 |
| Shipping Size | 0.05 | 0.05 | 0.05 | 0.05 |

### Light Chassis

Light battle dress is used in more specialised roles, often either fast recon units or protection for rear-echelon troops.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | TL 9-10 | TL 11-12 | TL 13-14 | TL 15-16 |
| Slots | 8 | 10 | 12 | 14 |
| Str Modifier | +1 | +2 | +3 | +4 |
| Dex Modifier | +0 | +2 | +4 | +6 |
| Base Damage | D6+2 | D6+2 | D6+2 | D6+2 |
| Max Armour | 14 | 16 | 18 | 20 |
| Cost (Cr.) | 50,000 | 80,000 | 110,000 | 140,000 |
| Speed (Walk/Run) | 5/25 | 10/50 | 20/100 | 40/200 |
| Duration | 8 hours | 16 hours | 24 hours | 32 hours |
| Shipping Size | 0.07 | 0.07 | 0.07 | 0.07 |

### Medium Chassis

The medium chassis is the basis of standard Imperial Marine battle dress and is used for most frontline powered armours.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | TL 9-10 | TL 11-12 | TL 13-14 | TL 15-16 |
| Slots | 12 | 14 | 16 | 18 |
| Str Modifier | +2 | +3 | +4 | +5 |
| Dex Modifier | +0 | +2 | +4 | +6 |
| Base Damage | 2D | 2D | 2D | 2D |
| Max Armour | 18 | 20 | 22 | 24 |
| Cost (Cr.) | 200,000 | 250,000 | 300,000 | 350,000 |
| Speed (Walk/Run) | 3/15 | 6/30 | 12/60 | 24/120 |
| Duration | 6 hours | 12 hours | 18 hours | 24 hours |
| Shipping Size | 0.1 | 0.1 | 0.1 | 0.1 |

### Heavy Chassis

Heavy suits are used in assault and support roles. Many are found spearheading attacks, often with mobility boosts, while similar-sized suits can be found toiling behind the lines, building entrenchments and loading heavy guns.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | TL 9-10 | TL 11-12 | TL 13-14 | TL 15-16 |
| Slots | 16 | 18 | 20 | 22 |
| Str Modifier | +3 | +4 | +5 | +6 |
| Dex Modifier | -2 | 0 | +2 | +4 |
| Base Damage | 3D | 3D | 3D | 3D |
| Max Armour | 22 | 24 | 26 | 28 |
| Cost (Cr.) | 500,000 | 600,000 | 700,000 | 800,000 |
| Speed (Walk/Run) | 2/10 | 4/20 | 8/40 | 16/80 |
| Duration | 3 hours | 6 hours | 12 hours | 24 hours |
| Shipping Size | 0.15 | 0.15 | 0.15 | 0.15 |

### Ultra-heavy

Ultra-heavy battle dress blurs the line between armour and walking vehicles. They are used in heavy support roles, where their ability to carry heavy battlepacks allows them to bring considerable firepower to bear.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | TL 9-10 | TL 11-12 | TL 13-14 | TL 15-16 |
| Slots | 20 | 22 | 24 | 26 |
| Str Modifier | +4 | +5 | +6 | +7 |
| Dex Modifier | -4 | -2 | 0 | +2 |
| Base Damage | 4D | 4D | 4D | 4D |
| Max Armour | 26 | 28 | 30 | 32 |
| Cost (Cr.) | 1,000,000 | 1,250,000 | 1,500,000 | 1,750,000 |
| Speed (Walk/Run) | 1/5 | 2/10 | 4/20 | 8/40 |
| Duration | 2 hours | 4 hours | 8 hours | 16 hours |
| Shipping Size | 0.25 | 0.25 | 0.25 | 0.25 |

### Battle Dress in Vehicles

While based on the human frame, battle dress is bulkier than an un-armoured person. Ultra-light exoskeletons, without Armour, can be used in double-capacity seating but not triple-capacity. With Armour, they require normal seating. Light battle dress, whether a bare exoskeleton or an armoured suit, requires regular seating at one Space per suit. Any heavy weapons have to have cargo space allocated. Medium battle dress is quite bulky and requires two Spaces per suit, plus space for heavy weapons. Heavy battle dress requires three Spaces per suit. Ultra-heavy battle dress requires four Spaces per suit.

## Armour

Each point of Armour costs Cr. 50,000, up to the maximum supported by the chassis. This represents not just the armour itself, but the systems required to support the armour.

### Heavy Armour

For every additional -1 DM to Dex the battle dress is given, a further two points of Armour can be added. This may be done three times, for a maximum Dex DM of -3 and 6 extra points of Armour.

### Base Cost

The total spent on the chassis and Armour is the Base Cost of battle dress, a figure used to calculate the cost of a lot of equipment and modifications that can now be added.

### Mount Points

Mount Points allow vehicle-scale heavy weapons to be used with battle dress. Each Space of heavy weapons on a vehicle requires eight Slots on battle dress. A 1 Space weapon can be arm-mounted, taking up the entire arm. A 2 Space weapon can be shoulder mounted, while 3 Space weapons have to be back-mounted. Battle dress up TL 12 and lower cannot move and fire Mount Point weapons in the same round. At TL13 gravitic stabilisation of the weapon becomes possible, allowing these armour to move and fire with these heavy weapons.

## Carried Weapons

Conventionally-sized small arms can be used with no penalty by ultra-light and light chassis. Medium chassis can use rifles but cannot use pistols unless the weapons have been modified for use by the larger fingers of the suit. Heavy chassis have a -1 DM to their use, will ultra-heavy chassis have a -2 DM to their use. This only applies to rifles, as pistols and SMGs are simply too small to be used. Weapons purpose-built for battle dress do not suffer these penalties. Heavy chassis can carry a one Space weapon, while ultra-heavy chassis can carry a two Space weapon.

## Using other weapons on Battle Dress

An equipment slot is approximately the same size as a large pistol. Pistols take one Slot, SMGs and carbines 2 Slots, and rifles 3 Slots. **Slot Mounts** Slot weapons are interchangeable but it requires the services of an armourer (with Mechanic-1) to do the change. Normal weapons cannot be placed into a Slot without an extensive amount of work, typically costing up to twice the value of the weapon.

## Battledress Weapons

| Hand carried | TL | Cost (Cr.) | Damage | Auto | STR | Range | Ammo |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Heavy Machinegun | 6 | 8,000 | 5d6 SAP | 6 | 12 | Rifle | 100 |
| Light Autocannon | 7 | 9500 | 6d6 SAP | 6 | 14 | Rifle | 50 |
| PGMP-13 | 13 | 65,000 | 12d6 | No | 12 | Rifle | 10 |
| FGMP-14 | 14 | 100,000 | 16d6 | No | 14 | Rifle | 12 |
| Gauss Rifle | 12 | 2,000 | 4d6 | 4 | 8 | Rifle | 100 |
| RF Gauss Rifle | 13 | 16,000 | 4d6 AP | 8 | 9 | Rifle | 500 |
| MagRail Rifle | 13 | 2,500 | 4d6+2 | 4 | 10 | Rifle | 10 |
| Gauss Shotgun | 12 | 4,500 | 8d6 | No | 8 | Shotgun | 12 |
| Gauss Flamer | 13 | 10,000 | 6d6+6 | No | 9 | Rifle | 40 |
| Slotted | TL | Cost (Cr) | Damage | Auto | Slots | Range | Ammo |
| Gauss Pistol | 12 | 500 | 3d6 AP | 4 | 1 | Rifle | 40 |
| Gauss SMG | 13 | 1,200 | 3d6+1 AP | 4 | 1 | Rifle | 500 |
| Seeker Gun | 13 | 1,200 | 4d6 | No | 1 | Rifle | 6 |
| Hand Flamer | 10 | 1,400 | 3d6+6 | No | 2 | Pistol | 6 |
| Laser Carbine | 11 | 3,200 | 4d6 | No | 2 | Rifle | 50 |
| Mount Point Weapons | TL | Cost (Cr) | Damage | Auto | Spaces | Range | Ammo |
| Plasma Bazooka | 11 | 15,000 | 10d6 | No | 1 | Rifle | 5 |
| Recoilless Rifle | 5 | 8,000 | 10d6 AP | No | 2 | Rifle | 3 |
| Medium Autocannon | 6 | 6,000 | 7d6 SAP | 6 | 2 | Dist | 400 |
| Rocket Pod | 6 | 10,000 | 6d6 | 6 | 2 | Dist | 24 |
| Heavy Plasma Gun | 12 | 250,000 | 14d6 | No | 2 | V. Long | 12 |
| Advanced Anti-Armour Gun | 14 | 50,000 | 14d6 Super-AP |  | 3 | Dist | 50 |
| Heavy Fusion Gun | 14 | 200,000 | 18d6 AP | No | 3 | V. Dist | 10 |
| Mass Driver Cannon | 13 | 250,000 | 16d6 Super-Ap | 2 | 3 | V. Dist | 20 |
| Tac Missile Pack | 10 | 22,000 | Varies | 0 | 3 | Varies | 4 |

## Modifications

### Strength Increase

Strength can be increased by +1, at a cost of 10% of the Base Cost. This may be done up to ten times.

### Extended Duration

This adds additional power cells to the suit. Every 50% increase in duration costs Cr. 10,000 and uses one Slot. This cannot be used on the same battle dress as Decreased Duration.

### Decreased Duration

Decreased duration uses smaller or lower-powered power cells to save cost. Each 10% decrease in Duration reduces the Base Cost by Cr. 5,000. This cannot be used on the same battle dress as Extended Duration.

### Increased Speed

Battle dress maximum speeds can be increased. For every 10% increase in Speed, increase the cost by 25% of Base Cost.

### Decreased Speed

Speed can also be decreased. For each 33% decrease in Speed, decrease Base Cost by 25%.

### Enhanced Manoeuvrability

Each point of Dex penalty can be removed at a cost of 50% of the Base Cost. This can reduce the Dex penalty but cannot add a bonus.

### Lowered Manoeuvrability

Lowering manoeuvrability can either increase the Maximum Armour permitted or, as here, reduce the price of the battle dress. Each point of Dex penalty taken, to a maximum of -3, will reduce the Base Cost of the suit by 10%.

### Stealth (TL9)

Stealth is the art of rendering a suit of armour undetectable to sensors   The listed bonus is applied against sensors of the same Tech Level. Cost is based on the Base Cost.

|  |  |  |
| --- | --- | --- |
| Stealth Class | Stealth Bonus | Cost |
| I | +1 | 200% |
| II | +2 | 400% |
| III | +3 | 600% |

### Extended Life Support

Extended Life Support provides complete life support, including food, water, waste collection and recycling for up to 72 hours. Extended Life Support uses two Slots and costs 10% of the Base Cost.

### Corrosive Environment Protection

This coating provides effectively unlimited protection in a corrosive environment. It integral costs 25% of the Base Cost and requires no Spaces.

### Insidious Environment Protection

Suits can be designed to be resistant to Insidious atmospheres. Insidious Environment Protection will provide protection for 72 hours before it starts to degrade, at the rate of one point of Armour per hour. Insidious Environment Protection costs 100% of the Base Cost of the suit, as every component has to be protected.

### Medikit (TL9)

This internal medikit provides support and assistance to the wearer. It can diagnose medical emergencies as if it had Medic-2 and can heal up to four points of damage instantly, though the effects only last for 1D hours. It takes up one Slot and costs Cr. 25,000.

### Advanced Medikit (TL12)

This internal medikit is more effective than the standard model. It can repair up to six points of damage instantly, though the effects only last for 1D6 hours. It also has the equivalent of Medic-3 for treatment and diagnostic purposes. It takes up one Slot and costs Cr. 50,000.

## Camouflage

Camouflage provides bonuses to Stealth rolls.

