Space Master ™

Tech
Book

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7

α • Alpha Delphini (+ 250Z)

ε • Alpha Scuti (+ 153Z)   Zeta Scuti (+ 97Z) • η

Beta Delphini (28

θ• Angeli Outstation (+ 203

Dauphine Delphini (+ 251Z) • τ

Beta Apus (-40Z)

π • Proma Scuti (

π • Mu Apus (-66Z)

9

φ • Beta Scuti (+ 89Z)

η • Zeta Delphini (+ 175Z)

ε • Gamma Scuti (+ 149Z)

τ • Rho Apus (-39Z)

π • Omicron Apus (-79Z)

α • Hoen (+ 193Z)

θ • De Villa Outstation (-122Z)

10   π • Psi apus (-85Z)

π • 6606 Delphini (+ 188Z)   ε• Teria (-111Z)

Eta Pavonis (-13Z) •

η • Cera (+ 201Z)   τ • Beta

λ • Kailis (-91Z)

λ • Alpha V

τ • Exta 2 (+ 205Z)

Stele Outstation (+ 10Z) •

Omicron Leporis (-47Z) • λ   α • 7 Volantis (+ 11Z

Regulus (+ 27Z) • ε   α • 1000 Pyxidis (-

Pollux (+ 17Z) • π

• Bushe Outstation (-20Z) θ

11   π • Avior (+ 17Z)

φ Miaplacidus (-23Z) •

φ • Zosma (-25Z)

θ Bowan Outstation (+ 3Z) •   R

Betelgeu

Gienah (-31Z) • ε

TECH BOOK

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"Nan et ipsa scientia potestas est."
("Knowledge itself is power")

Francis Bacon
Religious Meditation

1.0

INTRODUCTION

The universe of *Space Master* is the far future, where science has achieved in reality what can only be guessed as possible today. A brief framework of the "current" state of such technology may be helpful in understanding many assumptions and assertions in other parts of this book. Power sources in *Space Master* — as well as several other elements which bear explanation — are discussed in detail later in this section.

1.1

LEVELS OF TECHNOLOGY

Below are listed a series of key achievements in Science and Technology. Although the exact order of the specific entries might vary from civilization to civilization, the progression is very similar in any technic society.

- **Vacuum Tubes:** The infancy of electronics.
- **Fission Nuclear Power:** Heavy atoms split to create heat energy, converted to electricity with steam-driven turbines.
- **Transistor Electronics:** Vacuum tubes are replaced by (relatively) compact circuits. First crude computers are constructed.
- **Microchip Electronics:** Silicon chips — vastly more compact and inexpensive than transistors — spread technology.
- **Superconductors:** Practical superconductive materials (which operate without the need for extreme cooling) are synthesized, opening doors to other avenues of advancement.
- **Sentient Cloning:** Successful cloning of a human being is achieved. No memories are carried over, however. Laws banning cloning for "spare organs" limit the practice.
- **Optronics:** Optical electronics, the next step beyond silicon microchips, leaps to the forefront. Utilizing light patterns and laser reading, memory systems are able to store and transmit vast quantities of information at high speed.
- **Thermalectric Power Conversion:** One development as a result of superconductor technology, electric power can be generated directly from heat energy, bypassing bulky and inefficient steam turbine systems in reactors. Microfusion reactors are soon developed.

- **Controlled Fusion Power:** Advancing laser and electromagnetic technologies make fusion power generation practical. A renaissance of inexpensive electrical power ensues.
- **Cryogenic Hibernation:** Control of human physiological functions to put sentients into cryogenic sleep perfected.
- **Molecular Data Storage:** The precursor to Molecutronics, this system stores information by a method (similar to the human brain) even more dense than optically, and hundreds of times more efficiently than magnetic databanks.
- **Sentient Alterant Replication:** Relaxing of genetic control laws allow for experimentation. Several societies practice controlled breeding. Alteration of fetuses on a chromosomal level is done successfully, allowing creation of beings "pre-designed" to certain professions or tasks.

- **Gravitic Field Control:** The force of gravity is mastered. Fields which can annul or mimic it are produced cheaply.
- **Molecular Electronics:** After many failures, living circuitry is created, and can be reproduced ("grown") very inexpensively. Utilizing a radically different processing method than any previous system, it is not unlike the synapse of the brain. Molecutronics is born.
- **Sensor Beams:** The term *Sensor* in *Space Master* is actually a bastardization of the acronym: SENSR (Selected Electromagnetic/Neutrino-Stream Reflection). This all-encompassing title refers to a system used by nearly all sophisticated sensing systems from Multiscanners to starship sensor banks. The power and flexibility of Sensors far exceeds such early analysis tools as spectroscopy and gravitic scans, being able to bombard a target area with selectively treated, hyperlight-accelerated neutrino beams (which have no mass and can thus travel at hyperlight speeds). Depending on their 'treatment' (a temporary electromagnetic or gravitic charge) and whether they return to the sensing device, the neutrino beams provide data on the nature of the target in great detail. Neutrino beams are completely harmless and almost undetectable, and they can pass through almost unlimited amounts of intervening matter if desired, to reach the scan target. The results are almost instantaneous.

Sensor range is dependent almost exclusively on the power of the sensing device itself, although there is inevitable distortion beyond about 50 light-years. Beyond about one light-year detailed analysis is limited; however, it is accurate enough at this range for a ship to plot a reasonably safe Hyperspace shunt. Analysis under one-LY range is extremely useful to ships as they drop out of hyperspace near a star system and require a swift, complete analysis. Such a study using speed-of-light analysis beams would take hours, if not days.

- **Stealth Fields:** Developed in its earliest forms almost immediately after the invention of the Sensor, the Stealth Field as it is often called, absorbs, attracts or distorts the treated neutrinos sent out by sensor beams, thus making it appear as if there were nothing there to detect. The field does the same with other radiations — including visible light — so that the craft or object surrounded by a Stealth Field reflects no radiation. Of course, the field is not perfect, and there is an inevitable warping around the craft. Because of this there are EW/Stealth operators who monitor and manipulate the field to enhance its effectiveness. The Stealth field has a myriad of uses in warfare. For instance, the field can be extended out from the ship in such a manner that it can 'fool' incoming missile tracking system into believing that the ship is much closer than it really is, thus triggering the missile proximity fuse.

- **Tachyon Communication:** the Tachyon Beam Dictor, while by far the fastest mode of long range communication, is far from the perfect solution. The Dictor utilizes Tachyon beams (more stable over a long range than neutrinos) to transmit information. The dictor has an effective range of about 30 light-years, and this creates the necessity for a message to be relayed several times if it has a long way to travel. This creates serious security problems for sensitive information. An additional drawback is that the beam must be very carefully aimed, and so useful Dictors must be located on installations with very predictable movements, such as orbiting space stations (the beam does not travel well through planetary atmospheres either; standard laser transmission is used for ground to orbit communication). Dictors can also be used between ships if each has a sensor-lock on the other, so that the beam may be properly aimed. This allows for instantaneous communication between ships which may be across a solar system from each other, where a laser transmission would take hours to be received.

- **Artificial Sentience (Android Construction):** The natural followup to Molecutronics is the self-programming, "thinking" brain, placed in a mobile framework. Some true Androids are indistinguishable from living sentients without a scanning device.

- **Relative Inertial Field Suspension:** The control of inertia and — by methods not completely understood — relativity opens the door to faster-than-light travel. Unfortunately, fusion power is not up to the task of a controlled hyperspace shunt. The door is ajar but no one can pass through.

- **Controlled Matter/Antimatter Power:** The creation of *Andrium* leads to the harnessing of the most powerful source of energy yet: the mutual annihilation of matter and antimatter. This energy is so great, however, that it is not feasible for use as a sublight ship propulsion system. However, the massive energies are ideal to shunt a craft into hyperspace.

- **Hyperspace Shunt:** The technique is perfected, and the human race explodes across the galaxy.

1.2 ▮▮▮▮▮▮
ENERGY SOURCES IN THE TIME OF *SPACE MASTER*

Three basic types of energy-generation are considered in *Space Master*. They are: Fission, or the splitting of heavy atoms and tapping the released heat energy; Fusion, or the joining of two atoms to form another (the power source of suns); and Matter/Antimatter, where Antimatter is allowed to come into contact with matter in limited quantities, at which point they annihilate each other.

- **Fossil Fuels:** Coal, oil, and natural gas all were burned initially for heat energy, then the heat was converted to electricity.

- **Hydro/Aeroelectric:** A cleaner form of energy using the power of water flows or wind to spin turbines and generate electricity, it is nevertheless impractical on many high-tech industralized worlds and certainly in any application other than for planetary, immobile power needs.

- **Solar:** More flexible than the above, solar energy still suffers from a lack of compactness and (to some extent) portability. It is clean, however, and is still finds many uses where solar radiaiton is abundant and dependable.

- **Fission:** This is heat energy created from the splitting of heavy atoms such as Uranium and Plutonium. Dangerous radiation is associated with this form of energy, though modern alloys can shield most such radiation. Fuel is in the form of pellets of the heavy material; these pellets are held in fuel 'rods'.

- **Fusion:** Overall, Fusion is an almost ideal combination of a much cleaner, powerful and plentiful source of energy than any of the forms listed above. Many sublight ships use fusion reactors, which generate heat from the joining of two 'heavy' hydrogen atoms (deuterium) to form a helium atom. This process releases a tremendous amount of relatively 'clean' (radiation-free) thermal energy. The heat to cause the fusion reaction is in most cases created by banks of high-intensity lasers — the most compact and efficient method under *Space Master* technology. Small, portable reactors are most often fusion in nature, both because of the ease of acquiring fuel and their relatively simple design and safe operation.

- **Matter/Antimatter:** This type of reactor is the most powerful and efficient by far — though initially the most expensive. By the time of *Space Master*, however, it is the predominant method aboard advanced spacecraft, which require — more than any other application — large quantities of power from a limited volume. The fuel utilized in the vast majority of M/A reactors and engines is an specific type of dense antimatter. When matter and antimatter are combined to fuel a reactor or engine, electromagnetic fields of incredible force are needed to contain or direct the energies thus unleashed, fields many times more powerful than those needed to contain fusion reactions.

Antimatter is collected by bombarding certain very rare elements with specific types of radiation which strips away — via a fission process — the protective nucleus barrier isolating the antimatter subatomic elements. The initial fissioning generates intense radiation: the only dangerous radiation in the process (other than raw heat of course). Thus exposed, the antimatter elements are ready to be combined with normal matter to create the annihilation. Ships are fueled with the material while it is still 'neutral' — the antimatter is safe within the subatomic field. The ship reactor or engine "strips" the atoms then triggers the controlled annihilation.

Antimatter is, of course, a highly volatile material, since its coming into contact with *any* normal matter will cause it to utterly and violently destroy as much of that matter as is equal to its own mass. For this reason, 'hot' antimatter is stored at all times in electromagnetic 'bottles', held separate from any matter. While so stored, the energy to hold the antimatter suspended is relatively low. For items like M/A Torpedoes, the antimatter is pre-stripped and tapped into a storage 'bottle' in the torpedo. The technology level assumed in *Space Master* is capable of full control of matter-antimatter annihilation, a power source with potential far beyond fission or even fusion. However, M/A reactors are the most costly as an initial investment, due to their necessary sophistication. Fuel is also a cost consideration. Antimatter might not even be available in many areas, where Technic development has lagged behind. In addition, it is quite possible for a ship to have M/A translight engines while having a fusion reactor, as engine design is much less complex than reactor configuration. Indeed, in *Space Master* technology, effective translight travel is not possible without M/A, since only the raw power released by destruction of matter can shunt a craft into hyperspace at a velocity which makes frequent interstellar travel feasible. All state-of-technology reactors in *Space Master* utilize thermalectric conversion to adapt the tremendous heat energy into more usable electrical power; a far more compact and efficient method than the immensely crude steam turbines used on pre-starflight Terra. M/A drives are more basic, using the reaction from the powerful annihilation as thrust.

2.0

PERSONAL WEAPONS

Below is a description of the weapons available for characters in *Space Master*. Following this is a *Master Equipment Table* pg. 26-27. Many weapons in this listing require a power supply to fire: following the standard *Space Master* progression of energy sources, weapons will be keyed to their specific needs in their descriptions, as well as in the summary chart.

Power Supply Key:
- * : Cell
- † : Cartridge
- ‡ : Pack
- § : Microfusion Reactor

A more complete breakdown of power supplies can be found in Section 3.8.

2.1

PROJECTILE WEAPONS

CONVENTIONAL PISTOLS

Coming in Light, Medium and Heavy versions, conventional pistols are slug throwing personal defense weapons. The models represented in the game are semi-automatic weapons, meaning that once a bullet is discharged, another is immediately available to fire. Ammunition of the proper caliber is interchangeable with conventional machine pistols.

CONVENTIONAL MACHINE PISTOLS

In two versions, machine pistols are nothing more than embellished pistols, given offensive punch through an automatic fire capability. When used in a semi-automatic (single shot) mode, range characteristics remain the same, but less ammunition is expended in each attack. Ammunition of the proper caliber is interchangeable with conventional pistols.

CONVENTIONAL RIFLES

Rifles are long range slug throwers which come in Light, Medium and Heavy versions. They are semi-automatic weapons, and thus incapable of burst fire. Their ammunition, if of the proper caliber, is interchangeable with assault rifles.

CONVENTIONAL ASSAULT RIFLES

Assault rifles, which come in Light and Medium versions, are short rifles with automatic fire capability. When used in a semi-automatic (single shot) mode, their effective range performance characteristics increase. Their ammunition, if of the proper caliber, is interchangeable with rifles.

CONVENTIONAL MACHINE GUNS

Machine guns are fully automatic slug throwers with excellent range and durability. Although there are only two calibers (10mm and 12mm) of MG's represented in the game, machine guns come in Light, Medium and Heavy models. The differences between the Light and Medium versions are based on how the weapons are mounted, not the caliber of the bore. Light machine guns are fired from a bipod at the end of the barrel, while Medium machine guns are fired from a tripod or otherwise more stable mount. As one can see from the range differences on the *Master Weapons Chart 1* pg.65, the stability of the Medium MG's firing platform dramatically increases its effective range. It stands to reason that one can turn a Light MG into a Medium MG (and vice versa) by changing the mount. Light and Medium belt and magazine ammunition is interchangeable between these two weapons.

CONVENTIONAL SHOTGUNS

Of the shotguns represented in *Space Master*, there are two basic bores (15mm and 20mm), with three different variations of each (standard, sawed-off and autoshot). Shotguns are unique in that their very design is conducive to a variety of uses. For instance, merely changing the ammunition used can turn a shotgun into a flechettegun (which fires metal slivers instead of metal shot), or a slug thrower (by exchanging shot for a single slug). In addition, sawing off the shotgun's barrel will produce a more easily concealable weapon which trades off its already limited range. The autoshotguns provide burst fire through an automatic reloading mechanism. The various kinds of shotgun ammunitions are interchangeable between shotguns of the same bore.