### Basic Camo

Shatter-pattern paint scheme in colours designed to help blend into the local environment. This adds a +1 DM to Stealth checks, and costs Cr. 500.

### IR Camo (TL8)

IR camo selectively bleeds the suit’s temperature to match background levels. It does not work in vacuum environments. This adds a +2 DM to Stealth checks vs. heat-seeking and IR sensors, and costs Cr. 25,000.

### Active Camo (TL10)

Active camo allows a choice of camo patterns and colours, and instantly changes the suit’s surface to match. This adds a +2 DM to Stealth checks, and costs Cr. 50,000.

### Looking Glass (TL15)

Looking Glass is an expensive system that uses quantum waveguides to bend light around the suit, resulting in near-invisibility from all angles. It uses one Slot, costs Cr. 200,000, and adds a +4 DM to Stealth checks.

### Sonic Suppresser (TL10)

An active system that constantly monitors the sounds being made by the suit and broadcasts sound waves in direct opposition, in order to cancel them out. Takes up one Space. It costs Cr. 20,000, and adds a +2 DM to Stealth checks. IR Camo and the Sonic Suppressor can be combined with either the Basic, Active or Looking Glass systems.

## Electronics

### Computer

Computers use one Slot and use the rules from the *Traveller Main Rulebook*. At TL 12 and higher, an Expert system on an onboard computer can take control of the suit even if the operator is dead or incapacitated.

### Navigation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Type | TL | Slots | Navigation DM | Cost (Cr.) |
| Basic | 5 | 1 | +1 | 2,000 |
| Standard | 9 | 2 | +2 | 10,000 |
| Advanced | 13 | 4 | +3 | 50,000 |

### Communications

Basic communicators are first available at TL 4, have a range of Distant, and cost Cr. 1,000. They can support Boosted Range. Standard communicators are first available at TL7, have a range of Very Distant, and cost Cr. 2,000. They can support Boosted Range, Satellite Uplink and Encryption. Advanced communicators are first available at TL 10, have a range of Extreme, and cost Cr. 4,000. They can support all options.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Type | TL | Range | Slots | Cost (Cr) |
| Basic | 4 | Dist | 1 | 1,000 |
| Standard | 7 | V.Distant | 2 | 2,000 |
| Advanced | 10 | Continental | 3 | 4,000 |

**Communications modifications**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Modification | TL | Range | Slots | Cost |
| Boosted Range | 4 | +1 Range band | +1 | x2 per Range band |
| Tightbeam | 9 | – | +1 | x3 |
| Uplink | 7 | Orbital | +2 | x3 |
| Encrypted | 9 | – | – | x2 |

### Boosted Range

Each additional range band desired doubles the cost of the communicator.

### Tightbeam

Tightbeam uses a laser or maser to precisely aim the signal so it cannot be intercepted.

### Satellite Uplink

This allows a communications system to communicate with a satellite or ship in orbit. It includes the necessary tracking equipment to stay locked on and is often combined with a tight-beam system.

### Encrypted

At the same Tech Level, Encrypted communications are Formidable to crack. Tech Level difference represents a DM, depending on whether the reading equipment is from a higher or lower tech. So, if invading TL 15 Imperial marines intercept a TL12 encrypted communiquÃ© from insurgent forces, they have a DM of +3 to decode it. If those insurgents managed to intercept an encrypted TL15 transmission, they would be at -3 on their roll to decode it.

### Electronic Countermeasures

Like most electronics and their counter-measures, the relative Tech Levels are critically important. Basic communications and sensors are relatively easy to intercept and/or jam, while Standard and Advanced become increasingly more difficult. Tightbeam communications cannot be intercepted, save by pure luck, but they can be jammed with difficulty. TL difference is a negative or positive DM in all attempts to jam communications **Countermeasures Tasks**

| Type | TL | Range | Slots | Bonus | Cost (Cr.) |
| --- | --- | --- | --- | --- | --- |
| Basic | 8 | Long | 1 | +1 | 10,000 |
| Standard | 11 | Distant | 2 | +2 | 20,000 |
| Advanced | 14 | Very Distant | 4 | +3 | 40,000 |

| Sensor/Comm Class | Basic | Standard | Advanced |
| --- | --- | --- | --- |
| Task | Difficult | Hard | Impossible |

## Sensors

The base Tech Level for all sensors is TL8. Sensors are rated within their Tech Level. The difference in TL is used as a positive or negative DM. This is in addition to any effects from Stealth.

| Class | Bonus | Slots | Range | Cost (Cr.) |
| --- | --- | --- | --- | --- |
| Basic | +0 | 1 | Long | 10,000 |
| Standard | +1 | 3 | Very Long | 20,000 |
| Advanced | +1 | 5 | Distant | 35,000 |

**Underwater Sensors**

| Class | Bonus | Slots | Range | Cost (Cr.) |
| --- | --- | --- | --- | --- |
| Basic | +1 | 1 | Long | 5,000 |
| Standard | +2 | 2 | Very Long | 15,000 |
| Advanced | +3 | 4 | Distant | 25,000 |

The basic Tech Level for underwater sensors is also 8 and they have the same modifications as standard sensors. Surface sensors cannot be used underwater, and vice versa.

### Modifying Sensors

### Range Increase

Sensor range can be increased at a cost of doubling the sensor’s cost for every additional Range band desired.

### Sensory Extensions

A boom mount for video and audio sensors, allowing the suit to peek around corners without exposing itself to fire. Uses one Slot, costs Cr. 1,000.

### Enhanced Visual Sensors

These sensors add low-light, telescopic optics and thermal imaging to a suit’s capabilities. They take up no Slots, and cost Cr. 15,000.

### Enhanced Audio Sensors

These sensors add high and low-frequency hearings, audio enhancement and, when required, audio dampening to a suit. They take up no Slots, and cost Cr. 7,000.

## Defences

### Static Armour (TL13)

Similar to the electrostatic armour found on vehicles, Static Armour can dissipate the energy of incoming plasma, fusion and HEAP weapons. Static Armour can also damage unprotected infantry forces if they attempt to move within Personal range of the battle dress. Unlike the more powerful systems on vehicles, Static Armour has no effect on kinetic weapons. Static Armour adds its TL to the battle dress Armour against fusion, plasma and HEAP warheads. It will causes 3D damage to infantry who get into Personal range.

| Slots | Cost | Effect | Attacks per round |
| --- | --- | --- | --- |
| 3 | Cr. 20,000 | +TL vs. HEAP & high-energy | 2, +1 per TL after 13 |

## Anti-missile Systems

These systems will negate an incoming missile, rocket, launched grenade or mortar round on a roll of 8+. Some systems have Target DMs that modify this, and every system will suffer a -1 DM for every additional target it is forced to engage in each round. **Explosive Belt (TL 8)** An Explosive Belt system is an array of explosive mine blocks attached to the exterior of the battle dress. They require no Spaces. This system uses the battle dress’ sensor system to detect incoming warheads. They detonate an outward-facing charge loaded with hundreds of small steel and ceramic buck shot. The explosive belt can also be detonated manually, often for defence against infantry in close quarters. In such cases, the Explosive Belt causes 4D damage up to Short Range and is treated like a giant shotgun. The belt can target any threat fired from Short Range or longer. The Explosive Belt costs Cr. 5,000, and reloads cost Cr. 400 per shot. It uses 1 Slot.

| Damage | Shots | Target DM |
| --- | --- | --- |
| 4D | 5 | +0 |

### Laser Anti-Missile System (TL10)

Laser-based anti-missile systems come in two varieties, based on Tech Level. The first, available at TL 10, uses a relatively low-powered laser to damage or destroy the seeker heads of missiles, sending them off-course. It is only effective against guided weapons and smart weapons. The second is available at TL 13 and uses a high-powered laser to damage or destroy missiles in flight. It cannot engage anything fired from Short Range or closer. The Laser Anti-Missile System takes up 2 Slots and costs Cr. 150,000.

| Weapon | DAM | DM |
| --- | --- | --- |
| TL10 | – | +1 |
| TL13 | 2D | +2 |

### Projectile-Anti-Missile System (TL8)

This system uses a small-calibre, very high rate of fire minigun to intercept and destroy incoming projectiles. It is first available at TL 8, with a gauss version available at TL 11. These systems cannot target anything fired from Short Range or closer. This system takes up 1 Mount Point and costs Cr. 80,000.

| Weapon | TL | DAM | Shots | DM |
| --- | --- | --- | --- | --- |
| Minigun | 8 | 1D | 10 | +0 |
| VRF gauss | 11 | 4D | 15 | +1 |

### Swarm Hive (TL13)

Swarms can survive for up to one hour outside of their battle dress. A swarm can penetrate any unsealed vehicle or building. A swarm pack is TL 13, uses two Slots and costs Cr. 45,000. In attack mode, a swarm can do 2D damage per round to opponents. As reconnaissance units, Swarms add a +2 DM to Recon skill checks.

## Mobility Options

### Powered Wheels

This is a set of pop-down powered wheels that give battle dress high mobility on smooth roadways. Powered wheels consume 2 Slots and cost Cr. 10,000. They double the suit’s movement on roads but are unusable off-road.

### Air Cushion System

The Air Cushion system uses a high-speed blower and a set of inflatable skirts on each foot to lift and propel the battle dress over the ground. The system can handle just about any terrain save for dense forest and undergrowth. The air cushion uses 2 Slots and costs Cr. 25,000. Maximum speed is 100km/h.

### Flight Pack

The flight pack, available at TL 9, is a small jet engine and a set of wings and can only be used with ultra-light suits. It uses 4 Slots and costs Cr. 50,000. A suit in flight mode has a maximum speed of 300 km/h, with a maximum range of 200 km.

### Grav Pack (TL12)

This is the ultimate mobility enhancement for powered armour and allows free flight for any suit so equipped. The Grav Pack uses 2 Slots and costs Cr. 100,000. The Grav Pack gives the suit free flight with a maximum speed of 200 km/h and Agility +1. This increases to 400 km/h and Agility +2 at TL 14.

### Parachute (TL4)

Available from TL4 on, the Parachute is a simple harness and deployment system for a large canopy capable of supporting the weight of a suit of battle dress. It takes 3 Slots. Cr. 4,000.

### Grav Chute (TL9)

A Grav Chute uses a low-powered grav lifter and shielded power cell to give the suit limited flight abilities. The Grav Chute module usually supports the suit, in a manner similar to conventional parachutes, so that it can be cut away when the suit lands, sparing the extra weight and bulk. A Grav Chute uses 2 Slots and costs Cr. 10,000.

### Swimmer System

The swimmer system allows battle dress to move around unrestricted under water, at speeds up to the suit’s running speed. Life support must be purchased separately. The Swimmer System uses 2 Slots and costs Cr. 15,000. Safe depth for battle dress is 100 metres, while crush depth is 250 metres. Safe and crush depths can be improved**:** Each 50% increase in Safe Depth/Crush Depth costs 100% of the Base Cost of the battle dress.

## Miscellaneous

### Armoured Coveralls

Armoured coveralls provide some additional protection to the suit but their main role is to keep contaminants and debris out of the complex joints of a powered suit. Coveralls provide an additional two points of Armour (which can take the battle dress above its normal maximum Armour) and cost Cr. 10,000. They use no Slots.

### Tool Kit

A set of basic mechanic tools, powered off the suit’s own power supply. This includes screwdrivers, drill, wrench and saw. Uses 2 Slots, and costs Cr. 1,800.

### Med Pack

The med pack is an advanced ‘smart’ medical diagnostic and dispensary. It contains up to five doses of a variety of drugs and is equipped with an expert system that either gives a +1 DM on all Medic skill checks, or else can operate on its own as if it had Medic-1. It costs Cr. 5,000.