NEEDLEGUNS

Needle pistols, carbines and rifles fire a spray of metal slivers by way of a sophisticated spring mechanism. Because no explosives are required to propel the slivers, Needlers are almost completely silent weapons. Needle ammunition is not interchangeable between the three classes of needleguns because the slivers become larger (increasing the effective ranges and penetration power) as the classification of gun increases. All Needleguns tend to be notoriously small, with short barrels, making them easily concealable. They are excellent (and quite deadly) close quarter weapons.

TANGLEGUNS

Tangleguns fire a special ammunition which, upon hitting the target, expands, enveloping the foe with tough fibrous strands. There are three types of tangleguns, a pistol, carbine and rifle. Their ammunition is not interchangeable.

TASERGUNS

Tasers are devastating stun weapons. The three versions (pistol, carbine and rifle) each fire a prong or barb which trails behind it a fine conducting wire connected to the shell. If the barb manages to strike the target's skin, a small power source located in the shell discharges a strong electric jolt. The effective ranges of these weapons are restricted by the low carrying weight of the barb and the amount of wire which can be spooled out by the shell. The ammunition of these three tasers is not interchangeable.

ROCKETGUNS

Rocketguns, of which there are three types (pistols, carbines and rifles), are specially constructed launching mechanisms for self-propelled small caliber ammunition. Ammunition is completely interchangeable between the three types of rocketguns.

MAGNETIC LINEAR ACCELERATORS

MLA Pistols (†) and Rifles (‡) have special conducting-coil barrels which, when powered, accelerate MLA ammunition to exceptional velocities. Imparted with such momentum, MLA slugs are the ultimate in hand-held, anti-personnel stopping power. The size of a "Linex" (as the technology is referred to) weapon is telling; the pistol barrel length is never less than 40cm, while the rifle barrel can be well over 1.5 m long. Pistol and rifle ammunition is interchangeable.
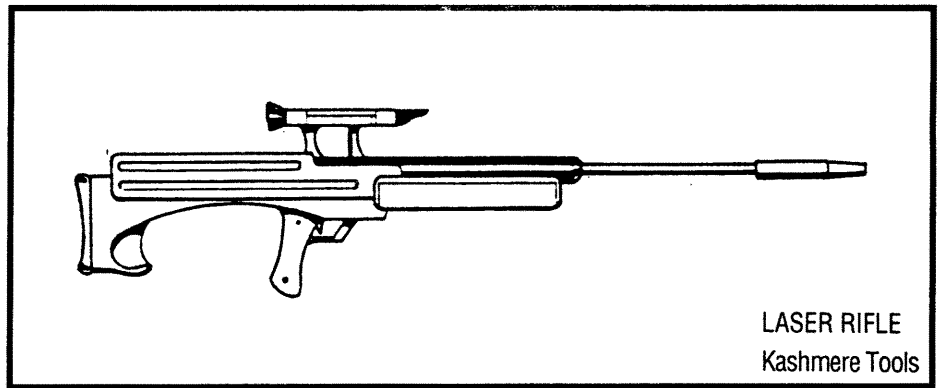
LASER RIFLE
Kashmere Tools

GRENADE LAUNCHERS

Grenade launchers come in many shapes and sizes, all having different performance characteristics. The one represented in the game is a standard version. It may be a weapon unto itself, or a version fused alongside the barrel of another gun. The range characteristics listed in the *Master Weapons Chart 1* are indicative of the standard propellant charge which most rifle-launched grenades have. Therefore, ranges will vary if stronger or weaker propellant is used.

ROCKET PROPELLED GRENADE LAUNCHERS

These launchers are merely mechanisms to discharge rocket propelled grenades. The may be disposable (after one launching), or reusable. The range characteristics listed in the *Master Weapons Chart 1* are indicative of two things: 1) the standard propellant charge with which most rocket propelled grenades are issued, and 2) the limit of effective targeting for an unguided warhead over a distance. With these considerations in mind, the GM may wish to vary the range of a given RPG slightly if the propellant charge was altered.

PORTABLE MISSILE LAUNCHERS

Portable missile launchers are firing mechanisms for small guided or unguided missiles. Because of the variety of missile types, no range characteristics are listed in the *Master Weapons Chart 1*. A listing of the various types of portable missiles, and their range characteristics can be found in the Ammunition Section, pg.12. Basically, the PML and the PML Quad are breach-loading tubes on a rifle stock. The stock alone harbors the firing control, and the guidance system (if guided missiles are used). The PML Autoload weapon uses a single launching tube but is compatible with a magazine feeder, eliminating the necessity of breach-loading the device. Because portable missiles are somewhat standardized in physical size, a PML could theoretically fire any MK. number of portable missile from Mk.1 through Mk.5.

ENERGY WEAPONS

LASERS

Man-portable laser weapons function on the premise that a highly cohesive, layered stream of homogeneous electromagnetic radiation can be delivered to a target causing a "burn-through" of armor and subsequent heat damage to the victim. Lasers have the advantage of being absolutely silent when discharged, and their beams are virtually invisible unless observed in the infra-red or in pitch darkness. There is no noticeable recoil when a laser fires. Their disadvantages lie in size and durability. By necessity, laser barrels are quite long and unwieldy, and any misalignment of the delivery system will cause a malfunction. Lasers also lose effectiveness as they fire through smoke or anti-laser aerosols.

Lasers are represented in the game by five general types. The Mini Laser (*) is significantly miniaturized by most standards of this technology and so can fit onto the end of a fingertip. The Laser Pistol (*) is a comfortable hand-held weapon, despite its longish barrel. The Assault Laser (†) and Laser Rifle (†), though effective offensive weapons, are cumbersome. Their greatest strength lies in their range characteristics. The Heavy Laser (‡) is an excellent support weapon when mounted on a firing platform.

Note: the GM may wish to introduce light and medium versions of the Heavy (support) Laser with reduced range.

5

BLASTERS

Blasters, or, more properly, particle beam weapons, contain miniature particle accelerators. When the weapon is discharged, the light atomic nuclei in the accelerator are shot out at the target. Unfortunately, once released from the mechanism, the "blast bolt" tends to lose cohesion and becomes rather random in its flight and hitting power. When discharged, blasters emit a piercing screech, and have a slight recoil.

Blasters are represented in the game by five general types. The Mini Blaster (*) is small enough to be concealed in the palm of a man's hand. The Blast Pistol (*) is a favored weapon due to its wieldiness and excellent defensive capabilities. The Assault Blaster (†) and Blast Rifle (†) are popular military weapons because of their relative reliability The Heavy Blaster (‡) is a devastating weapon only limited by its range characteristics.

FLAMERS

Flamers propel a chemical mix which both adheres to its target and burns for an extended period of time. Once ignited by the discharging mechanism, the flamer chemical mix is almost impossible to extinguish until it has consumed itself. Flamers tend to make a satisfying "Whoosh" sound when discharged. Oxygen is required for the chemicals to burn, so flamers are useless in vaccuum or oxygen-starved atmospheres.

Five flamer types are represented in the game. The Mini Flamer (*) is small enough to be fired from the wrist of a man if its power supply is strapped to the wielder's forearm. The Flame Pistol (*) is considered a good close-range weapon. The Assault Flamer (†) and Flame Rifle (†) have a fair offensive capability, and are only restricted by their range characteristics. Heavy Flamers (‡) are support weapons to be feared at close because of their fair range and superior burning effects.

STUNNERS

Stunners pulse strong electromagnetic radiation at their targets. At the frequencies used for these weapons, stunners tend to shock and disorient their foes. Because sound pressure waves are not the medium for the discharge, stunners are weapons equally capable in atmospheres or vacuum. They make no noise when discharged, emit no visible beam, and have no recoil. Stunners are excellent non-lethal, suppression systems.

There are five general stunner types represented in the game. The Mini Stunner (*) is so small that it can be concealed in almost anything, from a false eye, to a chemical lighter. The Stun Pistol (*) is a favored police weapon on non-violent worlds because of its capacity to subdue foes at close range. Assault Stunners (†) and Stun Rifles (†) are often used for riot control and similar exercises. The Heavy Stunner (‡), with its arc firing capability, makes an excellent non-violent crowd control support weapon.

DISRUPTORS

Disruptors use the same attack delivery principle as stunners. However, at the frequencies used for these weapons, disruptors set up sympathetic vibrations with the target's molecular structure. Disintegration of chemical bonds is the normal effect, causing massive destruction within the target. Often, the end result in a living target is quite gruesome. Cells explode, bones shatter, and blood vessels rupture.

There are five general disruptor types represented in the game. The Mini Disruptor (*) is a typically small espionage device. The Disruptor Pistol (*), Assault Disruptor (†), and Disruptor Rifle (†) are increasingly deadly and cruel weapons used almost exclusively by the military. The Heavy Disruptor (‡) is a truly evil weapon when used against organic targets, and is thus severely monitored.

STRUPTORGUNS

Struptorguns are unique in that they incorporate both a stunner mechanism and a disruptor mechanism in the same weapon. Invariably, struptorguns have two settings; "STUN" and "DISRUPT". One merely flips a toggle on the weapon's breach to obtain a different effect. In all respects, struptorguns adhere to the descriptions of Stunners and Disruptors found above.

PLASMATIC REPEATORS

Man-portable plasma weapon technology is an offshoot of the blaster firing system. Essentially, plasma attack mechanisms heat accelerated particles by means of their microfusion reactor power supply. The resulting super-heated, sub-atomic particle plasma can then be shot out of the accelerator with devastating effects. The weapon is termed a "repeator" because the limited magnetic containment apparatus inside a plasma weapon can neither hold very much plasma nor hold it for a very long time. Thus, small bolts of plasma are discharged in rapid succession, for once the containment vessel is evacuated, newly generated plasma quickly fills it and is ready for discharge again. The net result is a weapon system that spits out bolt after bolt of hot plasma, with menacing "cracking" sounds and moderate recoil. Plasmatic repeators are by no means ideal weapons; they quickly drain their power supplies, the individual bolts retain the blaster's inherent unpredictability, and they are invariably large and cumbersome.

Two types of plasmatic repeators are represented in the game. The Plasma Repeator Rifle (§) is just unencumbering enough to be held as a two-handed weapon, though it is still quite unwieldy. The Heavy Plasma Repeator (§) is actually a support weapon requiring a firing platform for full effectiveness.
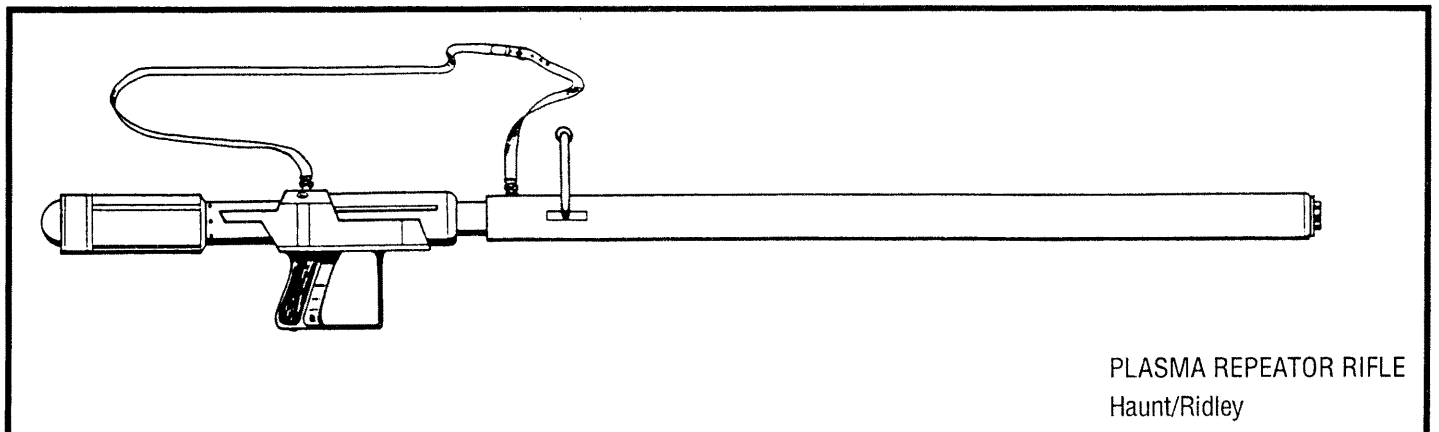
PLASMA REPEATOR RIFLE
Haunt/Ridley

2.3

WEAPON DESCRIPTIONS

The weapons available to characters in *Space Master* are many and varied. There are essentially four different kinds of personal weapons: Projectile Weapons, Energy Weapons, Melee Weapons, and Archaic Missile Weapons.

The Projectile Weapons are noteworthy because they generally carry their ammunition in magazine clips or require breach loading. Projectile Weapons capable of burst fire discharge several projectiles in quick (automatic) succession. Each burst fired represents the discharge of five to ten individual slugs/shells (exactly five slugs/shells for bookkeepers).

For those weapons capable of both burst (automatic) and single shot (semi-automatic) fire, careful track of ammunition expenditures will be necessary. A burst may be followed by two single shots, then another burst, and then another single shot. Before you know it, you have no idea how many more shells your magazine is holding. In such instances assume the hard and fast rule that a burst represents five (5) rounds fired, and that a single shot represents one (1) round fired. If a magazine holds fewer than five rounds at any given time, do not allow the burst fire option.

Energy Weapons are unique in that it is not necessary to keep track of ammunition expenditure. Power supply depletion for Energy Weapons is handled through the weapon failure rules. If the unmodified attack roll of an Energy Weapon falls within that weapon's failure range, there is a probability listed at the bottom of the respective attack chart which indicates that a power supply failure has occurred.

2.31 PROJECTILE WEAPONS

CONVENTIONAL PISTOLS

5mm Pistol: Can fire up to two shots per round using the *Small Projectile Attack Table* (15.1) Mk.1.

10mm Pistol: Can fire up to two shots per round using the *Small Projectile Attack Table* Mk.2.

12mm Pistol: Can fire up to two shots per round using the *Small Projectile Attack Table* Mk.3.

CONVENTIONAL MACHINE PISTOLS

5mm Light Machine Pistol: Can fire up to two bursts per round or two shots per round (or combination adding to two), using the *Small Projectile Attack Table* Mk.1. Both burst and single shot fire use the same range characteristics.

10mm Medium Machine Pistol: Can fire up to two bursts per round or two shots per round (or combination adding to two), using the *Small Projectile Attack Table* Mk.2. Both burst and single shot fire use the same range characteristics.

CONVENTIONAL RIFLES

5mm Light Rifle: Can fire up to two shots per round using the *Small Projectile Attack Table* Mk.1.

10mm Medium Rifle: Can fire up to two shots per round using the *Small Projectile Attack Table* Mk.2.

12mm Heavy Rifle: Can fire up to two shots per round using the *Small Projectile Attack Table* Mk.3.

CONVENTIONAL ASSAULT RIFLES

5mm Light Assault Rifle: Can fire up to two bursts per round or two shots per round (or combination adding to two), using the *Small Projectile Attack Table* Mk.1. Effective single shot range characteristics are somewhat better than burst fire ranges.

10mm Medium Assault Rifle: Can fire up to two bursts per round or two shots per round (or combination adding to two), using the *Small Projectile Attack Table* Mk.2. Effective single shot range characteristics are somewhat better than burst fire ranges.

CONVENTIONAL MACHINE GUNS

10mm Light Machine Gun: Fires up to two bursts per round using the *Small Projectile Attack Table* Mk.3.

10mm Medium Machine Gun: Fires up to two bursts per round using the *Small Projectile Attack Table* Mk.3.

12mm Heavy Machine Gun: Fires up to two bursts per round using the *Small Projectile Attack Table* Mk.4.

CONVENTIONAL SHOTGUNS

15mm Shotgun and Sawed-off Shotgun: Fires up to twice per round on the *Shotgun Attack Table* (15.2).

15mm Autoshotgun: Fires two bursts per round. All targets in the firing arc are attacked on the *Shotgun Attack Table*.

20mm Shotgun and Sawed-off Shotgun: Fires up to twice per round on the *Shotgun Attack Table*.

20mm Autoshotgun: Fires two bursts per round. All targets in the firing arc are attacked on the *Shotgun Attack Table*.

NEEDLEGUNS

Needle Pistol: Fires two bursts per round on the *Small Projectile Attack Table* Mk.1.

Needle Carbine: Fires up to two bursts per round on the *Small Projectile Attack Table* Mk.2.

Needle Rifle: Fires two bursts per round on the *Small Projectile Attack Table* Mk.3.

TANGLEGUNS

Tangle Pistol: Fires up to two shots per round on the *Entangle Attack Table* Mk.3.

Tangle Carbine: Fires up to two shots per round on the *Entangle Attack Table* Mk.4.

Tangle Rifle: Fires up to two shots per round on the *Entangle Attack Table* Mk.5.

TASERGUNS

Taser Pistol: Capable of firing one shot on the *Small Projectile Attack Table* Mk.1. Specific critical results are ignored; rather, any target given a critical takes an "E" severity Stun critical instead.

Taser Carbine: Fires up to two shots per round on the *Small Projectile Attack Table* Mk.2. Specific critical results are ignored; rather, any target given a critical takes an "E" severity Stun critical instead.

Taser Rifle: Fires up to two shots per round on the *Small Projectile Attack Table* Mk.3. Specific critical results are ignored; rather, any target given a critical takes an "E" severity Stun critical instead.
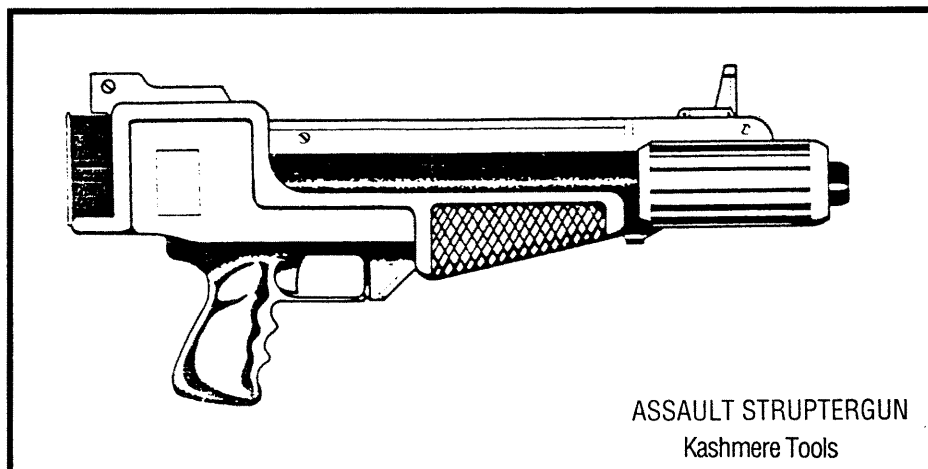
ASSAULT STRUPTERGUN
Kashmere Tools

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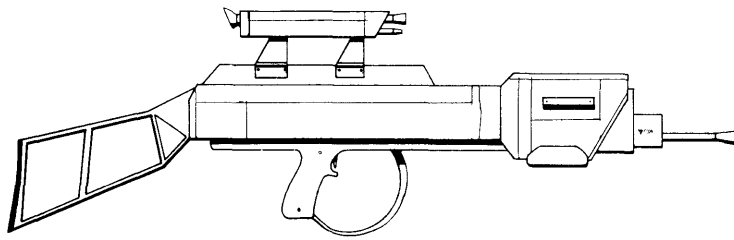
ROCKET RIFLE
Cobra/Devcomn

ROCKETGUNS

Rocket Pistol: Fires up to two shots per round on the *Small Projectile Attack Table* Mk.3.

Rocket Carbine: Fires up to two shots per round, or two bursts per round (or a combination adding up to two), on the *Small Projectile Attack Table* Mk.3. Single shot fire has somewhat improved effective range characteristics over burst fire.

Rocket Rifle: Fires up to two shots per round, or two bursts per round (or a combination adding up to two), on the *Small Projectile Attack Table Mk.3.* Single shot fire has somewhat improved effective range characteristics over burst fire.

MAGNETIC LINEAR ACCELERATORS

MLA (Linex) Pistol (†): Fires up to two shots per round on the *Small Projectile Attack Table Mk.4.* This weapon must be powered by one Utility Cartridge.

MLA (Linex) Rifle (‡): Fires up to two shots per round on the *Small Projectile Attack Table Mk.5.* This weapon must be powered by one Utility Pack. Note that it is the more powerful energy source (as opposed to a larger slug) which allows a Linex rifle to do more damage than a Linex pistol.

GRENADE LAUNCHERS

Grenade Rifle: Weapon can discharge up to two grenades per round. The combat roll is resolved on the *Launcher Error Chart (Player Book, pg.60)* to determine where the grenade has landed. Individual grenade attacks are then resolved on the *Grenade Attack Table* (15.3) against any potential victims in the blast radii of the warhead.

ROCKET PROPELLED GRENADE LAUNCHERS

RPG Launcher: Mechanism capable of discharging one RPG. The combat roll is resolved on the *Launcher Error Chart* to determine where the rocket propelled grenade has landed. Individual grenade attacks are then resolved on the *Grenade Attack Table* against any potential victims in the blast radii of the warhead.

PORTABLE MISSILE LAUNCHERS

PML: A mechanism fires one portable missile. Range characteristics are dependent upon the portable missile being used. The combat roll is resolved on the *Launcher Error Chart* to determine where the missile has landed. Individual portable missile attacks are then resolved on the *Grenade Attack Table* against any potential victims in the blast radii of the warhead.

PML Quad and Autofeed: Mechanisms capable of firing up to two portable missiles per round. Range characteristics are dependant upon the portable missile being used. Combat rolls are resolved on the *Launcher Error Chart* to determine where a given missile lands. Individual portable missile attacks are then resolved on the *Grenade AttackTable* against any potential victims in the blast radii of the warhead.

2.32 ENERGY WEAPONS

LASERS

Mini Laser (*): Fires once per round on the *Laser Attack Table* Mk.1. Power supply is either a Utility Cell or a Weapon Cell.

Laser Pistol (*): Fires up to twice per round on the *Laser Attack Table* (15.4) Mk.2. Power supply is a Weapon Cell.

Assault Laser (†): Fires up to twice per round on the *Laser Attack Table* Mk.3. Power supply is a Weapon Cartridge.

Laser Rifle (†): Fires up to twice per round on the *Laser Attack Table* Mk.4. Power supply is a Weapon Cartridge.

Heavy Laser (‡): Fires up to twice per round on the *Laser Attack Table* Mk.5. Power supply is a Weapon Pack.

BLASTERS

Mini Blaster (*): Fires once per round on the *Blaster Attack Table* Mk.1. Power supply is either a Utility Cell or a Weapon Cell.

Blast Pistol (*): Fires up to twice per round on the *Blaster Attack Table* (15.5) Mk.2. Power supply is a Weapon Cell.

Assault Blaster (†): Fires up to twice per round on the *Blaster Attack Table* Mk.3. Power supply is a Weapon Cartridge.

Blast Rifle (†): Fires up to twice per round on the *Blaster Attack Table* Mk.4. Power supply is a Weapon Cartridge.

Heavy Blaster (‡): Fires up to twice per round on the *Blaster Attack Table* Mk.5. Power supply is a Weapon Pack.

FLAMERS

Mini Flamer (*): Fires once per round on the *Flamer Attack Table* (15.6) Mk.1. Power supply is a Flamer Cell.

Flame Pistol (*): Fires up to twice per round on the *Flamer Attack Table* Mk.2. Power supply is a Flamer Cell.

Assault Flamer (†): Fires up to twice per round on the *Flamer Attack Table* Mk.3. Power supply is a Flamer Cartridge.

Flame Rifle (†): Fires up to twice per round on the *Flamer Attack Table* Mk.4. Power supply is a Flamer Cartridge.

Heavy Flamer (‡): Fires up to twice per round on the *Flamer Attack Table* Mk.5. Power supply is a Flamer Pack.

STUNNERS

Mini Stunner (*): Fires once per round on the *Stunner Attack Table* Mk.1. Power supply is either a Utility Cell or a Weapon Cell.

Stun Pistol (*): Fires up to twice per round on the *Stunner Attack Table* (15.7) Mk.2. Power supply is a Weapon Cell.

Assault Stunner (†): Fires up to twice per round on the *Stunner Attack Table* Mk.3. Power supply is a Weapon Cartridge.

Stun Rifle (†): Fires up to twice per round on the *Stunner Attack Table* Mk.4. Power supply is a Weapon Cartridge.

Heavy Stunner (‡): Fires up to twice per round on the *Stunner Attack Table* Mk.5. Alternatively, it may fire once per round on the Stunner table Mk.3 versus all potential targets in a 30 degree arc. Power supply is a Weapon Pack.

DISRUPTORS

Mini Disruptor (*): Fires once per round on the *Disruptor Attack Table* Mk.1. Power supply is either a Utility or Weapon Cell.

Disruptor Pistol (*): Fires up to twice per round on the *Disruptor Attack Table* (15.7) Mk.2. Power supply is a Weapon Cell.

Assault Disruptor (†): Fires up to twice per round on the *Disruptor Attack Table* Mk.3. Power supply is a Weapon Cartridge.

Disruptor Rifle (†): Fires up to twice per round on the *Disruptor Attack Table* Mk.4. Power supply is a Weapon Cartridge.

Heavy Disruptor (‡): Fires up to twice per round on the *Disruptor Attack Table* Mk.5. Power supply is a Weapon Pack.

STRUPTORGUNS

Special: All struptorguns adhere to the standard energy weapon progression of Mini, Pistol, Assault, Rifle, and Heavy. However, their characteristics are determined by their setting. A struptorgun, no matter what size, may be used either as a Stunner, or a Disruptor, as chosen by the wielder.

PLASMATIC REPEATORS

Plasma Repeator Rifle (§): Fires up to two bursts per round on the *Blaster Attack Table* Mk.5. Power supply is a Microfusion Weapon Reactor.

Heavy Plasma Repeator (§): Fires up to two bursts per round on the *Blaster Attack Table* Mk.5. Power supply is a Microfusion Weapon Reactor.

MELEE ENERGY WEAPONS

Power Sword (†): This quite rare and arcane weapon takes the form of a handgrip when not activated. A finely aligned set of refractors in one end of the grip allows the weapon to form a powerful energy 'blade' about one meter long, thus creating an effective melee weapon.

Force Knife (†): Similar to the power sword, though the adjustable blade can only extend about 40cm and is not as powerful. It is more common, used as a tool more than a weapon.

2.4 ▮▮▮▮▮

PERSONAL PROJECTILE WEAPON AMMUNITION

The various attack tables included in *Space Master* assume both the standard gun types given in the *Master Weapons Charts* and standard ammunition (particularly with respect to the Projectile weapons). However, the possibility of special ammunition types, which adjust the attack table results, should not be ruled out. What follows is a listing of the ammunition types available in *Space Master*. Note that the general term, "round", when used here, refers to either a slug, shell, shot, cartridge, or warhead, whichever is applicable. Also, if a specific weapon fires caseless ammunition (as specified by the GM), it may not fire encased ammunition, and vice versa.

Note: *The properties of the different types of ammunition may not be combined unless otherwise stated.*

2.41 PROJECTILE ROUNDS

General Purpose Round:

The General Purpose (GP) round comes in 5mm, 10mm, and 12mm calibers and forms the basis for the *Small*

Projectile Attack Table (15.1). Such rounds are assumed to be caseless for conventional pistols, machine pistols, rifles and assault rifles. On the other hand, conventional machine guns generally use slugs encased in a cartridge. Both the standard Linex round (used in MLA weapons), and the standard Rocket round (used in Rocketguns) are assumed to be GP.

Armor Piercing Round:

Armor Piercing (AP) rounds come in 5mm, 10mm, and 12mm calibers, and may be fired from conventional pistols, machine pistols, rifles, assault rifles, and machine guns. They may be caseless or encased, and are also available in Linex and Rocket round versions. When an AP round is fired at an opponent wearing armor (generally ATs 5 through 20), 5 is added to the attacker's OB. If an AP round is fired at an unarmored foe (generally ATs 1 through 4), 5 is subtracted from the attacker's OB.

High Explosive Round:

High Explosive (HE) rounds come in 5mm, 10mm, and 12mm calibers, and may be fired by conventional pistols, machine pistols, rifles, assault rifles, and machine guns. They may be caseless or encased, and are also available in Linex and Rocket round versions. When an HE round hits an unarmored foe (generally having an AT of 1 through 4), an Internal Disruption critical, of the same severity as the primary critical delivered by the combat roll, is added to the combat result. If an HE round is fired at an armored target (generally of AT 5 through 20), 10 is subtracted from the attacker's OB, and no extra Internal Disruption critical is delivered.

High Explosive Armor Piercing Round:

High Explosive Armor Piercing (HEAP) rounds come in 5mm, 10mm, and 12mm calibers, and may be fired from conventional pistols, machine pistols, rifles, assault rifles, and machine guns. They may be caseless or encased, and are

available in Linex and Rocket round versions. HEAP rounds always deliver an extra Internal Disruption critical of the same severity as the primary critical delivered by the attack.

Tungsten Core Round:

Tungsten core (TC) rounds are available for 5mm, 10mm, 12mm, Linex and Rocket round GP and AP ammunition. Tungsten core rounds add an additional +5 to the attacker's OB due to their mass being concentrated within a smaller cross-section. A round may not be TC and DUC at the same time.

Depleted Uranium Core Rounds:

Depleted Uranium core (DUC) rounds are available for 5mm, 10mm, 12mm, Linex and Rocket round GP and AP ammunition. DUC rounds add an additional +5 to the attacker's OB, and raises the maximum damage threshold level of the weapon by one due to their increased mass. Therefore, a medium rifle firing a DUC round would resolve its attack on the *Small Projectile Attack Table* Mk.4 (instead of Mk.3). A round may not be DUC and TC at the same time.

Shotgun Standard Shot Rounds:

Standard Shot (SS) rounds form the basis of the *Shotgun Attack Table* and are available for all shotgun bores. An SS shell generally contains a multitude of tiny metal spheres (called shot) which are projected out of the shotgun barrel when the weapon is fired. At longer ranges SS rounds tend to do Pierce criticals, while at short ranges, Shrapnel/Automatic criticals are delivered (see the *Shotgun Attack Table*).