### Smoke Discharger

This pack include three smoke dispensers, which can lay down a cloud of thermally-opaque smoke giving a -2 DM all to hit rolls. At TL 7, radar-based targeting renders smoke dischargers largely ineffective. They remain effective against laser weapons, reducing damage by 3D. They use 1 Slot, and cost Cr. 500 per pack.

### Prismatic Aerosol Dispenser

Similar to the smoke discharger, the prismatic aerosol dispenser fires a cloud of diamonoid dust, which refracts and breaks up laser fire, including laser designators for smart weapons. This provides a -2 DM for to hit rolls for all laser weapons, including designators. It uses 1 Slot, and costs Cr. 1,000 per pack.

### Chaff Dispenser

The Chaff dispenser fires a cloud of radar-reflective strips, which confuse active sensors systems and missile guidance systems, giving a -2 DM on to hit rolls for all radar-guided missiles. It uses 1 Slot, and costs Cr. 1,000 per pack. Robots and Drones

## Drones

### Drone Controllers

|  | TL | Spaces | Control DM | Range | Cost |
| --- | --- | --- | --- | --- | --- |
| Primitive | 5 | 4 | -3 | Long | Cr. 10,000 |
| — | — | — | — | — | — |
| Basic | 7 | 3 | -2 | Very Long | Cr. 50,0000 |
| — | — | — | — | — | — |
| Advanced | 9 | 2 | -1 | Distant | Cr. 200,000 |
| — | — | — | — | — | — |
| Neural-linked | 11 | 1 | 0 | Very Distant | Cr. 500,000 |
| — | — | — | — | — | — |

The operator of a drone uses the Remote Operations skill to control it.

## Robot Brains

Robot Brains can be added to any vehicle with Advanced Controls or better.

### Robot Brains

| CPU | Spaces | TL | Computer Power | Skill Level | Cost |
| --- | --- | --- | --- | --- | --- |
| Linear | 3 | 8 | Computer/1 | 1 | Cr. 22,500 |
| Parallel | 2 | 10 | Computer/2 | 2 | Cr. 40,000 |
| Synaptic | 1 | 12 | Computer/3 | 3 | Cr. 90,000 |

## Cyborg Vehicles

The use of human (or sometimes animal) brains to control a vehicle is possible at TL12 and higher. The organic brain and its support systems take up one Space in the vehicle, and require Neural-linked Controls. The use of an organic core grants a +1 DM to all skill checks performed by the cyborg vehicle, in addition to the benefits of the neural link. An organic brain costs Cr. 250,000 and otherwise operates as an independent entity. It includes basic life support for the organic components for a period of one month.

### Organic Core Extended Life Support

An Organic Core Extended Life Support provides a year’s worth of nutrients and filtration for the organic brain and its biological support systems. It is available at TL 13, takes up 5 Spaces, and costs Cr. 250,000.

### Robots and Drones in Battle Dress

Much like vehicles, battle dress can be designed with a robot brain, drone controller, or organic core, and for much the same reasons. All of these versions of automated battle dress have Strength, Dexterity, and Endurance characteristics of 7, modified as normal by the actual battle dress.

### Drone Controllers

A Drone Controller fills the interior space of a suit, replacing the volume of a human operator. They do not require a control system but, in all other ways, they are identical to Drone Controllers fitted to vehicles.

|  | TL | Control DM | Range | Price |
| --- | --- | --- | --- | --- |
| Standard | 8 | -2 | Distant | Cr. 50,0000 |
| — | — | — | — | — |
| Advanced | 10 | -1 | Very Distant | Cr. 200,000 |
| — | — | — | — | — |
| Neural-linked | 12 | 0 | Very Distant | Cr. 500,000 |
| — | — | — | — | — |

### Robot Brains

The cost of the Robot Brain, below, includes are required support structures to be added into the suit. The brain is powered by the power cell of the suit, and uses non-volatile memory to store its essential core programming should it ever lose power. It does not require a control system but, in all other ways, it is identical to Robot Brains fitted to vehicles.

| CPU | TL | Computer Power (GHz) | Complexity | Max Skill Level | INT | EDU | Cost |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Linear | 9 | 1 | 5 | 1 | 2 | 6 | Cr. 25,000 |
| Parallel | 11 | 3 | 10 | 2 | 6 | 8 | Cr. 100,000 |
| Synaptic | 13 | 5 | 20 | 3 | 12 | 10 | Cr. 500,000 |

### Robot Brains

| CPU | TL | Computer Power | Skill Level | Cost |
| --- | --- | --- | --- | --- |
| Linear | 9 | Computer/1 | 1 | Cr. 45,000 |
| Parallel | 11 | Computer/2 | 2 | Cr. 130,000 |
| Synaptic | 13 | Computer/3 | 3 | Cr. 540,000 |

### Cyborg Controllers

Implanting an Organic Core in battle dress is possible at TL 13, and costs Cr. 500,000. Cyborgs gain the same bonuses as neural-linked battle dress, with an additional +1 DM to all physical actions.

# Army and Marine Characters

## New Army Mishaps

#### New Army Mishaps

| 2d6 | Mishap |
| --- | --- |
| 2 | Finding conditions to be inhumane under a barely sane commander during your current posting you desert and are now a wanted man. Gain 1d3 Enemies amongst the military, including your former commanding officer, who will try to bring you to justice. |
| 3 | You are involved in a disasatrous campaign and barely escape off planet in a frantic and badly organised evacuation. This leaves you a long way from your own lines and you make 1d3 Contacts as you return home. However you find yourself a wanted man and are listed as AWOL by an inquisitional commission that has come down hard on those even remotely involved in the debacle. |
| 4 | Your regiment merges with another due to budgetry constraints. You are one of those who are not offered a position within the new unit and are forced to leave the service. |
| 5 | You spend several days in the brig after getting into a fight with a superior officer. Gain that officer as a Rival as he has you ejected out of the service. |
| 6 | Severely wounded. Roll twice on the Injury table and take the lower result. |
| 7 | Your unit is slaughtered in a disastrous battle, for which you blame your commander. Gain him as an Enemy as he has you removed from the service. |
| 8 | Injured. Roll on the Injury table |
| 9 | You are sent to a very unpleasant region (jungle, swamp, desert, icecap, urban) to battle against guerrilla fighters and rebels. You are discharged because of stress, injury or because the government wishes to bury the whole incident. Increase Recon or Survival by one level but also gain the rebels as an Enemy. |
| 10 | You discover that your commanding officer is engaged in some illegal activity, such as weapon smuggling. You can join his ring and gain him as an Ally before the inevitable investigation gets you discharged, or you can co-operate with the military police – the official whitewash gets you discharged anyway but you may keep your Benefit roll from this term of service. |
| 11 | You are tormented by, or quarrel with, an officer or fellow soldier. Gain that officer as a Rival as he drives you out of the service. |
| 12 | You have a strong relationship with a munitions supplier which is deemed to be too close by your superiors and you are ‘requested’ to resign from the service. Gain the supplier as a Contact. |

## New Army Events

#### New Army Events

| d66 | Events |
| --- | --- |
| 11 | Disaster! Roll on the mishap table, but you are not ejected from this career. |
| 12 | You are assigned to an urbanised planet torn by war. Gain one of Stealth 1, Streetwise 1, Persuade 1 or Recon 1. |
| 13 | You are assigned to a planet with a hostile or wild environment. Gain one of Vacc Suit 1, Engineer (any) 1, Animals (riding or training) 1 or Recon 1. |
| 14 | You are given a special assignment or duty in your unit. Gain a +1 DM to any one Benefit roll. |
| 15 | You are thrown into a brutal ground war. Throw Endurance 8+ to avoid injury; if you succeed, you gain one level in Gun Combat (any) or Leadership. |
| 16 | You are given advanced training in a specialist field. Throw Education 8+ to increase any one skill you already have by one level. |
| 21 | Surrounded and outnumbered by the enemy, you hold out until relief arrives. Gain a +2 DM to your next Advancement check. |
| 22 | You are assigned to a peacekeeping role. Gain one of Admin 1, Investigate 1, Deception 1 or Recon 1. |
| 23 | Your commanding officer takes an interest in your career. Either gain Tactics (military) 1 or take a +4 DM to your next Advancement roll thanks to his aid. |
| 24 | You are chosen for cross training in a different service. Roll for a skill in a Specialist assignment other than your own. |
| 25 | You are assigned to protected forces training, gain one of Vacc Suit 1 or Zero-G 1. |
| 26 | You are named in a law suit alleging war crimes against your unit. You gain 1d3 Enemies despite your proclamations of innocence (whether they are true or not). |
| 31-36 | Life Event. Roll on the Life Events table. |
| 41-46 | Wartime Event. Roll on the Wartime Events table. |
| 51 | You are assigned to Officer Training, gain a commission, if you are already an officer you are automatically promoted. |
| 52 | You are given special forces training. Gain one of Melee (any) 1, Gun Combat (any) 1, Survival 1, Combat Engineering (any) 1 or Explosives 1. |
| 53 | You are assigned to a teaching post. Throw Instruction 8+. Success increases your Instruction skill by one level. |
| 54 | A posting far from any conflict on an idyllic world leaves you with plenty of downtime. Gain one of Gambling 1, Carouse 1 or Streetwise 1. |
| 55 | You are assigned to the legal offices of your base, helping with court martial services. Gain one of Admin 1, Advocate 1, Investigate 1 or Deception 1. |
| 56 | You are assigned to Military Intelligence. Gain one level in Streetwise, Computer, Interrogation (any) or Deception. |
| 61 | You are assigned a position at an embassy. You are automatically promoted this term and gain Social Sciences 1. |
| 62 | Your unit is sent to combat insurgents. Throw Gun Combat or Stealth 8+ to avoid injury; if you succeed, you gain one level in Gun Combat (any) or Tactics (military). |
| 63 | Your ability at the card table makes you a legend amongst your unit, however not everyone is a good loser. Gain one rank in either Gambling or Carouse, but gain 1d3 Enemies. |
| 64 | A revolution overthrows the legitimate government of the world you are serving on. Your unit backs the government as it attempts to regain power, throw Tactics or Gun Combat (any) to avoid injury. You gain both an Ally and an Enemy as a result of the fighting. |
| 65 | Your immediate superior is a drunkard and incompetent. If you report him then you gain a +2 DM to your next Advancement roll. If you say nothing and protect him, gain him as an Ally. |
| 66 | You display heroism in battle. You may gain a promotion or a commission automatically. |

# Creating A Mercenary

## Wartime Events

If you roll a Wartime Event on the Events table for your career, roll on the Wartime Event table.

#### Wartime Events

| Roll 2d6 | Event |
| --- | --- |
| 2 | Just a Flesh Wound: You are lightly wounded. Roll two dice on the Injury table, choosing the higher result. |
| 3 | Heartfelt Confession: Someone close to you, likely within your unit, is fatally wounded and dies in your arms. Whilst dying, he confesses something previously unknown to you; from knowing about a traitor to explaining where stolen treasure might be. |
| 4 | Double-cross: Someone on your side in a conflict turns on you at the last moment, causing tension within the unit. Paranoia and distrust exists in the ranks for some time to come. Gain a Rival. |
| 5 | Impressive Scar: You were wounded by an alien weapon that left a strange scar on your face or neck. It does not hurt anymore, but it does give you a rough exterior that is sometimes difficult to ignore. |
| 6 | Camaraderie: You become very close to the other members of your unit and such fraternity is rewarded with unquestioning acceptance. If you choose to remain in the same career path and assignment for your next term, you do not need to roll for Qualification. |
| 7 | You save a member of your unit’s life and gain a new Ally. |
| 8 | Weapon Cache. You stumble upon a stockpile of weaponry and armament. When no one is looking you manage to claim a piece of the find for yourself. Add an Armour, Combat Implant or Weapon Benefit (player’s choice) when you muster out. |
| 9 | Employment Offer: The character is approached by a potential future employer, and the unit is set up for another conflict before the current one is even concluded. You gain a +2 DM to your next Qualification roll. |
| 10 | Heroic Stand: You are caught alone in a fire fight where you hold off an enemy force for a prolonged period of time. Increase Social Standing by 1 or gain a +1 DM to your next Benefits roll. |
| 11 | Trouble with Authorities: Your unit is arrested and detained for supposed illegal wartime activities. Lose one Benefit roll or reduce your Social Standing by 1. |
| 12 | Unusual Event: Something odd has occurred. Roll 1d6 1 – Meta-Intelligence Officer. You encounter a Psionic officer, who offers to spend some time with you. You may immediately test your Psionic Strength and can, if you qualify, take the Psionist career in your next term. 2 – Alien Mercs. You are saddled with a small unit of alien mercenaries for a few tickets. Gain a Life Science and a Contact among an alien race. 3 – Military Black Market. You are approached by a black marketeer who has some advanced technology for sale on the cheap. You may choose any piece of TL12 personal equipment instead of taking the cash from a Benefits roll. 4 – Shell Shock. You were knocked into a short coma by artillery, and lost several weeks of your memory. 5 – Governmental Award. You and your unit are publicly heralded by the government you were serving. This ruins anonymity, but increases Social Standing by 1. 6 – Ancient weapon technology. You discover a weapon older than the Imperium. Now, if you could only figure out how to use it. |

## Mercenary Retirement Benefits – Friends & Favours

#### Friends & Favours

| 2d6 Result | Bonus |
| --- | --- |
| 2 | An alien transport pilot remembers you being kind to his people. Gain 2 ship shares. |
| 3 – 4 | Old gambling buddy owes you money. +10,000 credits |
| 5 – 6 | Government agent owes you for his life. Gain Ally |
| 7 – 9 | Military types rarely forget their debts. +5,000 credits |
| 10 | An arms dealer owes you for helping him in a hard time. +7,500 credits or the Weapon benefit |
| 11 | One of your old friends has arranged for a lesser vehicle to ‘go missing’ and end up in your possession. Gain either the Air/Raft or Ship’s Boat Benefit |
| 12 | You were named as an inheritor on an old colleague’s last will. Gain +15,000 credits |

## Medals and Commendations

**Combat Ribbon:** Any character that is in a combat Event or Mishap will automatically be awarded a Combat Ribbon. **Combat Command Ribbon:** Any officer that receives a Combat Ribbon is automatically awarded with a Combat Command Ribbon. **Purple Heart:** Any character that has to roll on the Injury table having failed his skill roll is awarded a Purple Heart. **Meritorious Conduct under Fire (MCUF):** A character is awarded this medal if the Effect of his skill roll is 3 or more. **Medal for Conspicuous Gallantry (MCG):** A character is awarded this medal if the Effect of his skill roll is 5 or more. **Starburst for Extreme Heroism (SEH):** A character is awarded this medal if the Effect of his skill roll is 7 or more.

## Going for Glory

A character may add up to 3 to the difficulty of the skill roll, making it much more likely to be injured. However, when it comes to receiving an award the modifier is added to the Effect instead.

ognCreateVideoAdSpot(“nitropay-traveller-srd-video”);

# New Skills & Specialities

### Admin

* *Arranging a ticket properly:* 10-60 Minutes, Education or Social, Average (+0).

### Athletics

* **Archery:** The use of bows and crossbows for hunting or in combat.

### Battle Dress

Battle Dress 2 permits the use of an artillery-equipped Battle Dress. The maximum usable Heavy Weapons skill is limited by the Battle Dress skill.

* *Reloading the weapon rig on an artillery-equipped Battle Dress:* 1-6 minutes, Dexterity or Education, Routine (+2).

### Broker

* *Negotiating a profitable ticket fee:* 1-6 Hours, Intelligence or Social, Average (+0) (see the Mercenary Tickets chapter for more details on how to use this speciality).

### \*Combat Engineering

#### Specialities

* **Fortifications:** The character is trained how to build field defences from trenches to bunkers.
* *Building a field fortification (trench, sandbag wall, etc.):* 1-6 Hours, Education or Endurance, Average (+0). Resulting fortification grants maximum cover equal to half Effect (round up).
* *Building a defensive fortification (wall, bunker, etc.):* 10-60 Days, Education, Difficult (-2). Resulting fortification grants maximum cover equal to Effect.
* *Finding weak point in enemy fortifications:* 1-6 Minutes, Intelligence, Difficult (-2). Character can ignore the cover DM of targets behind fortification, up to an amount equal to Effect.
* **Camouflage:** The character is trained to camouflage vehicles, fortifications and field sites.
* *Constructing sufficient camouflage to hide a single vehicle:* 10-60 Minutes, Intelligence, Average (+0). Grants a Stealth skill to the vehicle equal to Effect until vehicle is moved.
* *Constructing sufficient camouflage to hide a single small building or defensive fortification:* 1-6 Hours, Intelligence, Average (+0). Applies a skill DM penalty to those looking to visually find it equal to Effect until discovered.
* *Hiding a doorway or hatch from view:* 1-6 Minutes, Intelligence, Average (+0). Grants a Stealth skill to the doorway/hatch equal to Effect until discovered.
* **Land Mines:** The ability to place, search for, and remove land mines.
* *Properly hiding a minefield:* 1-6 Hours, Dexterity or Intelligence, Difficult (-2)
* *Avoiding previously placed minefields:* 1-6 Minutes, Dexterity or Intelligence, Average (+0)
* *Removing an active land mine:* 1-6 minutes, Dexterity, Very Difficult (-4)
* **Sensor Surveillance:** The use and placement of specially crafted ground sensors.
* *Properly placing a ground sensor:* 10-60 Minutes, Intelligence, Routine (+2)
* *Avoiding triggering existing ground sensors:* 10-60 Seconds, Dexterity or Intelligence, Difficult (-2)

### Drive

* **Hover:** For hovercraft and other ground-repulsion vehicles.
* *Driving a hovercraft across uneven terrain:* 1-6 minutes, Dexterity, Difficult (-2)
* *Using a ‘hover burst’ to leap over protruding objects:* 1-6 seconds, Dexterity, Routine for small objects (+2), Average for man-sized objects (+0), Difficult for vehicle-sized objects (-2)

### Explosives

* *Setting an anti-personnel charge to affect a specific area or angle:* 10-60 seconds, Education, Average (+0), Opposed by potential targets. The damage from the explosive is multiplied by the Effect.
* *Creating a lesser charge from household chemicals:* 1-6 hours, Education, Difficult (-2). Base Radius is 1 metre and Damage is x2, either of which can be added to by points of the Effect (1 for 1 basis).

### Flyer

* *Deploying carried personnel from a low altitude:* 1-6 minutes, Dexterity, Average (+0)

### Gun Combat

* **Slug Carbines:** Using slug throwing weapons designed to fill the space between pistols and rifles; autocarbine, gauss carbine, etc.
* **Zero-G Weapons:** Using weapons designed for use specifically in Zero-G situations. Only characters who already have Zero-G Combat expertise may take the Zero-G Weapons speciality upon receipt of a Gun Combat skill. Zero-G Weapon skills may also be applied to accelerator weapons and snub pistols.

### Heavy Weapons

* **Flamethrowers:** Using weaponry designed to project dangerous payloads in a fan or gout at short ranges.

### \*Instruction

Anyone with the Instruction skill can pass on the basics of their own knowledge to less experienced characters over a period of time. They can, with a successful check, pass skills to other characters up to a maximum level of one less than their Instruction skill or one less than their own skill level in the skill being taught (whichever is lower). Thus, a character with Instruction 4, Admin 4, Explosives 2 and Pilot 5 could teach another character Admin 3 and Explosives 1 (the skill -1) but only Pilot 3 (Instruction level -1). Teaching the skill requires an Instruction test on the behalf of the teacher, which takes between 1-6 days less than the time it would normally take (depending on Timing). The number of students that can benefit from this teaching is equal to the Effect of the check. During the training, the Referee should severely curtail the activities of all characters involved. At the conclusion of the training, the learning character(s) must then succeed in an Education or Intelligence roll with a Target Number of 8+. Player Characters cannot teach the Instruction skill to other Player Characters. The greatest assets an individual character has is his pool of skills, so we encourage the Referee to exercise great caution in allowing Player Characters to simply hire Non-Player Characters for their Instruction skill.

### \*Interrogation

#### Specialities

* **Doubletalk:** The character knows how to talk circles around most people, getting them to say or admit to things they never meant to with pressured conversation. With enough time to grill them properly, the character can get anyone to spill their secrets. *Badgering an admission of guilt out of a captive:* 1-6 Hours, Intelligence, Difficult (-2). The Effect is the DM penalty against the interrogator’s inquiries. *Uncovering a secret through focussed conversation:* 10-60 Minutes, Intelligence, Difficult (-2).
* **Torture:** This speciality governs the collection of emotional, physical and psychological methods in which an interrogator can get a victim to break. Through an assortment of unsavoury methods, the character can get anyone to say what he needs them to. *Knowing a true confession from a false one:* 1-6 Seconds, Intelligence, Routine (+2). *Using pain or discomfort to acquire an answer to an inquiry:* 1-6 Hours, Education or Strength, Average (+0). *Using emotional or psychological response to acquire an answer to an inquiry:* 10-60 Hours, Education or Intelligence, Average (+0).

### Language

* *Speaking or deciphering a phrase in false ‘language’:* 1-6 seconds, Education, Average (+0)
* *Holding a simple conversation in false ‘language’:* 10-60 seconds, Education, Difficult (-2)
* *Writing or deciphering a complex document or report in false ‘language’:* 10-60 minutes, Education, Very Difficult (-4)

### Leadership

* *Conveying orders non-verbally:* 1-6 seconds, Social, Average (+0). Number of words can be conveyed equal to twice Effect.

### Medic

* *Triage:* 10-60 seconds, Education, Difficult (-2). Able to prioritize casualties based upon their medical requirements.

### Pilot

* *Deploying breaching troops successfully:* 1-6 minutes, Dexterity or Education, Average (+0)

### Recon

* *Figuring the quantity of recent passers by using ground tracks:* 1-6 minutes, Intelligence, Average (+0)
* *Covering one’s own tracks:* 1-6 minutes, Intelligence, Average (+0) or Difficult if performed without slowing travel (-2). Covers the tracks for a number of additional allies equal to Effect.
* *Figuring the type of armour worn by a target by its ground tracks:* 10-60 seconds, Intelligence, Very Difficult (-4)

### \*Recruiting

Recruiting 0 allows the character to recognise anyone who shares a career path term with him, and the knowledge of what that path is. Recruiting 1 grants the character the ability to know the average skill level of a character that shares a career path term with him. Recruiting 2 allows the character the ability to know the highest and lowest skill (and level) of a character that shares a career path with him.

* *Approaching a possible recruit in an appropriate manner:* 10-60 Seconds, Social, Routine (+2). The character can approach a number of possible recruits at one time equal to Effect.

### Seafarer

* **Personal:** This skill is for any manpowered craft (canoes, kayaks, rowboats, etc.).
* Propelling the craft without making wake or splash: 10-60 minutes, Dexterity, Average (+0)

### Stealth

* *Passing through an area without leaving signs:* 1-6 minutes, Dexterity, Difficult (-2)

### Streetwise

* *Finding local mercenary contacts:* 10-60 hours, Intelligence or Social, Average (+0)
* *Evading local mercenary contacts:* 10-60 hours, Intelligence, Difficult (-2), Opposed

### Survival

* *Discovering temporary shelter in nature:* 10-60 Minutes, Education or Intelligence, Average (+0). Shelter can hold up to Effect in inhabitants.
* *Constructing a temporary shelter in fair weather:* 1-6 Hours, Intelligence, Average (+0). Shelter can hold up to Effect in inhabitants.
* *Constructing a temporary shelter in foul weather:* 1-6 Hours, Intelligence, Very Difficult (-4). Shelter can hold up to Effect in inhabitants but lasts for a number of hours equal to twice Effect.
* *Tracking native fauna:* 1-6 Hours, Education or Intelligence, Average (+0). Opposed.
* *Avoiding native predators:* 1-6 Hours, Dexterity or Intelligence, Difficult (-2). Opposed. Predators cannot track the character for a number of hours equal to Effect.
* *Avoiding treacherous terrain:* 10-60 Minutes, Education or Intelligence, Average (+0)
* *Luring enemies into treacherous terrain:* 10-60 Minutes, Intelligence, Difficult (-2). Opposed.