Shotgun Flechette Rounds:

Flechette (FL) rounds are available for all shotgun bores. An FL shell contains a multitude of tiny metal slivers (called flechettes) which are projected out of the shotgun barrel, spinning violently, when the weapon is fired. At longer ranges, FL rounds do Slash criticals, while at short ranges, Shrapnel/Automatic criticals are delivered (see the attack chart).

FLAME PISTOL
Haunt
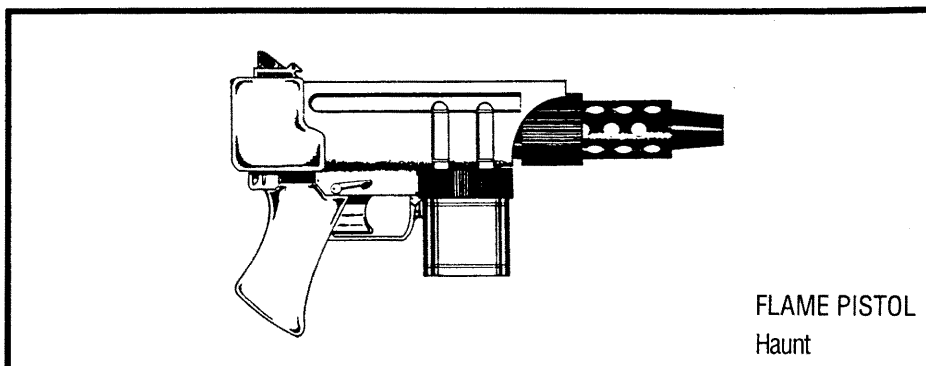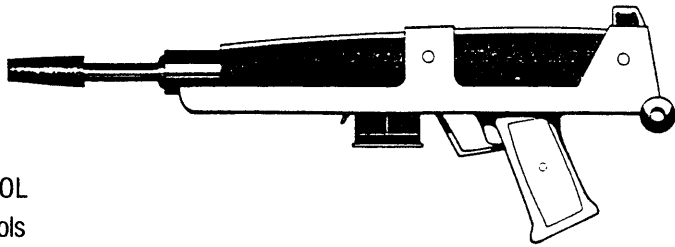
LASER PISTOL
Kashmere Tools
Special Edition

Shotgun Slug Rounds:

Shotgun Slug (SL) rounds are available for all shotgun bores. An SL shell contains a single large metal slug which is projected out of the shotgun barrel when the weapon is fired. Use the Small Projectile attack table with a Mk.3 threshold for 15mm bores and a Mk.4 threshold for 20mm bores. If a critical result is achieved, roll for both Pierce and Impact criticals of the same severity.

Standard Needlegun Rounds:

Standard Needlegun (SN) rounds are slivers of hardened steel which begin to spin after being discharged from the needlegun. Using the *Small Projectile Attack Table*, SN rounds do Slash criticals.

Super-teflon Coated Rounds:

Any GP, AP, HE, or HEAP round (whether or not having a TC or DUC), or shotgun shot and flechettes, or needlegun rounds may be Super-teflon Coated (STC). STC rounds add +5 to an attacker's OB when firing against ATs 5-8 (with a higher Maximum Result at Point Blank range).

Irulon Coated Rounds:

Any GP, AP, HE, or HEAP round (whether or not having a TC or DUC), or shotgun shot and flechettes, or needlegun rounds may be Irulon Coated (IC). IC rounds add +5 to an attacker's OB when firing against ATs 9-20 (with a higher Maximum Result at Point Blank range).

Tranquilizer Rounds:

Tranquilizer (TR) rounds may be discharged from conventional pistols, machine pistols, rifles, assault rifles, and shotguns in lieu of regular ammunition. The only restriction is that an attack may not exceed the Mk.2 threshold level. The GM may stipulate that only half of the normal concussion hits are delivered due to the lack of penetrating power intrinsic to any TR. If a critical is obtained, it is not resolved, but rather merely means that the round's tranquilizing drug has been delivered into the target's system. In this instance, the target must immediately make an RR against the level of the tranquilizer drug (GM's discretion).

Failing, the target is then knocked out for a number of rounds equal to the percentage that the RR was failed by. Generally, once the target comes around, he will be disoriented for a number of rounds equal those he was knocked out for.

Poisoned Rounds:

Poisoned (PO) rounds may be discharged from conventional pistols, machine pistols, rifles, assault rifles and shotguns. In addition, flechettes and needle ammunition may be coated with poisons. The design of poisons (and acids), are left to the devising of the GM, but as for some suggestions: certain poisons may only effect specific creatures, some effects may be delayed, biotoxins may be used, and so on.

2.42 GRENADES AND PORTABLE MISSILES

There are a variety of grenade and portable missile types available in *Space Master*, including hand-thrown explosives, grenades launched from a rifle or similar device, as well as rocket propelled grenades. Portable missiles, on the other hand, are either guided or unguided, and are generally fired from portable missile launchers as described in the Weapons Listing. Throughout the following rules section, it will be assumed that Grenades and Portable Missiles produce the same effects, and these will be phrased in terms of what grenade warheads do when they detonate. So, references to "grenade" effects apply equally to portable missiles.

Regardless of the delivery system, all grenades share some common properties. When detonated, grenades produce five distinct "blast radii". The first blast radius is called "ground zero", wherein the most severe explosive effects are produced. The second, third, fourth and fifth blast radii extend outward from ground zero spherically, each producing graduated, and generally reduced, blast effects. Both the volume encompassed within a given blast radius, as well as the specific effects produced, are dependent upon the type of grenade which is detonated.

General Purpose Grenades:

General Purpose (GP) grenades are anti-personnel warheads available in sizes ranging from Mk.1 through Mk.5. They come in hand-thrown, launched, rocket propelled, and portable missile versions. Every GP grenade produces the requisite five blast radii when detonated. GP grenades resolve their effects on the *Grenade Attack Table* (15.3) , delivering both Shrapnel and Impact criticals of the same severity. There are three variations of the GP grenade:

1) Point Defense General Purpose (PDGP) grenades have warheads with restricted blast radii to allow their use at close quarters, or for pin-point attacks. Each blast radius extends outward from the detonated grenade only one (1) meter per Mk.#.

2) Standard General Purpose (GP) grenades form the basis of this series, having standard blast radii. Each blast radius extends outward from the detonated grenade two (2) meters per Mk.#.

3) Enhanced General Purpose (EGP) grenades have warheads which produce abnormally large blast radii. Each blast radius extends outward from the detonated grenade three (3) meters per Mk.#.

Concussion Grenades:

Concussion (CO) grenades are anti-personnel warheads available in sizes ranging from Mk.1 through Mk.5. They come in hand-thrown, launched, rocket propelled, and portable missile versions. Every CO grenade produces the requisite five blast radii when detonated. CO grenades resolve their effects on the *Grenade Attack Table*, delivering an Impact critical when called for. There are three variations of the CO grenade:

1) (PDCO) grenades have warheads with restricted blast radii to allow their use at close quarters, or for pin-point attacks. Each blast radius extends outward from the detonated grenade only one (1) meter per Mk.#.

2) (CO) grenades form the basis of this series, having standard blast radii. Each blast radius extends outward from the detonated grenade two (2) meters per Mk.#.

3) (ECO) grenades have warheads which produce abnormally large blast radii. Each blast radius extends outward from the detonated grenade three (3) meters per Mk.#. In addition, any Impact critical is rolled twice, and all results are applied to the target.

Shrapnel Grenades:

Shrapnel (SH) grenades are anti-personnel warheads available in sizes ranging from Mk.1 through Mk.5. They come in hand-thrown, launched, rocket propelled, and portable missile versions. Every SH grenade produces the requisite five blast radii when detonated. SH grenades resolve their effects on the *Grenade Attack Table*, delivering a Shrapnel critical when called for. There are three variations of the SH grenade:

1) Point Defense Shrapnel (PDSH) grenades have warheads with restricted blast radii to allow their use at close quarters, or for pin-point attacks. Each blast radius extends outward from the detonated grenade only one (1) meter per Mk.#.

2) Standard Shrapnel (SH) grenades form the basis of this series, having standard blast radii. Each blast radius extends outward from the detonated grenade two (2) meters per Mk.#. In addition, a Shrapnel critical delivered within the first Blast Radii (Ground Zero), is rolled twice with all results applying to the target.

3) Enhanced Shrapnel (ESH) grenades have warheads which produce abnormally large blast radii. Each blast radius extends outward from the detonated grenade three (3) meters per Mk.#. In addition, any Shrapnel critical delivered within the first two Blast Radii (Ground Zero and the second Blast Radius) is rolled twice with all results applied to the target.

Plasma Grenades:

Plasma (PL) grenades are anti-personnel warheads available in sizes ranging from Mk.1 through Mk.5. They come in hand-thrown, launched, rocket propelled versions, and portable missiles. Every PL grenade produces the requisite five blast radii when detonated. PL grenades resolve their effects on the *Grenade Attack Table*, delivering Heat, Impact, and Radiation criticals of the same severity. There are three variations of the PL grenade:

1) Point Defense Plasma (PDPL) grenades have warheads with restricted blast radii to allow their use at close quarters, or for pin-point attacks. Each blast radius extends outward from the detonated grenade only one (1) meter per Mk.#.

2) Standard Plasma (PL) grenades form the basis of this series, having standard blast radii. Each blast radius extends outward from the detonated grenade two (2) meters per Mk.#.
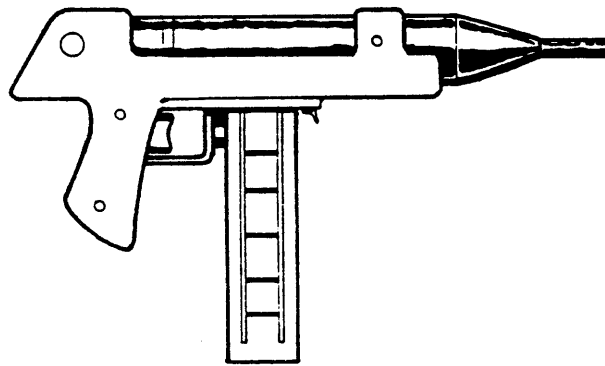
NEEDLE PISTOL
Conboy Labs

3) Enhanced Plasma (EPL) grenades have warheads which produce abnormally large blast radii. Each blast radius extends outward from the detonated grenade three (3) meters per Mk.#. In addition, the Heat effect of the warhead is residual when the grenade is detonated in any sort of atmosphere. Any targets occupying the Ground Zero of the warhead on the round after detonation takes an automatic "C" Heat critical (only a "B" Heat critical if the target is wearing an activated energy shield).

Smoke Grenades:

Smoke (SMK) grenades are obscuring/signalling/concealment warheads available in sizes ranging from Mk.1 through Mk.5. They come in hand-thrown, launched, rocket propelled, and portable missile versions. Every SMK grenade produces the requisite five blast radii when detonated, but instead of giving explosive damage, smoke is produced in the area. The GM will have to adjudicate smoke effects. Generally, the more dispersed the smoke from Ground Zero, the easier it will be to see through. Here is a set of guidelines for Perception and Combat modifiers when looking or firing through smoke: Ground Zero (-50), 2nd Blast Radius (-40), 3rd Blast Radius (-30), 4th Blast Radius (-20), and 5th Blast Radius (-10). Only use the worst modifier in application for each individual SMK grenade. There are three variations of the SMK grenade:

1) Point Defense Smoke (PDSMK) grenades have warheads with restricted blast radii to allow their use at close quarters, or for pin-point deliveries. Each blast radius extends outward from the detonated grenade two (2) meters per Mk.#. The smoke will last for 10 minutes if the atmospheric medium is undisturbed.

2) Standard Smoke (SMK) grenades form the basis of this series, having standard blast radii. Each blast radius extends outward from the detonated grenade four (4) meters per Mk.#. The smoke will last for 20 minutes if the atmospheric medium is undisturbed.

3) Enhanced Smoke (ESMK) grenades have warheads which produce abnormally large blast radii. Each blast radius extends outward from the detonated grenade six (6) meters per Mk.#. The smoke will last for 30 minutes if the atmospheric medium is undisturbed.

Anti-laser Aerosol Grenades:

Anti-laser Aerosol (ALA) grenades are defensive warheads which defeat coherent light (e.g., Laser) beams. They are available in sizes ranging from Mk.1 through Mk.5, and come in hand-thrown, launched, rocket propelled, and portable missile versions. Every ALA grenade produces the requisite five blast radii when detonated. ALA grenades defeat Laser attacks using the following modifiers: Laser fired through Ground Zero (-100), 2nd Blast Radius (-80), 3rd Blast Radius (-60), 4th Blast Radius (-40), 5th Blast Radius (-20). Only use the worst modifier for each effect produced by a single ALA grenade. Anti-laser aerosols do not affect perception in any way. There are three variations of the GP grenade:

1) Point Defense Anti-laser Aerosol (PDALA) grenades have warheads with restricted blast radii to allow their use at close quarters, or for pin-point deliveries. Each blast radius extends outward from the detonated grenade only one (1) meter per Mk.#. The aerosol remains suspended for 10 minutes provided that the atmosphere is undisturbed.

2) Standard Anti-laser Aerosol (ALA) grenades form the basis of this series, having standard blast radii. Each blast radius extends outward from the detonated grenade two (2) meters per Mk.#. The aerosol remains suspended for 20 minutes provided that the atmosphere is undisturbed.

3) Enhanced Anti-laser Aerosol (EALA) grenades have warheads which produce abnormally large blast radii. Each blast radius extends outward from the detonated grenade three (3) meters per Mk.#. The aerosol remains suspended for 30 minutes provided that the atmosphere is undisturbed.

Miscellaneous Grenades:

The GM is free to develop any grenade effects that he wishes to include in his game. These could include grenades which emit poison gas, acid, biotoxins, anti-molecutronic viruses, corrosives, etc. Variations on these grenades could follow the "Point Defense/ Standard/ Enhanced" progression given in this section.

Grenade Fuse Options:

There are several ways to have a grenade detonate. The following fuse options are available for grenades (and possibly mines if the GM allows their use):

- **Timed Fuse:** Grenades are usually delivered during a Fire Phase in the Combat Round Sequence. A warhead could be timed to detonate in the same phase, or the next action phase in the sequence.
- **Contact Fuse:** The grenade will detonate the instant it strikes any solid or liquid.
- **Proximity Fuse:** The grenade will detonate when it comes within a set distance of the ground, thus exploding in mid-air.
- **Delayed Action Proximity (DAP):** The grenade will not detonate until triggered by the presence of the appropriate target type (e.g., a man sized bio-organism) within its first blast radius.
- **Delayed Action Remote (DAR):** The grenade will only detonate when commanded to do so via a remote control unit possessed by the attacker.

GRENADE SUMMARY CHART

Grenade Type	PD	Blast Radii (m/Mk.#) Standard	Enhanced	Critical Type	Applicable Shield Mod
General Purpose	1	2	3	Shrap/Impact	Projectile
Concussion	1	2	3	Impact/Impact	Energy
Shrapnel	1	2 (a)	3 (b)	Shrapnel	Projectile
Plasma	1	2	3 (c)	Heat/Imp/Rad	Energy
Smoke	2 (d)	4 (e)	6 (f)	—	—
Aerosol	1 (d)	2 (e)	3 (f)	—	—

Notes:
a = Roll criticals twice in the first Blast Radius.
b = Roll criticals twice in the first two Blast Radii.
c = Lingering Heat effects. See the text for specifics.
d = Effect normally lasts for 10 minutes.
e = Effect normally lasts for 20 minutes.
f = Effect normally lasts for 30 minutes.