### Tactics

* *Orchestrating faster overland movements for large groups of infantry or vehicles:* 10-60 hours, Intelligence, Average (+0). Multiplies overland travel distances by 1.5 for a number of vehicles equal to Effect (multiply number Effect by 10 for infantry).

### \*Weapon Engineering

* **Drones:** Altering the utility and output of drones, making them more efficient for offensive roles.
* *Adding a basic weapon system to a non-Combat drone:* 1-6 Days, Education, Very Difficult (-4)
* *Changing weapon systems on an existing Combat drone:* 1-6 Days, Education, Difficult (+2)
* **Blades:** Creating bladed or stabbing weaponry from a suitable material.
* *Forging/carving a bladed weapon:* 1-6 Hours, Education, Routine (+2). Blade can have a maximum Damage increased by +1.
* **Slug Throwers:** The assembly and alteration of common firearms that use physical munitions.
* *Altering Magazine capacity:* 1-6 Hours, Education, Average (+0). Increases Magazine rating by Effect, maximum of double normal amount.
* *Reduce Recoil:* 1-6 Hours, Education, Difficult (-2). Lowers Recoil rating by Effect, to a minimum of half existing Recoil (round down).
* *Create zip gun from household items:* 10-60 Minutes, Education, Difficult ( ­-2)
* **Energy Weapons:** The assembly and alteration of energy-based weaponry.
* *Increasing power output and drain:* 1-6 Hours, Education, Very Difficult (-4). Adds Effect to Damage, but drains Effect from Magazine each attack.
* *Increasing power efficiency:* 1-6 Hours, Education, Difficult (-2). Magazine capacity is increased by 10% per Effect.
* **Heavy Weapons:** Alteration of some of the most powerful weapons known to exist.
* *Altering Magazine capacity:* 10-60 Hours, Education, Very Difficult (-4). Increases Magazine rating by Effect, maximum of double normal amount.
* *Reduce Recoil:* 10-60 Hours, Education, Very Difficult (-4). Lowers Recoil rating by Effect, to a minimum of half existing Recoil (round down).

# Mercenary Tickets

## Mercenary Tickets

In game terms, when a mercenary administrator sits down to judge the opening offer of a ticket – to ensure it is good enough, but not too good – he must throw his Admin skill 8+. Depending on the Effect of the throw, the mercenary can have a good deal of sway over the honesty of the Ticket Offer segment of a ticket (see Creating the Ticket below). The degrees of Effect on this throw are below.

| Effect | Ticket Offer Adjustment |
| --- | --- |
| 1 or lower | -4 DM |
| 2 | -2 DM |
| 3 | +0 DM |
| 4 | +0 DM |
| 5 | +1 DM |
| 6 or more | +2 DM |

In game terms, the negotiation process requires both primary administrators (the employer and the employee) to throw their Broker skill. If the employer’s result is higher than the mercenary’s, then the ticket is more or less arranged as the employer needs it to be, and all of the tables used to generate a mercenary ticket (see Creating the Ticket below) are rolled normally, with no modifiers. If the mercenary administrator manages to roll a higher overall result than the employer, his Effect is compared to the table below. This shows just how much sway the mercenaries have in creating the ticket and adjusting it according to their wishes. Ticket adjustments are discussed further later in this chapter.

| Effect | Number of Ticket Adjustments |
| --- | --- |
| 1 or lower | 1d6 |
| 2 | 1d6+1 |
| 3 | 1d6+2 |
| 4 | 1d6+3 |
| 5 | 2d6 |
| 6 or more | 2d6+2 |

Any ticket that is administrated by outside forces is given 1d6-1 Ticket Adjustments during the creation process.

### Step One – Working out the Employer Details

It may seem obvious that the employer of a mercenary ticket would be listed plainly and honestly, but it is not always the case. Some employers are purposefully shady in their listings, and only through the mercenary’s scrutiny can they be discovered. The above information is considered privileged for the Referee unless the mercenary administrator involved chooses to research it further. This costs the administrator one Ticket Adjustment to research, and takes an Admin throw 7+ to know the status of the employer’s true details.

### Step Two – Including the Employee Details

The amount of information about the mercenary unit listed on a ticket is up to the individual administrator. If the unit does not want to include all of the information about itself, it simply does not. Omitting any information about the unit on the ticket costs the unit administrator one Ticket Adjustment.

#### Employer Details

| 2d6 Result | Employer Details |
| --- | --- |
| 2 | Employer is trying to remain anonymous and use false nomenclature to protect itself. |
| 3-5 | Employer is purposefully vague on important details. |
| 6-8 | Employer is perfectly honest in the ticket, but details are little more than title and mode of communication. |
| 9-10 | Honest details; including the employing agent’s name and direct communication. |
| 11 | Honest and very detailed information about the employer. |
| 12 | Private Ticket; employer is honest – but is willing to pay extra to keep the information secret. |

### Step Three – Service Required

### 3.1 Generic Service Type

The Referee can either choose or roll randomly on the table below to determine this. For this roll, the administrating character’s Rank is added to the result.

| 2d6 Result | Generic Service Type |
| --- | --- |
| 1 or lower | Criminal |
| 2 | Guerrilla |
| 3 | Cadre |
| 4 | Cadre |
| 5 | Commando |
| 6 | Commando |
| 7 | Striker |
| 8 | Striker |
| 9 | Striker |
| 10 | Security |
| 11 | Security |
| 12 | Warmonger |
| 13 or higher | Dream |

The varied sub-types of mission are rolled randomly on the individual Service tables below, the descriptions of all mission categories are listed after all of the tables.

#### Criminal Missions

| 1d6 Result | Mission Type | Compensation Grade |
| --- | --- | --- |
| 1 | Assassination | E |
| 2 | Raid | A |
| 3 | Raid | B |
| 4 | Raid | C |
| 5 | Sabotage | C |
| 6 | Unlawful Acquisition | D |

#### Guerrilla Missions1

| 1d6 Result | Mission Type | Compensation Grade |
| --- | --- | --- |
| 1 | Sabotage | A |
| 2 | Sabotage | B |
| 3 | Terrorise | D |
| 4 | Assassination | D |
| 5 | Recon | B |
| 6 | First Strike | C |

1 A mercenary administrator with two or more terms in the Guerrilla career path can roll twice on this table, choosing the result they desire.

#### Cadre Missions1

| 1d6 Result | Mission Type | Compensation Grade |
| --- | --- | --- |
| 1 | Train | A |
| 2 | Train | B |
| 3 | Field Exercise | B |
| 4 | Field Exercise | C |
| 5 | Active Duty | D |
| 6 | Recon | C |

1 A mercenary administrator with two or more terms in the Cadre career path can roll twice on this table, choosing the result they desire.

#### Commando Missions1

| 1d6 Result | Mission Type | Compensation Grade |
| --- | --- | --- |
| 1 | First Strike | C |
| 2 | Raid | B |
| 3 | Active Duty | D |
| 4 | Active Duty | E |
| 5 | Retrieval | C |
| 6 | Elimination | D |

1 A mercenary administrator with two or more terms in the Commando career path can roll twice on this table, choosing the result they desire.

#### Striker Missions1

| 1d6 Result | Mission Type | Compensation Grade |
| --- | --- | --- |
| 1 | Counter Strike | E |
| 2 | Recon | A |
| 3 | First Strike | C |
| 4 | First Strike | D |
| 5 | Elimination | C |
| 6 | Elimination | D |

1 A mercenary administrator with two or more terms in the Striker career path can roll twice on this table, choosing the result they desire.

#### Security Missions1

| 1d6 Result | Mission Type | Compensation Grade |
| --- | --- | --- |
| 1 | Defence | A |
| 2 | Defence | B |
| 3 | Defence | C |
| 4 | Active Duty | D |
| 5 | Escort | B |
| 6 | Escort | C |

1 A mercenary administrator with two or more terms in the Security career path can roll twice on this table, choosing the result they desire.

#### Warmonger Missions1

| 1d6 Result | Mission Type | Compensation Grade |
| --- | --- | --- |
| 1 | Escort | B |
| 2 | Escort | C |
| 3 | Field Exercise | C |
| 4 | Commerce | D |
| 5 | Commerce | E |
| 6 | Raid | C |

1 A mercenary administrator with two or more terms in the Warmonger career path can roll twice on this table, choosing the result they desire.

#### Dream Missions

| 1d6 Result1 | Mission Type | Compensation Grade |
| --- | --- | --- |
| 1 | Recon | D |
| 2 | Escort | E |
| 3 | First Strike | F |
| 4 | Field Exercise | D |
| 5 | Elimination | G |
| 6 | Technological Test | D |

1 Raising or lowering this result costs three Ticket Adjustments per increment.

### 3.2 Length of Service

The following three tables are designed to quickly determine how long the mercenary unit will be given to fulfil the ticket’s services. The mercenary administrator may lengthen or shorten the time increment rolled by spending Ticket Adjustments, one per level moved up or down. Additionally, the administrator can spend three Ticket Adjustments to change the ticket mission’s base table completely (such as from Short to Long.).

#### Short Missions

| 1d6 Result | Ticket Service Length |
| --- | --- |
| 1 | 1d6 Days |
| 2 | 1d6 Days |
| 3 | 2d6 Days |
| 4 | 2d6 Days |
| 5 | 1d6 Weeks |
| 6 | 1d6 Weeks |
| 7 | 1d6+2 Weeks |

#### Medium Missions

| 1d6 Result | Ticket Service Length |
| --- | --- |
| 1 | 1d6 Weeks |
| 2 | 1d6+1 Weeks |
| 3 | 2d6 Weeks |
| 4 | 1d6 Months |
| 5 | 1d6+1 Months |
| 6 | 2d6 Months |
| 7 | 2d6+1 Months |

#### Long Missions

| 1d6 Result | Ticket Service Length |
| --- | --- |
| 1 | 1d6+1 Months |
| 2 | 2d6 Months |
| 3 | 2d6+1 Months |
| 4 | 3d6 Months |
| 5 | 3d6+2 Months |
| 6 | 4d6 Months |
| 7 | 1d6 Years |

Unless the mercenary administrator specifically includes an ‘end of mission’ clause (which costs the administrator a Ticket Adjustment), the unit will not actually receive their Compensation Package until the determined time has expired.

### 3.3 Ticket Exposure

The Referee can use the following table to determine the type of exposure the ticket’s activities will get. The mercenary administrator can spend Ticket Adjustments to raise or lower the result by +/- 1 per Ticket Adjustment.

| 2d6 Result | Public Exposure |
| --- | --- |
| 2 or lower | Hidden – Without doing research, no one knows the ticket existed. |
| 3 – 4 | Obscure – Only the local public is aware of the ticket’s actions. |
| 5 – 6 | Low Profile – Much of the planet is aware of the ticket’s actions, and the local public know the name of the mercenary unit. |
| 7 – 8 | Uncommon – The ticket has received some media attention in the local area and the mercenary unit’s involvement is locally public. |
| 9 – 10 | Common – The media has spread the mercenary unit’s name throughout the planet and it has spread to neighbouring planets. |
| 11 – 12 | Exposed – The mercenary unit’s name is publicly known on a planetary level; even a few specific members’ names are being spoken. |
| 13 or higher | High Profile – The ticket and the mercenary unit are being talked about throughout the system. At least one member of the unit is being named specifically. |

There are a few minor adjustments that are automatically applied to the table above:

* Any Criminal missions have a -3 to their exposure.
* Any Guerrilla missions have a -2 to their exposure.
* Any Warmonger missions have a -1 to their exposure.
* Any Dream missions have a +2 to their exposure.