Portable Missiles:

As indicated earlier on, portable missile effects are practically identical to the grenades described above. The difference with portable missiles is their attack delivery method. Portable missiles are best thought of as miniature guided or unguided, direct-fire rockets, which are discharged by portable missile launchers. For simplicity's sake, it is assumed that a portable missile launcher (PML) can fire any portable missile. However, the GM may stipulate as many restrictions as he sees fit. Below are detailed a few portable missiles followed by a chart of their range characteristics. Note that any of the grenade warheads described above could be held within any of the following portable missiles.

1) The Standard Unguided Missile is a direct line-of-sight warhead delivery system. Its maximum range is 800 meters.

2) The Standard Guided Missile, when discharged, must be directed to its target by the firer, who controls its flight from the portable missile launcher (by means of remote control). When so controlled, the missile adds +30 to its SR, MR and LR modifiers (from the Master Weapons Chart 1) to determine the accuracy of a hit attempt. If uncontrolled, a guided missile may be fired as an unguided missile. The missile's max range is 1500 meters.

Portable Missile Options:

A portable missile may be produced with multiple options, but it may have only one type of fuse. The following options are available for any portable missile:

- **Extended Range:** Long Range characteristics are doubled.
- **Fire-and-Forget:** This option is available for Guided Missiles only. Essentially, with the Fire-and-Forget option, a missile is treated as "guided" except that its flight need not be monitored and directed by the firer. Simply put, the missile uses its own detection system to guide itself to the target.
- **Proximity Fuse:** The missile detonates before reaching its chosen target if it comes within 1 Blast Radii of another target. This must be a specific sort of target chosen for the missile in question, be it a man-sized life form or armored vehicle.
- **Delayed Fuse:** The missile detonates after a set time interval has passed. This must be determined prior to launch on a case-by-case basis. The GM must determine reasonable limits for this technology.
- **Remote Fuse:** The missile detonates by a remote control possessed by the firer. With this option, a missile may be fired, its placement judged, and then the warhead detonated. This fuse may not be chosen as an option for armor piercing portable missiles.

RANGE CHARACTERISTIC CHART FOR PORTABLE MISSILES

Missile Type	Range (meters)				Range Modifers			
	PB	SR	MR	LR	PB	SR	MR	LR
Standard Unguided	10	100	200	800	+100	+50	+20	0
Extended Range Unguided	10	100	200	1600	+100	+50	+20	0
Standard Guided	10	200	400	1500	+100	+80	+50	+30
Extended Range Guided	10	200	400	3000	+100	+80	+50	+30

EQUIPMENT

"A 'Mark Five Magneto-feed Fully Automatic Plasma Repeator Rifle'? Is that what you call it? I call it a gun. I thought I knew how to use one of these; now I'm not sure. Let's try it out..."

Apocryphal Speech of a little-known Jym-bob Android model which malfunctioned slightly and murdered several dozen Citizens.

3.1
PERSONAL ITEMS

Calculator unit: (*) A small ("pocket-sized") calculator capable of performing only the most basic of mathematical functions. The calculator unit can add, subtract, multiply, divide, perform square roots, simple logarithms, derivation and integration. It also possesses a memory function.

Chronometer: (*) Fitted with a lifetime power cell, these wristwatch-like devices invariably perform several other tasks, including personal metabolic monitoring, limited audio recording, etc.

Computer Map: (*) Actually a combined scanner/recorder, this device uses hologlass plates to store visual information. The Map records information continuously in a 100 m. radius about the carrier, providing a faultless return guide. Premade maps from aerial and orbital scans can also be fed into the Map, which compares scan data with immediate surroundings to pinpoint current location. One Hologlass can store about 1,000,000 sq. km of map data. The Map is a 2 cm. thick 10 x 10 cm square, one full face devoted to a glassteel display face, which displays a 3-D top-view at a nearly infinite range of magnification. The Map can also project the image (in the right lighting) in a 3 m square display.

Distance Lenses: (*) About the size of a pair of small binoculars, these combine the powers of Infrared and Filter lenses, as well as superb magnification (up to 100,000x). A small display inside, along the edge of the view gives distance to an object targeted in crosshairs (up to 20 km).

Earphone Communicator: (*) A lightweight headset, it mounts in one ear with a filament wire extending to just in front of the mouth, a tiny microphone mounted on the tip. The unit is very lightweight and unencumbering. Hearing, even through the unit, is unimpaired. Range: 100 m; also used on-board vehicles.
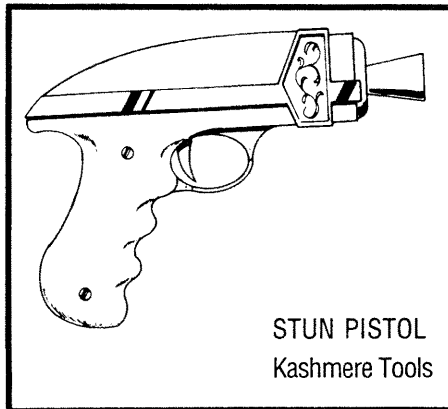
STUN PISTOL
Kashmere Tools

Elmonit Card: Not a 'credit' card, but an electronic checking system. The Elmonit card is about the size of a credit card, though 5 mm thick, and contains encoded data on the possessor's available financial resources. When plugged into a Merchant or Bank transactor the data is read, and, if the holder is making a purchase, the amount is deducted, altering the data. Illegal data alteration is extremely difficult, although not impossible. Normally they are only accepted if locally (within a system) issued so that the Bank network can verify the integrity of the card. For Interstellar travel, the traveller is issued a special bank credit, with which he/she/it may set up a temporary account at the local institution. Like the Ident Disk (see below), Elmonit cards are chemically keyed to the owner.

Glowglobe: (*) An 8 cm diameter translucent sphere, the glowglobe is a portable, self-contained light source. Light level is altered by twisting the hemispheres, from 'off' to an illumination equal to about a 150 watt light bulb. Also triggered when the globe is turned on is a tiny gravity neutralizer, rendering the globe weightless. A small loop is mounted on one hemisphere where the globe can be 'moored' to keep it from floating away. A variety of light shades are also available.

Ident Disk (replacement): One Ident Disk is issued to each citizen of the Imperium free of charge; lost ones are replaced at a penalty charge. The ident disk is a 5 cm plate about 2 mm thick, carrying on one face a holo-image of the bearer, and on the other face a special sensory material, engraved with the name of the bearer in standard Terran. Within the disk is held an array of personal information — physical, physiological, psychological and historical — as well as a retina scan for further ident confirmation. Access to this information is limited, depending on the reader. Normally, only authorized Patrol readers with a master clearance have full access, and only Confederation Hospital readers have full medical (physiological and psychological) access. The disks are chemically keyed to specific body chemistry and warmth, so that if the disk leaves the proximity of the wearer long enough to fully dissipate acquired body warmth (about an hour), the disk information is destroyed, and the holo-image blurred beyond recognition. Ident Disks, like Elmonit cards, are very difficult — but not impossible — to forge. They must be worn very close to the body. Personalized disk carriers, like jewelry, are constantly moving in and out of fashion.

Infra-red Goggles: Less expensive than the lenses above, they perform basically the same function. They do, however, reduce wearer Perception by 20 (and it is is obvious that one is wearing them, as opposed to the lenses, which are undetectable to the casual observer).

Infra-red Lenses: Contact lenses, wearable for up to a month without discomfort, which allow the wearer to 'see' into the infrared spectrum, allowing him to discern heat-radiating objects even in the dark. Activated by pupil dilation, they do not impede normal vision. *Must* be custom-fitted (included in price).

Light Filter Lenses: Similar to Infra-red Lenses, these are triggered by pupil constriction, darkening to cut glare when the wearer is in bright light. *Must* be custom-fitted (included in price).

Lightrod: (*) Basically a sophisticated flashlight, the lightrod can act as a signal beacon, in addition to possessing a variety of other levels of intensity and beam width.

Magnetic Compass: This simple device will function on any planet where magnetic poles are present. About 6 cm in diameter and 4 mm thick.

Makeover Kit: (2*) About the size of a small attaché case, this unit includes a built-in Holoviewer. In addition you will find a number of advanced cosmetics and colored eye lenses, allowing the skilled user to alter his/her/its face and hands to appear to be nearly any humanoid racial type. One very skilled, using a superimposed holo-image, can duplicate the exact features of another individual. An easier method of exact impersonation, also in the kit, is a spray-on mask, which allows one to make a mold and perfect mask of the impersonee. Of course, a willing (or unconscious) impersonee is necessary for this operation.

Microcomputer (Mk. 1 through 4): (1-4*) A small, hand-held computer unit (15 x 10 x 3 centimeters), the microcomputer is capable of performing all basic mathematical functions (this program is part of the unit's hardware), and can record data and perform programmed functions just as any larger computer (given that the appropriate programs are in the unit). The microcomputer features a 6 centimeter diagonal screen and a mini keyboard (which is protected by a hinged faceplate when not in use), and is unable to respond to vocal commands. The computer has a receptacle for memory discs and is capable of full data playback. It has not proved possible yet to create artificial intelligence in units of this size, but in all other respects (i.e., CPU capacity, memory and storage) the microcomputer is treated as a standard computer .

Molecutronic Scrambler: (1*/Mk.#) The bane of many an android and computer brain, the Molecutronic Scrambler creates a specifically tuned (random general electromagnetics have no effect on molecutronics) electromagnetic field which thoroughly disrupts the workings of molecutronics. The Mk.# of the Scrambler (which can only be as large as Mk.50) is used as the attack level on the *Resistance Roll Chart* (**Player Book**, pg.95). The defense level is equal to the *Computer Mk.#* for computer systems and robots, or the actual *Experience Level* of a target android. If the molecutronic target fails to resist the Scrambler, the computer "brain" is mutilated beyond all possible function and is rendered completely useless. In the case of Android failure, all mental stat potentials are reduced 1 for every point of failure.

On the other hand, if the "brain" resists the Molecutronic Scrambler's attack, it is in perfect working condition and may never again be affected by that particular Scrambler.
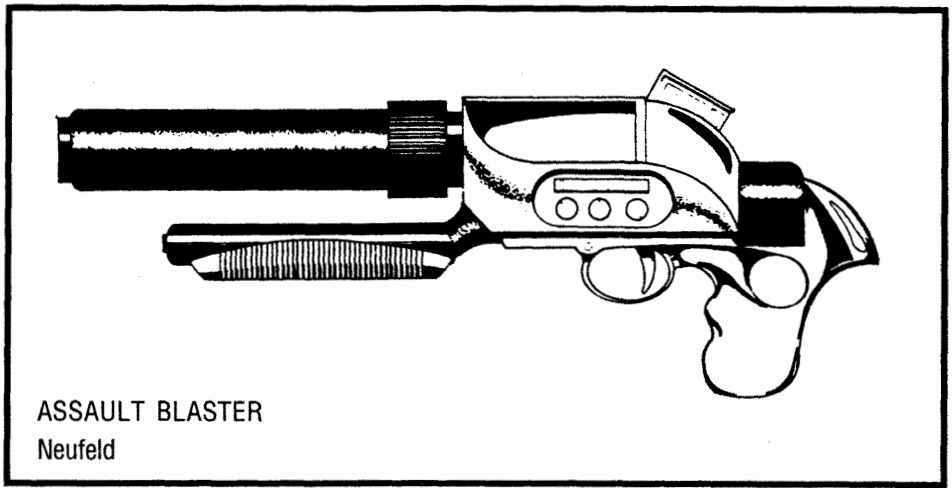
ASSAULT BLASTER
Neufeld

Small Scrambler units look like little boxes and can be hand-held. Larger units are shaped like long rods with malicious looking prongs on the end. Still larger units can be mounted into back slung packs. Molecutronic Scramblers are not ranged weapons; the disruption field generator must be placed right next to the target brain (1 cm/Mk#). If engaged in melee, the wielder of the Scrambler must make a successful maneuver to discharge it next to a robot or android brain in order to have any chance of success. Molecutronic Scramblers are banned on Jym-Bob 77.

Personal EW Generator: (‡) This is a belt-carried device which, when activated, cloaks the subject from scanning detection attempts. Specifically, there is a -50 modifier to all scanner rolls directed at the wearer which are intended to pick up life forms. Concentrated ship or installation sensors are at -30 to pick up the 'cloaked' wearer. The Generator will operate for 100 hours before its power supply is depleted. The Generator may not be used in conjunction with a personal shield of any type.

Pocket Communicator: (*) A small, palm-sized device designed for long-range audio communication (1000 km overland, or land to standard overhead orbit). It can be linked to a multiscanner to transmit coded information for more detailed shipboard analysis — though this is not 100% dependable (base — 01-02 roll indicates flawed transmission; may be worse dependent on conditions) over long distances, and can be time-consuming. The Pocket communicator has a wider range of frequencies than an earphone and has limited (25 hour) built-in recording capacity.

Poison Detector: (*) Using the principals of diffracted X-ray analysis, this small handheld device is capable of detecting many different types of poisons commonly used in food or drink. The Detector has "standard" diffraction *signatures* stored in its memory; these are used to make positive matches when poisons are present in the analyzed material. A special X-ray reflective plate must be placed under or behind the subject matter, and the Detector is then waved within 10 cm of the subject surface. Detection of standard poisons is automatic, with *Electrical Tech* rolls required for exotic toxins, or when the device is modified for expanded capabilities. A Detector can be used about 100 times before its power supply is depleted.

Psion Damping Gear: (4*) As developed by Fredrik Borg, this lightweight equipment takes the form of a headband, laced with dozens of superconductor filaments crisscrossing in a dome formation to make an open mesh skullcap. Each headband requires 4 energy cells to operate, and is triggered automatically when the wearer is the target of an attack Psion. Each time the wearer is attacked, the cap must make a resistance roll at 20th level. Failure by 01-50 results in energy cell exhaustion (1-4 of the cells are dead). Failure by 51-100 results in the device burning out — roll for damage/repairs (all but Fredrik would be at -50 to repair the devices); failure by more than 100 results in device burnout *and* failure to protect the wearer from the attack (in which case the wearer must make a RR on their own). The gear does *not* conceal the wearer from detection Psions, nor is it resistant to Psions which cause physical manifestations (such as Telekinesis or Energy Channels).

Note: such equipment is extremely rare and hard to acquire. The lightweight headgear above should be virtually unattainable at any price.

*Note: Success, failure or partial success for scanner use must be determined by the GM, based on a roll using the appropriate scanner skill. Section 21.2 of the **Player Book** discusses such static maneuvers and modifiers.*

Multiscanner: (†) An extremely useful device for explorer/adventurers, the multiscanner is the ultimate in portable analysis and detection instruments. Approx. 18 x 12 x 5 cm in size, the Multiscanner is often carried on a shoulder strap. Readout is via a 2-D screen set on one side of the device, just above the control surfaces. The device is capable of three separate types of scan/analysis, as well as recording scan information for future, more detailed analysis by an onboard ship or land-based computer. It is also capable of normal audio-video recording. Information is stored on standard memory disks, 4 cm in diameter and 7 mm. thick, each capable of holding 10 hours of continuous full-spectrum scan (about 100 megabytes) in molecular memory. There is storage space in the bottom of the scanner for four disks in addition to the reader receptacle further up. Below is a summary of the scans which can be performed:

• **Life Types:** Life form detection and distinction between animal and plant life can be made at a distance of 1000 meters. At 200 meters individual animal life units can be discerned, and at 50 meters the scanner can make distinctions between basic types (humanoid vs lizard or bear, for instance). More detailed information must be gleaned using a Medscanner.
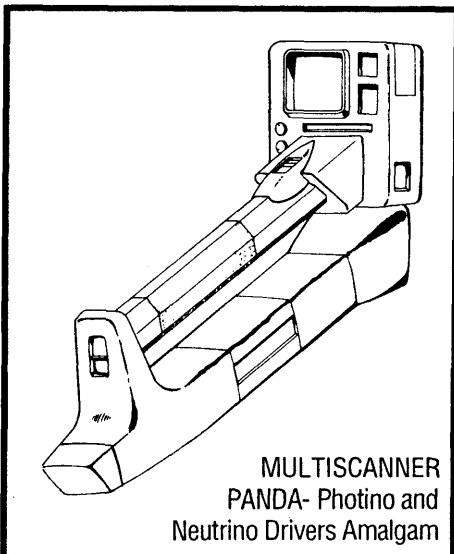
MULTISCANNER
PANDA- Photino and
Neutrino Drivers Amalgam

• **Power Emanations:** This scan reveals any form of radiation, running the full spectrum from gamma to infrared, automatically screening out the usual background radiations (unless programmed to do otherwise). This is useful in detecting transmission sources, as well as any sort of energy generator. Range varies tremendously depending on the power/transmission, but an activated scanner could pick up an unshielded pocket communicator beam at a range of about 100 meters, while it could detect a large, operating fusion reactor from as far as 10 km. At 1/10th of detection range (again, somewhat variable, dependent on conditions and skill of scanner operator) specifics can be made out (interception of transmission, exact location and type of power generation).

• **Physical Analysis:** By utilizing this setting, the operator may locate concentrations of a given substance — assuming the scanner already has in memory a previous scan or database readout of the substance with which to compare — of as little as one gram at 10 m. The progression is, conveniently, fairly even, so that a concentration of one kg. of an element may be found as far as 10,000 meters (10 km.) away.

Repair Scanner: (†) The Repair Scanner is the Technician's counterpart to the Medic's Medscanner or the Explorer's Multiscanner. Successful use of the Repair Scanner allows a Technician to determine the exact causes and effects of malfunctions or damage to mechanical, power, and electrical systems. It is largely dependant on circuit 'plans' (in Memory disks) with which to compare the ideal with actual circuitry status. At a range of 50 meters it will detect a disrupted circuit, and as range decreases it can pinpoint the problem. Repair scanners can act as an infra-plate, probing to a depth of 50 cm (though it does not mount to a surface and must be held), and can detect even minute electrical currents at a range of 100m.

Essentially the Repair scanner performs only the "Power Emanations" and "Physical Analysis" scanning functions:

• **Power Emanations:** This scan reveals any form of radiation , running the full spectrum from gamma to infrared, automatically screening out the usual background radiation (unless programmed to do otherwise). This is useful in detecting transmission sources, as well as any sort of energy generator.
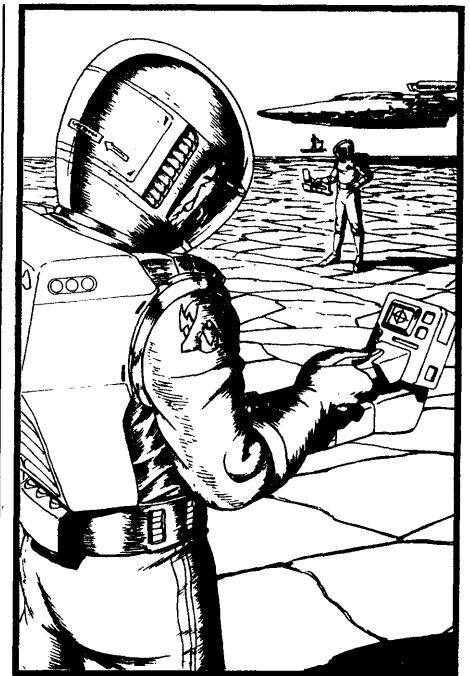
Range varies tremendously depending on the power/transmission, but an activated Repair scanner could pick up an unshielded pocket communicator beam at a range of about 300 meters (pick it up, but not listen in), while it could detect a large, operating fusion reactor as far away as 30 km. At 1/10 of detection range specifics can be made out (interception of transmission, exact location, output and size of reactor). The Repair scanner is able to trace power lines and circuitry, and — with a skilled operator — analyze flawed circuits as a prelude to repair. It can also analyze electronic locks as a prelude to defeating them.

• **Physical Analysis:** By utilizing this setting, the operator may locate concentrations of a given substance — assuming the scanner already has in memory a previous scan or database readout of the substance with which to compare — of as little as one gram at 10 meters. The progression is fairly even, so that a concentration of one kg. (1000 grams) of an element may be found as far away as 10,000 meters (10 kilometers). The Repair scanner also has fine tuning controls, allowing it to determine detailed interior structures of any object within 10 meters. This function is particularly useful to Crime Techs working in areas where there are mechanical locks and devices to be dealt with.

Tactical Scanner: (*) A much simpler version of the standard Multiscanner, the tactical scanner is the preferred tool by many military services. Multiscanner skill is still used, but all rolls are at +50, due to the simplicity of the unit. Success indicates an accurate scan within the unit's range. The Tactical Scanner has drawbacks, however: standard range is only 30 meters (360° scan) and the scanner only detects in two modes, motion and infrared. While capable of detecting in a vertical range 10 meters up and down, most users set the scanner for a more limited vertical field. It does not distinguish life forms, power sources, or perform any sort of analysis. It is strictly a tactical information tool; size of all objects is approximate. The Scanner is able to penetrate most normal physical objects (walls, bulkheads) and force fields, though the GM may wish to include a difficulty subtraction when trying to read through a number of obstacles. In appearance the scanner is a small unit, about 25 x 10 x 15 cm, with a luminous blue gridded display. It can be mounted to large weapons (such as plasma rifles) or hand-carried.

Signal Beacon: (*) A flat disk about the size of a Memory Disk, the beacon projects a very bright beam of red light as far as 10 km. in length. The touch-switch allows for binary code transmission. Total light duration on one power cell: 5 hours.

Ultra Goggles: Like the Lenses below, except these are less expensive, and reduce Perception by 20.

Ultra Lenses: These combine the features of Infra-red and Light Filter lenses. *Must* be custom-fitted (included in price).

Security Scanner: (2* or †) This is the term used for an entire class of hand-portable data retrieval devices especially designed to read coded information off of an Ident Disc (they are commonly referred to as "Ident Scanners" for this reason). These devices are standard-issue equipment for most law enforcement officers throughout the Imperial and Provincial territories, as well as security personnel who represent the more autonomous corporate concerns. Varying in size, weight, manufacturing cost and energy requirements from region to region, the average Security Scanner is held in one hand while the Ident Disk is passed over its sensorplate or inserted directly into a provided slot. Depending upon the Scanner's setting (see below), this will enable the user access to various types/levels of personal information (known as "tiers") on the disc's owner.

The average Security Scanner weighs .5 to 2 kilos, and requires 2 Energy Cells (2*) or an energy Cartiridge (†) to operate. They are not commercially available, although they are occasionally seen on the black market (SHEER FOLLY to find), where they can fetch prices ranging from 500 to 5000 Elmonits.

Use of a Security Scanner requires a Routine Crime Tech maneuver (a roll of 02 or lower indicates power failure or equipment breakage), and will reveal only such data as the Scanner is "set" to retrieve (all other data will appear as meaningless lines of characters across the small screen). All information encoded upon an Ident Disc is entered into one of three "tiers"; these are detailed below:

- **Tier One/Open Data:** Accessible to all known Security Scanners of Imperial or Provincial design, this tier contains all pertinent "non-sensitive" identification data (that which, for instance, might be examined by a prospective employer). Such information includes the owner's name, sex, origin and current place of residence, date of birth, hair and eye color, height and weight, profession and employer, and Imperial/Provincial awards or decorations received, and denotes any licenses or certifications possessed (to operate given classes of vehicles, to engage in various forms of commerce, to near certain sorts of weaponry, etc.)

- **Tier Two/Security Data:** Data on this tier is primarily for the use of local law enforcement agencies and VegaPol representatives. It includes the owners past arrest and conviction record, parole or probation information, physiological and medical notes (blood type, diseases, prescribed medication, etc), and known aliases or monikers. Another sort of record may be found/recorded on this tier; miscellaneous notes on psychological or biological idiosyncrasies of recommended procedures for the identification and handling of the individual, which are occasionally placed there by such persons as teachers, counselors, psychologists, physicians, wardens or enforcement officers to serve as an aid to other authorities should the need ever arise. Often referred to as "marks" or "tags", the presence fo such notes always indicates that the individual has undergone some sort of analysis, evaluation, incarceration or treatment which may have some effect on future behavior or require special consideration. Most citizens who bear tags do not know exactly what they say.

- **Tier Three/High Security Data:** Data entries on this tier differ from those on the first two in that they are doubly coded, and may only be easily retrieved by the organization which placed them there to begin with (or by an allied organization entrusted with the code). Most Ident Disks possess little or nothing in the way of high security data; the presence of such entries always indicates some sort of group affiliation (or suspicion thereof). Such items as one's military service record, Special Agent status, security clearance rating, and known or suspected ties to subversive or criminal groups would all be recorded here. Undercover field agents of various organizations may possess another type of mark; known as an "agency Recognize Release", this is basically an instruction to allied agencies that this individual is indeed a field operative and should not be obstructed or delayed. In the event that such an operative is arrested by an allied agency, the ARR serves as a "get out of jail card" — the agent is to be released immediately and responsibility (recognizance) assumed by the "mother group".

The encoding of information upon an Ident Disk requires a Laser Engraver and a Moderate Crime Tech Construction Project — this assumes that the engraver knows the appropriate code(s). Data on the first and second tiers is recorded in DODEC, translating into Anglaman, while high security data may be recorded in any number of different ways (depending upon the sophistication/authority of the encoding group).

A Security Scanner which is set to retrieve from tier two or three will also read data from the lower tiers. A Security Scanner capable of only retrieving up to tier two cannot even detect the presence of tier three data (just having tier three data makes you a suspicious character). All information on the disk will be represented on the Scanner's screen, even if it is not translated (rumor has it that the Imperial Intelligence Directorate possess an invisible Disc code and a fourth tier — there is probably no truth in these stories). Security Scanners may not be "reset" to read data from other tiers. As an additional security precaution, many agencies which issue Security Scanners have them attuned to the finger/voiceprint of the individual officers/representatives who carry them. This prevents them from being used should they somehow fall into "the wrong hands".

3.2

MEDICAL EQUIPMENT AND DRUGS

Note: *Use of the following equipment requires specialized training for full effectiveness. It is not normally issued to anyone who is not at least certified in First Aid, and even then most drugs and sophisticated equipment are restricted. It is suggested that the PC performing surgery make a roll for each tool/ operation. To knit major bones or arteries or perform other severe repairs, a laser scalpel will be necessary to access the damaged tissues.*

3.21 FIELD MEDICAL EQUIPMENT

Although generally not as complex to use effectively as Infirmary equipment, field medical devices should still be treated with respect. Each item has the difficulty modifier noted after the type of energy cell. Unless otherwise noted, Medical Practice or Medical Technics are required to utilize these devices (see the definitions of those skills in the **Player Book**).

Medical Scanner (†): (Medium [+0], use Medscanner skill) A device almost identical to the Multiscanner in appearance, its detection/analysis abilities are more specialized in the Life Signs field. Life form detection and distinction between animal and plant life can be made at a distance of 1000 meters. At 500 meters, individual animal life units can be discerned (within a given 50 m radius, after a scan) and within 100 meters the instrument will give information on basic animal types. Within 2 meters it can detect subtle racial differences and simple diagnostic analysis, such as detecting foreign matter in the target bloodstream, dangerous bacteria, etc. More accurate readings on an individual are possible if the Scanner has the person's Medhistory fed into it directly. (This can be transmitted via communicator tie-in or read off of a memory disk.) Note that the Medscanner does *not* provide treatment advice.

Diagnostic Computer (2*): (Extremely Hard [-30]) About twice the size of the Medscanner, this unit has a 200 megabyte internal storage capacity as well as memory disks, read/write ability, and space to store five extra disks. It is a sophisticated diagnostic device, capable of a detailed biomedical and psychologic analysis. It does *not* perform scanning functions; rather it reads data gleaned by a Medscanner and interprets it much more effectively than the scanner, including

TOP VIEW

SIDE VIEW

TISSUE KNITTER
Caeduceus
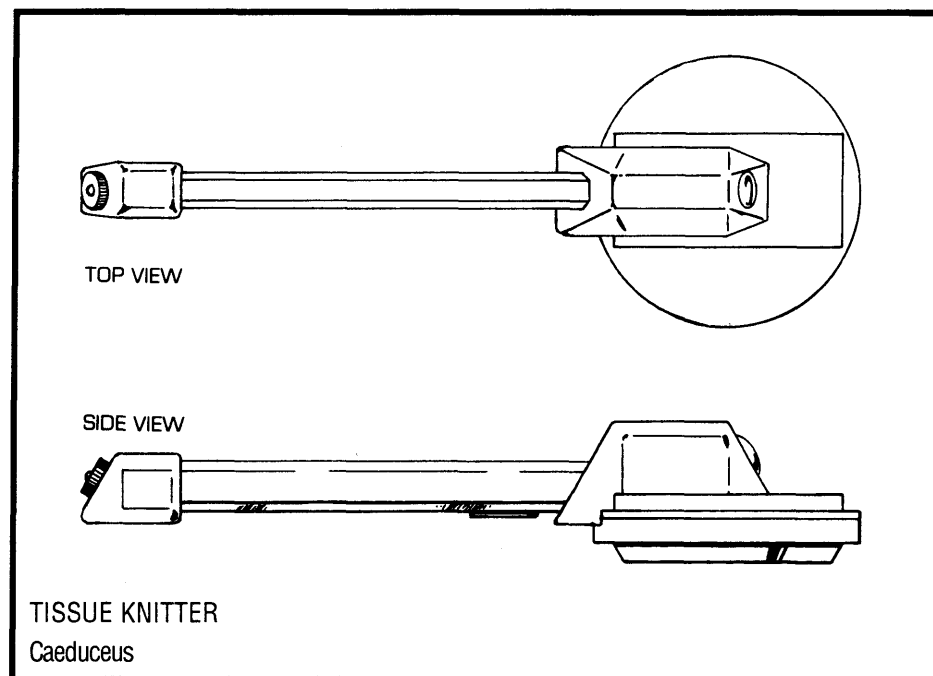
detailed treatment advice (something the Medscanner does not do). Once again, accurate readings are much easier if the computer has had a Medhistory of the patient previously input. An average complete Medhistory (including all previous scans and medical history) is kept on the patient's ident disc.