### 3.4 Determine Target

**Defensive Target Missions:** Active Duty, Defence, Escort, Retrieval, Train **Neutral Target Missions:** Commerce, Defence, Field Exercise, Recon, Retrieval, Technological Test **Offensive Target Missions:** Active Duty, Assassination1, Counter Strike, Elimination, Field Exercise, First Strike, Raid, Recon, Sabotage, Terrorise, Unlawful Acquisition

#### Defensive Target Types

| 1d6 Result | Type of Target | Pay Grade Adjustment |
| --- | --- | --- |
| 1 | Item | – |
| 2 | Location | +1 Increment |
| 3 | Ally, Individual | +1 Increment |
| 4 | Information | -1 Increment |
| 5 | Ship | +1 Increment |
| 6 | Ally, Group | +2 Increment |

#### Neutral Target Types

| 1d6 Result | Type of Target | Pay Grade Adjustment |
| --- | --- | --- |
| 1 | Item | – |
| 2 | Trade Goods | – |
| 3 | Individual | -1 Increment |
| 4 | Personal Goods | – |
| 5 | Ship | +2 Increment |
| 6 | Activity | – |

#### Offensive Target Types

| 1d6 Result | Type of Target | Pay Grade Adjustment |
| --- | --- | --- |
| 1 | Individual | +1 Increment |
| 2 | Location | +2 Increment |
| 3 | Item | +1 Increment |
| 4 | Vehicle | +2 Increment |
| 5 | Ship | +2 Increment |
| 6 | Group | +2 Increment |

1 Assassinations always target an Individual. The mercenary administrator can adjust the result of the target table one increment up or down by spending two Ticket Adjustments.

### 3.4b – Target Type Descriptor

#### Target Descriptors

| 1d6 result | Target Descriptor |
| --- | --- |
| 1 | Political |
| 2 | Military |
| 3 | Civilian |
| 4 | Commercial |
| 5 | Mobile1 |
| 6 | Alien1 |

1 Roll again for further descriptor, ignoring the same result.

### 3.5 Determine Risk

Referees can choose or roll upon the Ticket Risk table to determine the level of risk involved with the ticket (and the payment increase involved). This is kept secret by the Referee, but a mercenary administrator can choose to spend a Ticket Adjustment to learn the results.

#### Ticket Risk

| 1d6 Result | Level of Risk | Pay Grade Adjustment |
| --- | --- | --- |
| 1 | Too Easy – This is well beneath the unit’s level of training; it is unlikely they will even break a sweat. | -2 Increments |
| 2 | Easy – This ticket will not cost the unit much in the way of resources or stress. | -1 Increment |
| 3 | Average – This is what the unit is trained for, and should serve as a good reminder what ticket work should be. | – |
| 4 | Worthy Test – This is a fantastic place to test the unit’s skills, even some of the obscure ones. They might suffer some wounds or even casualties. | +1 Increment |
| 5 | Difficult – This ticket will be a tough one for the whole unit, and the members will need to be diligent in their training or they might not make it back home. | +2 Increments |
| 6 | Arduous – This mission is a nightmare. If anyone makes it back in one piece, they will have been pushed to the very limit. | +3 Increments |

### Step Four – Pre-Ticket Support

The mercenary administrator can either spend a number of Ticket Adjustments to add Pre-Ticket Support, rolling once for each on the table below, or they can throw Broker 9+ to add a single result from the table without spending the Ticket Adjustment. A ticket can only have one instance of each type of support, re-rolling duplicates.

#### Pre-Ticket Support Type

| 1d6 Result | Support Table Used | Pay Grade Loss |
| --- | --- | --- |
| 1 – 2 | Advance Funds | -1 Increment |
| 3 – 4 | Services | -1 Increment |
| 5 – 6 | Equipment1 | -3 Increments |

1 Technological Test missions always gain this Support, but do not suffer the Pay Grade Loss.

#### Support: Advance Funds

| 1d6 Result | Advance Funds Offered |
| --- | --- |
| 1 | 5,000 Credits |
| 2 | 10,000 Credits |
| 3 | 20,000 Credits |
| 4 | 30,000 Credits |
| 5 | 40,000 Credits |
| 6 | 50,000 Credits |

#### Support: Services

| 1d6 Result | Service Offered |
| --- | --- |
| 1 | Transportation |
| 2 | Transportation |
| 3 | Equipment Repairs |
| 4 | Rearmament |
| 5 | Arms Trading |
| 6 | Medical Process |

**Transportation:** The unit will not have to worry about getting to and from the ticket service site. The employer will arrange for these things and will not pass on any of the cost. **Equipment Repairs:** If the unit has physical equipment (vehicles, armour, gear, etc.) that requires repairs before the ticket begins, the employer will arrange for those repairs. **Rearmament:** The employer arranges for all power packs, fuel cells, and munitions for the unit’s weaponry to be recharged, re-armed, or otherwise refreshed properly. Arms Trading: The employer arranges a meeting with an allied arms dealer, who will trade with the unit at a discount of 10% to market prices.**Medical Process:** The employer will pay for 50% of any medical services the unit wishes to undertake before the ticket can begin. This can include wound care, augmentation, implanting or image reconstruction.

#### Support: Equipment

| 1d6 Result | Equipment Offered |
| --- | --- |
| 1 | Basics |
| 2 | Armour |
| 3 | Weapons |
| 4 | Heavy Weapon |
| 5 | Transport |
| 6 | Specialised Gear |

**Basics:** The employer arranges for each unit member to be outfitted with 5,000 credits worth of basic equipment useful to the ticket mission. **Armour:** The employer arranges for enough Flak Jackets (TL8) for the entire unit or 2d6 suits of Combat Armour (TL11). **Weapons:** The employer arranges for up to 1,250 credits worth of weapons for each member of the unit placed on the ticket. **Heavy Weapon:** The employer arranges for a single heavy weapon for the unit’s use worth up to 5,000 credits (after ammunition). **Transport:** The employer grants the unit the use of any single vehicle worth 300,000 credits or less; this must be returned after the ticket. **Specialised Gear:** The employer gives each member of the unit a single piece of specialised equipment or armament that the ticket might require them to have (Vacc suit, toxin antidotes, methane breathers and so on). As a note, if a mercenary administrator specifically waives any Pre-Ticket Support, he may increase the Pay Grade of the Compensation Package by +1 Increment.

### Step Five – Post-Ticket Support

Each roll on the following table cost the mercenary administrator a Ticket Adjustment. Alternatively, the Referee can choose to automatically add one roll from the table on behalf of the employer – an effort to reduce cost in exchange for services. A ticket can only have one instance of each type of support, re-rolling duplicates.

#### Post-Ticket Support

| 1d6 Result | Support Given | Pay Grade Loss |
| --- | --- | --- |
| 1 | Rest and Relaxation | – |
| 2 | Repair and Rearm | -2 Increment |
| 3 | Medical Care | -1 Increment |
| 4 | Expedited Evacuation | – |
| 5 | Legal Counsel | -1 Increment |
| 6 | Repeated Ticketing Agreement | -2 Increments |

**Rest and Relaxation:** The employer agrees to pay for 1d6 weeks of recuperation time for the unit at a pleasurable location (tourist resort, vacation location, etc.). **Repair and Rearm:** The employer agrees to pay for 50% of any rearmament and repair costs for ticket-related equipment and weaponry. **Medical Care:** The employer agrees to pay for up to 5,000 credits of medical care for unit members injured during the mission. **Expedited Evacuation:** The employer agrees to ensure the fastest transportation process they can manage for the unit when the ticket is reported finished. This cuts return travel time for the unit in half. **Legal Counsel:** The employer agrees to retain an attorney for the mercenary unit (if needed); with Admin 1, Advocate 2, Broker 1 and Language 1. **Repeated Ticketing Agreement:** The employer agrees to contract the unit up for future use, granting an additional 1d6 Ticket Adjustments to their next ticket with this employer. As a note, if a mercenary administrator specifically waives any Post-Ticket Support, he may increase the Pay Grade of the Compensation Package by +1 Increment.

### Step Six – Compensation Package

The initial pay grade of the Compensation Package is determined by the mission type and any adjustments made due to ticket negotiations.

#### Pay Grade Amounts

| Grade | Amount | Grade | Amount |
| --- | --- | --- | --- |
| ? | 5,000 Cr | M | 1 MCr |
| 0 | 10,000 Cr | N | 1.5 MCr |
| A | 20,000 Cr | O | 2 MCr |
| B | 30,000 Cr | P | 3 MCr |
| C | 50,000 Cr | Q | 4 MCr |
| D | 75,000 Cr | R | 5 MCr |
| E | 100,000 Cr | S | 7 MCr |
| F | 150,000 Cr | T | 10 MCr |
| G | 200,000 Cr | U | 15 MCr |
| H | 250,000 Cr | V | 20 MCr |
| I | 325,000 Cr | W | 25 MCr |
| J | 400,000 Cr | X | 30 MCr |
| K | 500,000 Cr | Y | 40 MCr |
| L | 750,000 Cr | Z | 50 MCr |

The mercenary administrator can choose to augment the Pay Grade by spending Ticket Adjustments, at a ratio of two adjustments per Pay Grade. Any ticket that has a final Pay Grade of ‘F’ or higher qualifies for a potential bonus in its compensation package. By willingly reducing the Pay Grade by one increment and spending a Ticket Adjustment, the mercenary administrator can roll once (and once only!) on the special compensation bonus table below.

#### Special Compensation Bonus

| 1d6 Result | Compensation Bonus |
| --- | --- |
| 1 | Equipment Package |
| 2 | Free Medical Care |
| 3 | Combat Implant Package |
| 4 | Ship Shares |
| 5 | Debt Payment |
| 6 | Prime Ticket |

**Equipment Package:** The employer includes 2d6 x 10,000 credits worth of equipment (any) as part of the compensation for a successful ticket. **Free Medical Care:** The employer includes a contract for completely free medical care for members of the mercenary unit for 2d6 months after the ticket is finished. **Combat Implant Package:** The employer will arrange for the purchase and grafting of up to 100,000 credits worth of Combat Implants to the higher ranking members of the unit. **Ship Shares:** The employer gives 2d6 Ship Shares to the mercenary unit. **Debt Payment:** The employer offers to pay 1d6 x 10% of the unit’s medical or banking-related debts. **Prime Ticket:** The employer will grant the equivalent to the Prime Ticket benefit to the unit for their next sanctioned ticket together.

### Step Seven – Repatriation Bond

The Referee rolls upon the following table to determine the amount of the Compensation Package funds (cash only, no bonuses) will be paid to the mercenary unit in case the employer is forced to abandon the ticket. The mercenary administrator can adjust the result one increment by spending a Ticket Adjustments.

#### Repatriation Bond Level

| 2d6 Result1 | Repatriation Percentage |
| --- | --- |
| 2 – 3 | 15% |
| 4 – 5 | 25% |
| 6 – 7 | 40% |
| 8 – 9 | 50% |
| 10 – 11 | 60% |
| 12 | 75% |

1 If doubles are rolled, the Repatriation does NOT include emergency evacuation costs.

### Step Eight – Escape Clause

If the mercenaries want to have an escape clause added, the administrator must spend a Ticket Adjustment to earn a single roll upon the Escape Clause Levels table.