Dermal Closer (*): (Light [+10]) Releasing an energy wave which accelerates cell regeneration radically, the Closer is used for healing concussion hits at the rate of 1/ round while activated; also will heal bleeding wounds (max 5 hits/round in severity) at the rate of 1/round. The Sealer will also repair up to 2nd degree burns. One power cell in this unit will heal a total of 100 hits or hits/round. The device is roughly cylindrical, 2.5cm in diameter and 10cm long, and is operated by holding about 3cm above the affected area and activating.

Tissue Knitter (*): (Hard [-10]) Working on the same principle as the Dermal closer but more powerful, the Knitter is able to rejoin muscle, tendon and cartilage. Severe and complex injuries (such as shatters) are not recommended to be treated by field equipment, as the sophistication of these devices is limited. Tissues to be joined must be aligned somewhat. The Knitter is 3.5 cm in diameter and 12 long, with more complex controls (and so more skill required to operate). Repair time varies with complexity. The power cell will repair 4 specific wounds.

Regenergun (3*): (Hard [-10]) Will repair and regenerate any severity burns at the rate of approx 10 hits/minute. The 'gun' will also regenerate destroyed muscle,

cartilage, tendon and partial bone tissue, requiring about one hour for each regenerated part. The gun cannot re-grow complex tissues like organs. The patient is at -25 (for each regenergun treatment) for a period of 25 hours after the treatment. It will repair any three burned areas or three specific tissue damages before exhausting its cells.

Arterial Sealer (*): (Very Hard [-20]) Again, similar to the Knitter and Closer, this more specialized device will rejoin severed veins and arteries (maneuver required) and stop bleeding hits at the rate of 3/rnd. It is approximately the same size as the Dermal closer, though 2 cm longer. The power cell will repair 5 severed arteries or 50 bleeding hits, or any combination (3 arteries and 20 hits/rnd, for instance).

Laseknife (*): (Very Hard [-20]) Utilizing a focused laser scalpel, this device, though probably not a potential effective weapon, could be dangerous if used by the unskilled. The Laseknife is 6 cm long, 3 in diameter, the 'blade' end cone-shaped.

Preservation Unit (†): (Hard [-10]) This device keeps alive a patient whose body, for one reason or another, is incapable of self-support, and is beyond the capability of field medication. The unit is about the size of a small backpack, with several retractable wires and tubes, each fitted on the end with a cutaneous adhesion plate. (These plates work in a similar manner to medtabs, adhering to the skin and injecting medicines or taking samples through tiny, high-pressure infusions.) The entire setup, including patient, is placed in a special polymer bag (included).

Although the device can run for as long as 25 hours on the 3 power cells, and the cells may be exchanged indefinitely, the body is not as stable as it would be if held in a more sophisticated (and much more bulky) Medcomputer Stasis Unit, and the patient's condition could deteriorate if not attended to within 25 hours (roll a RR/hour for Stat decline after 25 hrs.

Instasplint: (Medium [+0]) An inflatable sleeve forty-five centimeters long which fits snugly over any limb, the instasplint immobilizes the limb and reduces the chances of additional injury. If the GM makes rolls to determine whether healing is 100% correct, use of an instasplint adds 70 to any roll.

Instacast: (Medium [+0]) More durable than an instasplint, the instacast is an adjustable, plastic sleeve which hardens when a catalytic solution is applied, creating a rigid but relatively comfortable 'cast'. Use of an instacast effectively halves the maneuver penalty for a broken limb. It is easily removed by the application of a softening solution. A tube of each solution is included with each instacast. If the GM makes rolls to determine whether healing is 100% correct, use of an instacast adds 90 to any roll.

Skeletal Field Knitter (3*): (Very Hard [-20]) The Skeletal Knitter is a field device akin to the *Tissue Knitter*, but it has a more specialized function. When successfully utilized, the three power cells of this Knitter are capable of repairing 6 sprains, or 3 breaks, or 1 shatter, or an appropriate combination of these bone/cartilage/tendon repairs. The subjects of Skeletal Knitting are physically drained by the process, so all actions for 25 hours following the bone repair are at -25%. This represents the recovery period.

Medtab Applicator (*): (Light [+10]) An oval, palm-sized instrument, the applicator adheres Medtabs to the patient's skin. Medtabs are the latest development in controlled medicine dispensing, and are sold (to qualified personnel) in 10-tab cartridges. A cartridge is fed into the Applicator; the dosage to be applied is set on the Applicator controls — based on Diagnostic Computer recommendation or skilled treatment decision based on Medscanner readout — and the device is pressed against the patient's skin (usually on a limb). A 1 cm disk sticks to the skin, and remains firmly adhered after the Applicator is removed. The 'Tab' infuses the medication over a safe period of time and falls off, fully spent.

Auto Tab Applicator: (Hard [-10]) (2*) This device can be attached to a person's upper arm or leg so that it will automatically dispense Med Tabs into the being's system at preset intervals. It has a 10 Tab Capacity. The Auto Tab Applicator is best attached and set by a person with *Medical Technic* skills.

Modifications of the Auto Tab Applicator are possible (as they are with any device). Certain modifications could allow automatic injections at the command of the wearer or under certain environmental conditions.

3.22 TABS

The following Tabs have a variety of uses; all of the non-healing Tabs have an *Addiction Factor* (noted as the **AF** after the drug name). If the drug is taken more frequently than 1x/10 days, the imbiber must resist addiction by making a successful Resistance Roll (RR). This is done by making a percentage roll (plus Constitution bonus, if applicable) which is above the Addiction Factor. Each successive time the drug is taken, still within 10 days, adds 20 to the Addiction Factor. "Addiction" can range from its losing its effectiveness (the most common result), to a dependance on the drug, to death.

MEDICINAL TABS

Alerlene: (AF: 10) Alerlene is a stimulant often used by military and paramilitary troops. Application of one tab allows the recipient to operate at full efficiency for a 25 hour period without rest. The drug is so safe, that several consecutive injections will allow extended wakefulness without detrimental effects. However, after use of Alerlene is discontinued, a sleep period must follow with 4 extra hours of sleep required for each consecutive 25 hour period that the person was kept awake with the drug.

Amboathorphin: (AF: 15) Amboathorphin is a universal nerve gas antidote for humans. Each applied tab will protect a person in a chemical warfare nerve gas environment for 25 hours. Victims who have succumbed to nerve gas in a previous combat round, and are miraculously still alive, can be treated with Amboathorphin in order to revive them. This would require an exceptional Medical Technics skill roll.

Anacept: (AF: 01) The result of centuries of biochemical research, Anacept is a 100% effective contraceptive. It is available in two forms; for males and females (the female version is more expensive and much longer lasting), and need not be used on a periodic basis. A dose of either variety must be taken at least fifteen minutes prior to sexual intercourse, and will render the user effectively sterile (males for 100 hours, females for twenty-seven days). It may be purchased over the counter by non-medical personnel on most Imperial Homeworlds. Recently, the manufacturers of this and other contraceptives and abortifacients have come under fire from several of the more fanatical religious groups which have been growing in popularity, making this a controversial issue.

Andeline: (AF: 10) Heals 30 concussion hits over the space of 6 rounds.

Andrex: (AF: 50) This chemical will normally increase concussion hit total by 50% and double the number of exhaustion points available to the character. The duration of the effect is 2 rounds per 5% failure of a RR made against a 20th Lvl attack.
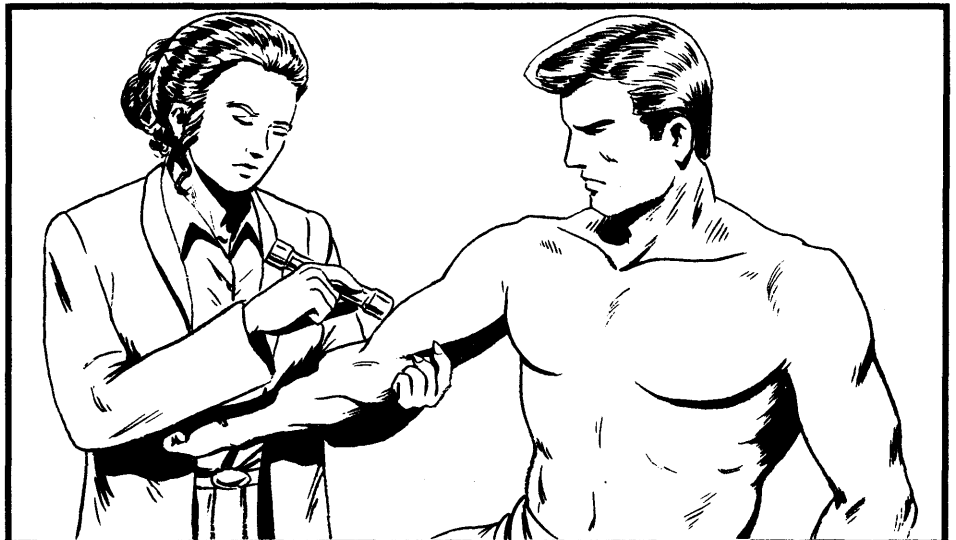
AntiRad I through V: (AF: 35) A highly effective antidote for radioactive poisoning, a dose of AntiRad remains active within the user's bloodstream for fifty hours, and reduces the level of any radiation critical then taken by the Mk. of the dose (An E crit versus AntiRad I becomes a D crit, versus AntiRad II a C crit, etc). AntiRad has a high Addiction Factor, due to the tolerance developed by many persons against normal doses. Usually the dose must be doubled if this tolerance develops.

Arelenex: (AF: 10) Available over-the-counter throughout the Empire, a dose of Arelenex completely relieves all symptoms of the common cold for twenty-five hours.

Decilage: (AF: 15) A micro-organism in Tab form with an incubation period of 31-60 minutes after it is introduced into the blood-stream. The M/O attacks and destroys ingested toxins and other M/O's which work on the digestive or circulatory system.

Doseline: (AF: 80) (Sedative variant) Causes immediate unconsciousness as Virlene, but certain sleep patterns are inhibited. User awakens after only 1/4 of normal sleep time, fully rested (including PPs) and can function as normal. (Addiction symptom: mental deterioration: -5 to permanent Reasoning, Intuition and Memory for every additional use/10 days when RR failed.)

Fir-Queline: (AF: 05) Heals 10 hits instantly.

Hemoflux: (AF: 20) (Specific Stimulant): Acts on the spleen and liver, causing greatly accelerated blood production — enough to completely replace blood supply within 2 hours. Patient must at all times still have the normal minimal amount of blood to remain alive. Patient must be kept hydrated and will be at -25 for 25 hours after taking this drug.

Hyravol: (AF: 25) This drug counters the side effects which often accompany Hyper Space travel. Anyone suffering from nausea or disorientation after a hyper-shunt (GM's discretion) can be cured with a shot of Hyravol

Interferon IV: (AF: 10) (Antiviral) The latest synthetic version. Immediately after administered the patient is allowed a new RR at +100. If it is successful, complete recovery is achieved within one hour. If not, the patient may make another roll at +100 after every hour until successful, or six tries are made, whichever comes first. If all should fail, one can receive the drug and try again after one full day (though the drug is at an additional -10 for every successive use vs the same virus).

Jirolene: (AF: 70) (Stimulant) Aids wakefulness; adds 20 to Perception and related alertness rolls. Prolonged use (75 hours without a full rest period) causes a deterioration of all stat bonuses at the rate of 5 pts/hr, until a full rest is taken.

Korteline: (AF: 20) Relieves 1-10 accumulated stun-rounds.

Luryadrenaline: (AF: 5) (System Stimulant) used to revive patient from stasis in a portable preservation unit.

Perserverine compound: (AF:70) A highly effective pain-killer used often by military physicians. Although it does not heal any concussion points of damage, Perserverine greatly reduces the user's sensitivity to any pain for a period of six hours. In game terms, this drug lowers the "Shock & Pain" modifier by one step (i.e.; a character who has taken from 51% to 75% of his total concussion hits may act as if only 25% to 50% have been taken — reducing the maneuver penalty from -20 to -10, etc). This adjustment also applies to the exhaustion point expenditure modifiers. One very dangerous aspect of this drug is its high addiction factor. Any character who rolls such a result must succeed in a very hard (-20) static maneuver modified by Self Discipline. It the total achieved on this roll exceeds 100, the dosage will have to be doubled the next time Perserverine is taken. It the total is 100 or lower, the character is physically dependent on the drug, and will feel hopeless and in pain whenever denied its effects. Such characters will suffer a -20 on all maneuvers attempted during withdrawal. This penalty will continue to apply until withdrawal is complete — usually from three to thirty days later.

Quedella Phi: (AF: 0) Not a chemical drug, but actually a micro-organism held within the Tab; a Quedella Phi Tab allows a human to digest rough cellulose for a week. This is a great survival boon for explorers on undeveloped worlds that are sparse in readily edible vegetable food.

Rebillis: (AF: 20) Allows character to "see into his future" (5 minutes only). He must make a RR against a 5th Lvl attack; if it is successful the vision is clear, if failed, the vision takes the form of a hazy hallucination.

Regenex III: (AF: 0) (regenerate limb) A very expensive drug, it allows the regeneration of lost body parts. It is also time-consuming, for the full re-growth of a finger will take as long as 20 Standard Days; an arm or leg 100 to 150 Days. The limb is a perfect reconstruction, however; identical to the original.

Stirene: (AF: 10) (antibiotic) Extremely useful in fighting most bacterial infections. Although full recovery usually takes 24 hours, only one Stirene-aided RR is made, at +100. If the patient fails this roll (and the GM should keep this secret for two hours, which is how long it takes before even a skilled and well-equipped physician could determine whether the drug was taking effect) more extreme measures need to be taken. Addiction here usually means that the drug becomes ineffective.

Teledrine: (AF: 20) A difficult drug to obtain (sheer folly (-50) on most Imperial worlds), and totally illegal in some Provinces, Teledrine somehow increases the effectiveness of psionic endeavors by Telepaths and Semi-Telepaths. It is occasionally used by the Truthsibyls of the Galactic Court of Humanity. The user must succeed in a static maneuver roll modified by Intuition and +30 in order for the dose to have any effect whatsoever. If the total is higher than 100, the user will receive a modifier of +30 on all Psionic attacks and resistance rolls for the next hour. Taking more than one dose will increase the duration of the effect, but not the modifier. Should a patient become 'addicted', the dosage must be doubled.

Thiagorex III: (AF: 15) Available over the counter throughout the Empire, Thiagorex III completely relieves headaches and minor muscle tension. Should a patient become 'addicted', the dosage must be doubled. A critically low roll (of 05 or lower) indicates either total tolerance to the drug (i.e., it will never have any effect on the character) or some kind of allergic reaction.

Torethene: (AF: 10) Heals 100 concussion hits over the space of 12 rounds.

Triadrenaline: (AF: 80) (Heavy Stimulant) A very powerful, short term stimulant, Triadrenaline acts to 'haste' the user for 4 rounds.