#### Escape Clause Levels

| 1d6 Result | Escape Clause Description |
| --- | --- |
| 1 | Poor – The mercenaries must return any Pre-Ticket Support, and must pass an Advocate throw 9+ or be fined 1d6 x 10,000 credits. |
| 2 | Below Average – The mercenaries must return any Pre-Ticket Support, and must pass an Advocate throw 8+ or be fined 1d6 x 5,000 credits. |
| 3 | Average – The mercenaries must return any Pre-Ticket Support, and must pass an Advocate throw 8+ or be fined 1d6 x 1,000 credits. |
| 4 | Above Average – The mercenaries must return their Pre-Ticket Support. |
| 5 | Good – The mercenaries can pass an Advocate throw 8+ to avoid giving back any Pre-Ticket Support. |
| 6 | Perfect – The mercenaries are allowed to back out of the ticket without any repercussion. |

### Step Nine – Seal the Ticket

Some mercenaries might want to keep their ticket completely private, risking the wrath of the operational authorities in order to hide their activities from all parties. If this is the case, not only will the mercenary administrator need to spend a Ticket Adjustment – but he will also have to succeed in a Broker throw 8+.

## Narrative Resolution Format

The fairest and most enjoyable format of ticket resolution for a gaming session, a Traveller ticket played in Narrative form runs as a string of scenarios and adventurous events. The Referee plans out all of the encounters he wishes to take place, maps out the course of the adventure, and creates individual Non-Player Characters to interact with, and so on. Essentially, this format has the Referee turn the ticket into a fully designed scenario.

### Summary Resolution Format

A ticket can be resolved in a Summary using the following steps:

* Step One – Each ticketing member throws one related skill (chosen by Referee) at 8+.
* Each failure must roll on the Ticket Mishap Table (below).
* Step Two – Each ticketing member must throw Endurance 8+ or Social 9+.
* Failing the Endurance throw earns the character a roll on the Injury Table (see Traveller core rulebook)
* Failing the Social throw earns the character a Rival or Enemy (Referee’s choice).
* Step Three – Unit rolls on Ticket Event Table (below).

#### Ticket Event Table

| 2d6 Result | Ticket Event |
| --- | --- |
| 2 | Disaster – Every character must immediately pass an End throw 9+ or suffer a Random Major Injury (see Mishap above). |
| 3 | Employer Dissolved – The employer is no more and the ticket’s Repatriation Bond must be enacted. |
| 4 – 5 | Unexpected Conflicts – Unit is placed into combat several times unexpectedly. Every member must pass a combat skill throw 8+ or suffer a Random Minor Injury. |
| 6 – 7 | New Recruits – Unit meets and hires 2d6 new recruits into the mercenary unit, adjusting their profitability. |
| 8 – 9 | Basic Conflicts – Every member must pass a combat skill throw 7+ or suffer a Random Minor Injury. |
| 10 – 11 | Flawless Conflicts – The unit eliminated any enemies with precision and skill, meaning that they suffer no ill effects from the ticket whatsoever. |
| 12 | Impressive! – The unit excels at the ticket and the employer is impressed, adding a +10% to the monetary amount of the Compensation Package of the ticket. |

For every full 10 members of the unit active for the ticket, one Player Character member can ignore Step One or Step Two of the above process.

#### Ticket Mishap Table

| 2d6 Result | Mishap |
| --- | --- |
| 2 – 3 | Random Major Injury |
| 4 – 5 | Actionable Offence |
| 6 – 7 | Random Minor Injury |
| 8 – 9 | Persistent Enemies |
| 10 – 11 | Bad Media Coverage |
| 12 | Personal Loss |

**Random Major Injury:** Character rolls on the Injury Table. **Actionable Offence:** The character is arrested by local authorities and must bail himself out of trouble, using his private funds or a share of his profits. This amount is equal to 2d6 x 100 credits. **Random Minor Injury:** Character rolls twice on the Injury Table, accepting the higher result. **Persistent Enemies:** The character finds himself targeted by his enemies, as if they have some form of grudge upon him. His Endurance or Social roll in Step Two has a -2 DM. **Bad Media Coverage:** The character is shown in a particularly bad light on the local media coverage, and word has spread about the negativity surrounding him. He must decrease his Social Standing by 1 immediately. **Personal Loss:** The character lost something important to him (weapon, jewellery, etc.) during the ticket. This item is chosen by the Referee, and should be something that the character would have had with them during the ticket.

## Reductions

### Reduction One – Transport

The Reduction for transport is set as a basic 1d6%, but has modifiers depending on the size of the unit and equipment being transported.

* +1% for every 10 unit members being transported
* +1% for every vehicle being transported
* +1% for every 25 passengers (allies, non-unit personnel and so on)
* +3% if being transported into actively hostile territory
* +5% is Emergency Evacuation is required

**What Eliminates this Reduction:** Owning sufficient transport, using personal sources, ticket support choices, local ticket.

### Reduction Two – Equipment Upkeep

The Reduction for equipment upkeep is set as a basic 1d6+1%, but has modifiers depending on the technological level and types of gear used by the unit.

* -1% for a non-combat ticket
* +1% for every 25 unit members on ticket
* +1% for using equipment with a TL higher than TL11
* +1% for every vehicle used
* +1% for a unit using Battle Dress
* +2% for a unit that actively used Field Artillery or Artillery Battle Dress

What Eliminates this Reduction: Access to sufficient upkeep workshops and equipment, ticket support choices.

### Reduction Three – Medical Fees

The Reduction for medical fees is set as a basic 1d6-1%, but has modifiers depending on the number of unit members possibly injured, and the threat level of the mission.

* -3% for a non-combat ticket
* -1% for a unit that uses Battle Dress armour
* +1% for every 10 active unit members on the ticket
* -2% for a unit that actively used unit members with at least Medic 1
* -3% for a ticket assessed at a Too Easy level of risk
* -1% for a ticket assessed at an Easy level of risk
* +1% for a ticket assessed at a Worthy Test level of risk
* +2% for a ticket assessed at a Difficult level of risk
* +3% for a ticket assessed at an Arduous level of risk

What Eliminates this Reduction: Not suffering wounds or casualties, ticket support choices.

### Reduction Four – Authority Payments

The Reduction for authority payments is set as a basic 1d6%, but has modifiers depending on the amount of money in the compensation package.

* -1% for a unit that actively used unit members with at least Advocate 2 during ticket administration
* +1% for a Compensation Package ranging between 30,000 – 99,999 credits
* +2% for a Compensation Package ranging between 100,000 – 499,999 credits
* +3% for a Compensation Package ranging between 500,000 credits and 1 Megacredits
* +4% for a Compensation Package over 1 Megacredit

What Eliminates this Reduction: Anonymous or illegal ticketing.

### Reduction Five – Ticketing Costs/Living Expenses

The Reduction for ticketing costs/living expenses is set as a basic 1d6-2%, but has modifiers depending on the size of the unit and the number of vehicles they commonly own.

* +1% for every 50 members of the unit
* +1% for every 5 vehicles owned by the unit
* +2% for every compound, office or other structure owned by the unit

What Eliminates this Reduction: Illegal living or storage arrangements.

### Calculating Final Profits

Once the Compensation Package from the ticket has had all of the necessary reductions removed, some 30% of any profit at this stage is put aside for the mercenary company’s own accounts. After this share is deducted the remaining money is split between the members of the mercenary unit. In game terms, after all applicable Reductions have been subtracted from the Compensation Package, the mercenary unit adds up all of their effective members’ Ranks (three Rank 0 members count for a single Rank 1). The Compensation Package is then divided by that total number of Ranks, giving the Salary Share amount of wage. This should amount to only the members that were considered active on the ticket, but some extremely large mercenary units or companies might have a special Rank 6 Salary Share that they take for themselves. If a Referee has not already detailed this information, a system for randomly generating the size and Ranks of a mercenary company is included in this book. The final Salary Share amount is then multiplied by each member’s individual Rank; the result is their wage from the ticket.

## Costs Outside of Tickets

### Step One – Figuring the Unit’s CPM Variable

The base number for a CPM variable is 5. This is then modified by the series of unit-based checks below. Many of these modifiers will be determined by the Referee. It should be noted that the CPM variable cannot be reduced to less than 2 by any given modifier.

#### Unit Size Category

| Size Category | CPM Modifier |
| --- | --- |
| Specialist | +0 |
| Private | +0 |
| Small | +0 |
| Common | +1 |
| Large | +1 |
| Legion | +2 |
| Huge | +2 |
| Expansive | +3 |

#### Technology Level of Unit

| Average TL of Unit Equipment | CPM Modifier |
| --- | --- |
| 1 – 3 | -3 |
| 4 – 5 | -2 |
| 6 – 7 | -1 |
| 8 – 9 | +0 |
| 10 – 11 | +1 |
| 12 – 13 | +2 |
| 14 | +3 |
| 15 | +5 |
| 16+ | +8 |

#### Average Unit Skill Level

| Average Skill Level | CPM Modifier |
| --- | --- |
| Introductory | -1 |
| Marginal | +0 |
| Average | +1 |
| Exceptional | +2 |

#### Miscellaneous Modifiers

| Miscellaneous Event or Situation | CPM Modifier |
| --- | --- |
| Unit uses multiple heavy weapons | +1 |
| Unit has needed legal counsel in past 6 mos. | +1 |
| Unit has Psionists as members | +1 |
| Unit saw battlefield combat in past 6 mos. | +2 |
| Unit uses owned vehicles | +2 |
| Unit uses owned artillery | +3 |
| Unit has not seen conflict in past 6 mos. | -1 |
| Unit has medics as members | -1 |
| Unit keeps HQ on TL7 – TL9 world | -2 |
| Unit keeps HQ on TL4 – TL6 world | -3 |

Once the CPM variable is calculated, it must be taken through the following steps to create a running total of funds that must be paid monthly to keep the unit in working order.

### Step Two – Transport Multiplier

The multiplier for transport is listed in credit amounts, creating a final number that will be multiplied by the unit’s CPM variable. This creates the cost for the unit’s monthly transport fees.

* 100 credits for every off-planet trip in the past month
* 200 credits if vehicles were transported off-planet in the past month
* 50 credits if any unit members travelled with battle dress of any kind in the past month
* 200 credits if any unit members had to use emergency evacuation transport in the past month

### Step Three – Equipment Upkeep Multiplier

The multiplier for equipment upkeep is listed in credit amounts, creating a final number that will be multiplied by the unit’s CPM variable. This creates the cost for the unit’s monthly equipment upkeep.

* 100 credits if the unit uses equipment with a TL less than TL6
* 200 credits if the unit uses equipment with a TL between TL7 and TL10
* 500 credits if the unit uses equipment with a TL higher than TL11
* 200 credits if the unit commonly uses heavy or support weaponry
* 200 credits if the unit uses vehicles
* 400 credits if the unit has a HQ on a TL10 world or higher

### Step Four – Medical Care Multiplier

The multiplier for medical costs is listed in credit amounts, creating a final number that will be multiplied by the unit’s CPM variable. This creates the cost for the unit’s monthly medical care bills.

* 100 credits if the unit was involved in a small action (10 or less opponents)
* 200 credits if the unit was involved in a notable action (11 to 100 opponents)
* 500 credits if the unit was involved in a major conflict (101 or more opponents)
* 50 credits if unit members have augmentations
* 50 credits if unit members have known conditions or diseases
* 200 credits if unit suffered major wounds or casualties in the last 6 months.

### Step Five -Living Expense Multiplier

The multiplier for living expenses is listed in credit amounts, creating a final number that will be multiplied by the unit’s CPM variable. This creates the cost for the unit’s monthly living expenses.

* 50 credits for every planet the unit has a HQ on
* 100 credits for every starship the unit has a HQ on
* 200 credits for every space station the unit has a HQ on
* 300 credits if the unit has a medical facility at their HQ
* 200 credits if the unit has a starport attached to their HQ (planetary only)

# Recruiting

## Recruiting Unit Members

#### The Recruiting Throw

After all modifiers have been fully calculated, the recruiting officer can throw his Recruiting skill 8+. It will take 1d6 weeks before all the recruits that might be hired can be located. The Effect measures how many potential recruits agree to try for unit admission. The following table shows the results.

| Effect1 | Number of Potential Recruits |
| --- | --- |
| 0 | 1d6 |
| 1 | 2d6 |
| 2 | 3d6 |
| 3 | 4d6 |
| 4 | 5d6 |
| 5 | 6d6 |
| 6 | 7d6 |
| 7 | 8d6 |
| 8 | 9d6 |
| 9 | 10d6 |

1 This cannot be modified below 0 or above 9 for any reason No matter the results of the Recruiting throw, the recruiter can attempt another throw in 1 – 6 weeks after he is finished with the last round of recruiting.

### The Recruitment Site

Each of the following subsections explains how these factors can adjust the Recruiting throw and its corresponding Effect.

#### Planetary Population

Using the planetary Population Digit system from the Traveller core rulebook, the table shows how a planet’s population will affect mercenary recruitment. For planets with negligible populations (level 0 or 1) there will be no chance of any recruits being found since it is extremely unlikely that any amongst the population will be both willing and physically able to become a mercenary.

| Population | Recruiting DM |
| --- | --- |
| 0 (Few) or 1 (Tens) | – |
| 2 (Hundreds) | -4 |
| 3 (Thousands) | -3 |
| 4 (Tens of thousands) | -2 |
| 5 (Hundreds of thousands) | +0 |
| 6 (Millions) | +0 |
| 7 (Tens of millions) | +2 |
| 8 (Hundreds of millions) | +2 |
| 9 (Billions) | +4 |
| 10 (A) (Tens of billions) | +4 |
| 11 (B) (Hundreds of billions) | +6 |
| 12 (C) (Trillions) | +6 |

### Operational Government

Using the planetary Government Type system from the Traveller core rulebook, the table shows how a planet’s overall governing body will affect mercenary recruitment.

| Government Type | Recruiting DM |
| --- | --- |
| 0 (Anarchic) | +1 |
| 1 (Company or Corporation) | +0 |
| 2 (Participating Democracy) | +1 |
| 3 (Self-perpetuating Oligarchy) | -1 |
| 4 (Representative Democracy) | +0 |
| 5 (Feudal Technocracy) | -2 |
| 6 (Captive Government) | -2 |
| 7 (Balkanisation) | -2 |
| 8 (Civil Service Bureaucracy) | +2 |
| 9 (Impersonal Bureaucracy) | +2 |
| 10 (A) (Charismatic Dictator) | -2 |
| 11 (B) (Non-charismatic Leader) | +2 |
| 12 (C) (Charismatic Oligarchy) | +0 |
| 13 (D) (Religious Dictatorship) | -4 |

### Type of Law Enforcement

Using the planetary Law Level system from the Traveller core rulebook, the table shows how a planet’s major legal system will affect mercenary recruitment.

| Law Level Digit | Recruiting DM |
| --- | --- |
| 0 | +2 |
| 1 | +2 |
| 2 | +1 |
| 3 | +1 |
| 4 | +0 |
| 5 | +0 |
| 6 | -1 |
| 7 | -1 |
| 8 | -2 |
| 9 | -3 |

### Starport Existence

Using the Starport rules from the Traveller core rulebook, the table shows how a planet’s major legal system will affect mercenary recruitment.

| Starport Class | Recruiting DM |
| --- | --- |
| A | +2 |
| B | +2 |
| C | +0 |
| D | +0 |
| E | -2 |
| X | -4 |
| Non-spacefaring | -6 |

### Base Existence

Using the rules for adding Bases to a planet from the Traveller core rulebook, the table below shows how a base upon the planet will affect mercenary recruitment. As a note, there are some bases listed here that are just good examples of what could exist out in the galaxy.

| Base Type (if any) | Recruiting DM |
| --- | --- |
| Alien Embassy | -2 |
| Bureau | +0 |
| Frontier Port | +2 |
| Naval | -4 |
| Pirate | -2 |
| Prison Facility | -6 |
| Research | -4 |
| Scout | +0 |
| Shipyard | +2 |
| Traveller Aid Society | -2 |

### Assessing the Recruits

The potential recruits should be divided roughly evenly between the three tests, with each ‘class’ rolling the specified skill to see how many pass into Rank 0. If a Player Character with at least Instruction 2 and the necessary skill at level 2 or higher is selected to teach that portion of the recruits, that class receives a +2 DM to their collective skill throw for judgement. It should be noted that all raw recruits should use the statistics for Trainees (found later in this chapter). The course takes; from between 10 and 60 days.

#### Combat Training

The class must make a Dexterity throw 8+ in order to pass in high numbers. The following table shows what percentage of the recruits will pass into Rank 0 depending on the Effect.

| Effect | Recruits gaining Rank 01 |
| --- | --- |
| Failed roll | 10% |
| 1 or less | 15% |
| 2 | 30% |
| 3 | 45% |
| 4 | 60% |
| 5 | 75% |
| 6 or more | 90% |

1 Round results up to the nearest recruit

#### Support Skill Training

The class must make an Education throw 9+ in order to pass in high numbers. The following table shows what percentage of the recruits will pass into Rank 0 depending on the Effect.

| Effect | Recruits gaining Rank 01 |
| --- | --- |
| Failed roll | 0% |
| 1 or less | 10% |
| 2 | 25% |
| 3 | 35% |
| 4 | 50% |
| 5 | 70% |
| 6 or more | 80% |

1 Round results up to the nearest recruit

#### Office Training

The class must make an Intelligence throw 9+ in order to pass in high numbers. The following table shows what percentage of the recruits will pass into Rank 0 depending on the Effect.

| Effect | Recruits gaining Rank 01 |
| --- | --- |
| Failed roll | 0% |
| 1 or less | 5% |
| 2 | 10% |
| 3 | 20% |
| 4 | 30% |
| 5 | 40% |
| 6 or more | 50% |

1 Round results up to the nearest recruit

## Building a Mercenary Unit

### Unit Size

Referees can roll or choose on the table below to determine the size category of the mercenary unit, detailing the number of active members and the maximum number of members that can be sent on a normal ticketed mission.

#### Mercenary Unit Size

| 2d6 Result | Size Category | Number of Members1 |
| --- | --- | --- |
| 2 | Specialist | 1 – 6 (1d6) |
| 3 – 4 | Private | 5 – 10 (1d6 + 4) |
| 5 – 6 | Small | 6 – 36 (2d6 x 3) |
| 7 | Common | 10 – 60 (1d6 x 10) |
| 8 – 9 | Large | 20 – 120 (2d6 x 10) |
| 10 | Legion | 100 – 600 (1d6 x 100) |
| 11 | Huge | 200 – 1200 (2d6 x 100) |
| 12 | Expansive | 1000 – 6000 (1d6 x 1000) |

1 The unit could send far less, depending on the assessed risk of the ticket, or by employer request

### Fame/Infamy of the Unit

Referees can roll or choose on the table below to determine how far the reputation of the mercenary unit has travelled, detailing any earned bonuses to their Social Standing throws when applicable. This table is based not only upon the die roll, but also the size of the unit (determined above).

#### Mercenary Unit Fame

| 2d6 Result | Social Standing DM1 |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Specialist | Private | Small | Common | Large | Legion | Huge | Expansive |  |
| 2 | +0 | +0 | +0 | +0 | +0 | +1 | +1 | +1 |
| 3 | +0 | +0 | +0 | +0 | +1 | +1 | +1 | +2 |
| 4 | +0 | +0 | +0 | +1 | +1 | +1 | +2 | +2 |
| 5 | +0 | +0 | +0 | +1 | +1 | +2 | +2 | +3 |
| 6 | +0 | +0 | +1 | +1 | +2 | +2 | +2 | +3 |
| 7 | +0 | +0 | +1 | +2 | +2 | +2 | +3 | +4 |
| 8 | +0 | +1 | +1 | +2 | +2 | +2 | +3 | +4 |
| 9 | +0 | +1 | +2 | +2 | +2 | +3 | +4 | +5 |
| 10 | +1 | +1 | +2 | +2 | +3 | +3 | +4 | +5 |
| 11 | +1 | +2 | +2 | +3 | +3 | +4 | +5 | +5 |
| 12 | +1 | +2 | +3 | +3 | +4 | +4 | +5 | +6 |

1 This DM is only applicable when the Referee believes the unit’s fame/infamy can come into play

### Unit Experience

The Referee must roll on or choose from the Mercenary Unit Average Skill table as to the general skill level of the unit. That skill level is then compared to the Rank Distribution in Unit table, which gives the Rank breakdown of the unit. For obvious reasons, any Player Character members are not included in the listed results – they are considered to be additional ‘bonuses’ to the unit.

#### Mercenary Unit Average Skill

| 2d6 Result | Average Skill Level |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Specialist | Private | Small | Common | Large | Legion | Huge | Expansive |  |
| 2 | Marginal | Introductory | Introductory | Introductory | Introductory | Introductory | Introductory | Introductory |
| 3 – 4 | Average | Marginal | Marginal | Introductory | Marginal | Marginal | Introductory | Introductory |
| 5 – 6 | Average | Average | Marginal | Marginal | Marginal | Average | Marginal | Marginal |
| 7 – 9 | Average | Average | Average | Average | Average | Average | Average | Marginal |
| 10 – 11 | Exceptional | Average | Average | Average | Average | Average | Average | Average |
| 12 | Exceptional | Exceptional | Exceptional | Exceptional | Exceptional | Average | Average | Average |

#### Rank Distribution in Unit

| Average Skill Level | Percentage of Ranks in Unit1 |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Rank 0 | Rank 1 | Rank 2 | Rank 3 | Rank 4 | Rank 5 | Rank 62 |  |
| Introductory | 60% | 30% | 5% | 3% | 1% | – | – |
| Marginal | 30% | 20% | 30% | 10% | 7% | 2% | 1% |
| Average | 15% | 20% | 20% | 25% | 15% | 3% | 2% |
| Exceptional | 10% | 15% | 20% | 20% | 25% | 7% | 3% |

1 Always round down with these percentages, with the leftover members (from the dropped remainders) falling into the Rank 0 members 2 Large, Legion, Huge or Expansive-sized mercenary units are always considered to have a phantom Rank 6 investor that takes its share of every ticket the unit undertakes

### Unit Traits

Referees should choose or roll a d66 on the Mercenary Unit Traits table to determine an interesting quality of the mercenary unit. Player Character members do not have to abide by this, but camaraderie might influence it upon them during game play.

#### Mercenary Unit Traits

| d66 | Trait | d66 | Trait |
| --- | --- | --- | --- |
| 11 | Untrustworthy | 41 | Well Protected |
| 12 | Bigotry | 42 | Well Armed |
| 13 | Overestimated | 43 | Well Informed |
| 14 | Dangerous | 44 | Well Travelled |
| 15 | Overeager | 45 | Well Spoken |
| 16 | Soft-hearted | 46 | Well Trained |
| 21 | Loyal | 51 | Alien Backed |
| 22 | Aggressive | 52 | Militarily Backed |
| 23 | Helpful | 53 | Corporately Backed |
| 24 | Cautious | 54 | Governmentally Backed |
| 25 | Easily Distracted | 55 | Religiously Backed |
| 26 | Technophile | 56 | Privately Owned |
| 31 | Criminal | 61 | Xenophobic |
| 32 | Religious | 62 | Xenophile |
| 33 | Fanatic | 63 | Heroic |
| 34 | Untrusting | 64 | Destined for Greatness |
| 35 | Violent | 65 | Psionically Inclined |
| 36 | Battle-scarred | 66 | Imperial Agents |