Tyreline: (AF: 100) (lifekeeping) Strictly an emergency drug, it is used when even a portable Preservation Unit is unavailable. The instant the Tab is applied, the patient's body is chemically 'frozen' and will not deteriorate. Brain oxygen requirements are minimized, so that 'death' does not occur. This condition can be allowed to continue for a maximum of one hour before the brain begins to deteriorate. If a preservation unit or (preferably) a Medcomputer Stasis Unit is reached before this time, however, a dose of Luryadrenaline must be applied to cancel the Tyreline, and the patient must roll above (100 — his Co) or die, his body unable to take the shock.

Verex Compound: (AF: 25) A universal poison antidote, it allows the patient an additional RR at +100.

Virlene: (AF: 30) (Heavy Sedative) Causes immediate unconsciousness for 2-4 hours.

Yuthix: (AF:100 — if taken more frequently than once per year) Stops the aging process in most humanoids. One dose a year is effective, but if it is used more than once per 350 days, severe organ damage and usually death result.

UNMONITORED/RECREATIONAL TABS

Gorteline: (AF: 50) (recreational stimulant) Lasting about an hour, Gorteline produces a euphoric effect similar to — though somewhat more intense than — the drug Cocaine.

Mertinel: (AF: 0) (suppresses hair growth) Usually taken by men who don't want to bother with a beard and are unwilling to deal with permanent beard irradication. The drug alters certain hormonal levels, retarding beard growth for 100 days.

Myrine: (AF: 10) (sense enhancement) Expands vision slightly into infra-red and ultraviolet realms; allows user to view other light waves. Useful for night travel where infra-red vision would be an aid. Unfortunately, anyone under the influence of the drug outdoors in full sunlight is virtually blind without goggles. Duration: 2 hours.

Siradrel: (AF: 20) (mind stimulant).

Urlene: (AF: 80) (hallucinogen).

3.23 INFIRMARY EQUIPMENT

Note: All infirmary surgical equipment assumes use in tandem with a scanner bed. These instruments are relatively ineffective (and can be dangerous) when used without support diagnostic equipment. Such instruments also operate using beamed power from a nearby transmitter tied in to the ship or building power reactor. Surgery with these devices without a scanner bed should be at an additional -30 penalty. However, successful surgery with this equipment takes but a quarter of the time to heal, always heals properly without scarring.

Scanner Bed: A sophisticated infirmary device, shaped somewhat like a large bed with a full size display mounted above along one side. The scanner bed continuously monitors all vital signs of the patient, and signalling if there is any change. It is also capable of detailed sensor scans, and magnifying specific body parts. It is an invaluable tool.

Surgical Dermal Closer: (Medium [+0]) This device is capable of healing 5 concussion hits per round.
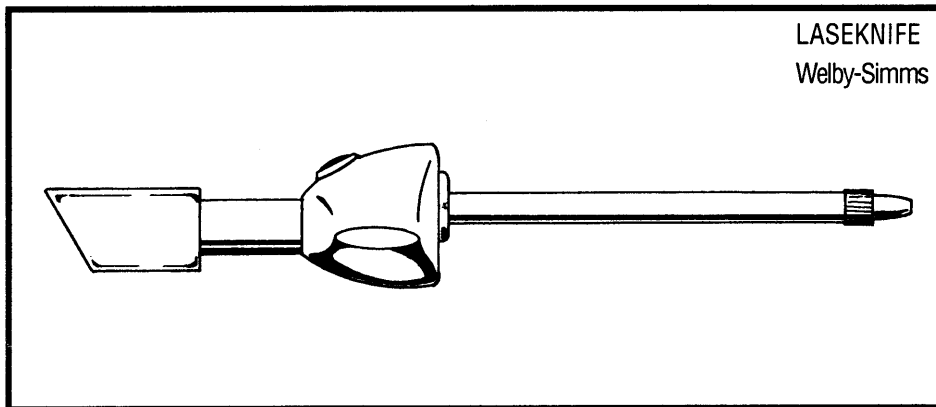
Surgical Tissue Knitter: (Hard [-10]) Can heal torn (but not destroyed) muscle, tendon and cartilage, and any bone breaks — including shatters.

Surgical Regenergun: (Very Hard [-20]) The most powerful of the Surgical instruments, the Regenergun is actually several different devices, one each for burns, muscle, cartilage, bone, and organs. A surgical gun heals burns up to 5 hits/rnd, a single complete muscle or cartilage structure in 10 minutes, and one bone in 10-200 minutes (variable with size). Each requires considerable skill to operate.

Surgical Arterial Sealer: (Hard [-10]) A specialized device, it will repair arterial and venous tissues, reducing bleeding rates by as much as 10 hits/rnd (max one bleeding wound per round).

Laser Scalpel: (Very Hard [-20]) An indispensable surgical tool, it is necessary to cut away tissue to get at damaged bones and organs, often used in concert with the above devices.

Medical Function Bed: ("Medbed") The ultimate device for exploration parties without a skilled medical official (but a lot of money), the Medbed is a large machine (1.5 x 2.5 x 2 meters) resembling a bulky glass-lidded coffin on a solid pedestal. It has a built-in Mk. 20 computer, with sophisticated Surgical programs and general physiological data for all known sentient races. It must be certified and periodically checked by qualified government personnel, because it is, in essence, a surgeon. It is equipped with all of the infirmary equipment listed above, and is also capable of administering Medtabs, depending on its available supply. The Medbed has a 500 tab storage capacity, and can provide an instant readout of its current inventory.

The Medbed is a scanner bed and a diagnostic computer which, once activated by the presence of a body inside, will perform whatever actions it deems necessary to return the occupant to full normal operating status. A preliminary scan is performed to determine whether the occupant is near death — and immediate preventative action is taken if necessary. In very serious cases, the Medbed will place the occupant in stasis. Medbed stasis is much safer, sustainable indefinitely, and involves only a 1% chance of stat decline when the patient is revived. After the patient is stabilized, the Medbed proceeds with additional repairs.

This rather expensive device also requires specific data to function properly. With a complete medical profile of the patient (available on his ident disc), it acts with a Medical Practice skill of +100; with only its standard programs it is +70 (no specific penalties for the various instruments are employed).

Medstasis Bed: Essentially a cryogenic berth with monitoring devices and a small computer to assure that the occupant's more fragile lifesigns are maintained.

3.24 PROSTHETICS

The science of prosthetics has become quite advanced, to the point where artificial limbs indistinguishable from the real thing can be fitted within a matter of few days. The limb has sensory contacts like nerve endings. This lack of time delay is the major advantage over regeneration. The limb is usually powered by an ultra-microfusion reactor (normally lasts 1 year without maintenance). Super-powerful limbs were soon discarded as dangerous, since use of them invariably caused a strain on connective tissues and other body parts. They were only useful for acts involving the limb itself, for instance a super-powerful hand could crush things within itself. The prosthetic limb does have the advantage of being more durable and resistant to heat, cold, and physical abuse.

3.3
DATA STORAGE AND RETRIEVAL

Audio Disks: 2cm diameter molecular storage discs, they can hold up to 20 hours of audio recording each. Due to the nature of the storage, near-instantaneous reference to any data area is possible.

Holocamera: (*) Able to record still or motion holographic pictures (with sound, if desired) on a hologlass plate (see Hologlass below). The camera is 10 cm x 5 cm x 7 cm and has twin lenses.

Hologlass: 5 x 5 x 1cm transparent glassteel square, a rectangle of metal mounted on one edge and an identifying label on the opposite edge. These small squares receive digitalized laser images, which can be stored at a very high density on their special crystalline interiors. Hologlass storage is permanent; the images cannot be altered without destroying the square, which is very resilient.

Holoviewer: (*) Basically the same device as the Memory Disk viewer, though less expensive. Adapter modules are available to convert from one to the other.

Memory Disk Viewer (portable): (*) Slightly larger than a standard multiscanner, the viewer has a larger screen (12 x 12 cm) covering nearly all of one face. This black, glassteel plate can either display text information on its surface or generate a 3-D holographic image above or behind the screen. This image can be freely rotated — assuming a full 360° scan of the original was performed).

Memory disks: For use with standard audio/visual playback and record devices. Each disk holds up to 100 hours of digitalized holovideo recording or 100 megabytes of coded data. They are 3cm in diameter and 5mm thick.

Memory Recorder: (*) About the size of a pack of cigarettes, the Recorder makes standard 3-D video and stereoaudio (within the limits of its sensors) recordings. It uses standard memory disks.

Recorder (audio): (*) Useful when only an audio recording is necessary, this 10 cm long, 3 cm diameter cylinder is capable of limited stereo recording via microphones at each end. Audio disks (useable only with this type of recorder) 2cm in diameter fit into a slot in the shaft. Touch controls modify volume, etc. The recorder is capable of playback, through the speaker/ mikes. A tiny readout on the side displays 'location' in storage area.

Viewer With Enhance: (*) Similar to the Holoviewer, this handy device is capable of 'enhancing' images encoded on the hologlass (this is only possible with the sophisticated digital laser recording done on a hologlass) many times, bringing into focus minute details previously too small to discern. Images may be enhanced up to 1000x.

3.4
CLOTHING

Naturally the prices given are but a base, and clothing costs can range dramatically, especially when high-fashion items, or custom-made items, are involved.

GENERAL CLOTHING EXAMPLES

Dress Clothing: Generally evening wear, more elaborate and less durable than leisure clothing.

Dress Footwear: To complement appropriate dress clothing.

Leisure Clothing: Daywear, activewear.

Leisure Footwear: More rugged, general-use shoes or boots.

Uniform: Often a one-piece coverall, this is the basic version of most military uniforms, including accoutrements and footwear (but no equipment).

Dress Uniform: A more elaborate version of the above, for state occasions, formal receptions, etc.

Light Jacket: General-purpose garment for cool weather.

Thermal Jacket: (*) A lightweight jacket with a built-in heating unit. It has detachable gloves and hood.

Thermal Suit: (*) This full-body suit uses two power cells, has a hood, foot and hand coverings, and a goggled mask shielding the face. The suit can keep a man warm in temperatures to -100° or cool up to +150° for as long as 100 hours with one power cell set. The suit is not equipped to be sealed against the atmosphere, but does have a filter for warming or cooling breathing air to reasonable temperatures.

SPECIFIC IMPERIAL MILIEU CLOTHING

The items in this section are examples form the *Space Master* Imperial Milieu to provide the GM with some pricing and clothing ideas. They are sometimes specific examples from the height of fashion.

Karolinian Seal Thigh-boots: The thick white fur of these aquatic mammals and the chamois-soft hide combine to make these incredibly comfortable boots a luxury accoutrement all across the Empire.

Kashmere Dress Toga: An elaborate garment bearing little resemblance to the simple tunics worn on a day-to-day basis on Olympus, this toga nearly sweeps the floor in many folds of cloth (the best are made from Oberon Moonmoth silk). Trimmed with precious-metal thread, they are indeed a work of art.

Shimmersheer Gown: The favored evening attire at any provincial court function, shimmersheer silk ripples in rainbow colors and even becomes semi-transparent. the material is also used to make tunics and shirts, but a gown of the cloth is every noblewoman's goal.

Static Cloak: Powered by a micro solar cell, a static cloak repels moisture using static electricity, forming a charge on the cloak exterior.

Trueleather Pants: In this distant future, to call a material 'leather' is not enough. The genuine article is priceless and now goes by the name *true* leather. Such pants are custom made.

Urkusk Mink Coat: The ultimate fur pelts come from the minks of the Kubischev-Lloyd capital planet; it has shimmering golden fur which brings an incredible price on interstellar trade markets.

Velaise Bodysuit: A skintight body suit covering all but the hands, feet and head, the velaise suit is surprisingly comfortable, being a material which breathes yet insulates against temperature extremes. It is made in a wide variety of colors, and other garments such as pants and tops are available separately. Velaise itself resembles an advanced lycra-like material.

3.5

ARMOR AND SHIELDS

Below are various types armor, shields, and accoutrements.

3.51 ARMOR

Armor is the basic protective material which covers the body. It is divided into five categories of four types each, thus there are 20 Armor Types (AT) represented in *Space Master*. For those players familiar with *Rolemaster*, the 20 *Space Master* ATs closely approximate those found in RM, and one will note that the standard progressions of "toughness" and "body covering" are followed here. Below are listed the 20 *Space Master* ATs with accompanying descriptions.

CLOTH-SKIN BASE

This category encompasses normal cloth attire, robes, unarmored environmental suits and normal animal hides.

Skin (AT 1): Normal clothing, assumed worn if other covering is not specified.

Robes/Environmental Suit (AT 2): Encumbering full-length ceremonial robes or non-armored environmental suiting.

Light Hide (AT 3): The natural hide of certain animals (e.g., deer, dog, wolf and the like).

Heavy Hide (AT 4): The skin of androids, and the natural hide of certain animals (e.g., buffalo, elephant, bear and the like).

LIGHT BODY ARMOR

This category encompasses pliable, lightweight ballistic cloths and alloys. References to "kevlar" assume an advanced material with superior puncture resistance, while "duralloy" is the name given to any number of soft armors which become rigid when struck by a considerable force.

LBA Flak Vest (AT 5): A heavy quilt or kevlar vest covering the back, torso and abdomen.

LBA Extended Flak Vest (AT 6): A heavy quilt or kevlar vest which extends down the arms and to mid-thigh.

LBA Reinforced Flak Vest (AT 7): An Extended Flak Vest with duralloy plates sewn in for added protection.

LBA Reinforced Flak Armor (AT 8): A full suit of duralloy-reinforced kevlar, covering the body from the collar to the lower legs. Padding protects the joints and groin.

PLIABLE ARMORED BODYSUITS

This category encompasses environmentally secure bodysuits of flexible but resilient cloth covered with laminated, yet somewhat pliable, armor pieces. The armored sections are typically made of duralloys layered with battleplastics.

When a compatible helmet and life support system are added to the armor types of this category, the wearer may be totally immune to hostile environments (such as hard vacuum). This category also includes the rigid hide coverings of certain animals.

ABS Pliable Breastplate (AT 9): An environmental bodysuit mated with a soft-armored breastplate which covers the back, torso and abdomen. There may also be shoulder/upper arm and thigh armor.

ABS Pliable Breastplate & Greaves (AT 10): An environmental bodysuit covered with a soft-armored breastplate, as well as arm and leg greaves. The greaves typically cover the outer forearms, thighs and shins.

ABS Pliable Half Plate (AT 11): An environmental bodysuit coupled with soft-armored plates which cover the torso, back, abdomen, arms, and the fronts and backs of the legs. Also, the hides of certain creatures that contain at least a few rigid plates (e.g., rhinoceros, alligator, and the like).

ABS Pliable Full Plate (AT 12): An environmental bodysuit covered with soft-armored plates. Additional areas protected include the neck, groin, buttocks, hands and feet. Many joints remain exposed however. Also, the hides of creatures which contain many rigid plates (e.g., turtles, crabs, certain alien beasts, and the like).

MESH ARMORED BODYSUITS

This category encompasses environmentally secure bodysuits of non-constricting and resilient cloths, covered with mesh armor to various degrees. Mesh armor is a flexible covering of plasteels and synthi-armors woven so as to give optimum mobility for the considerable protection they impart to the wearer. When these armor types are coupled with a compatible helmet and life support system, the wearer may be immune to hostile environments (like hard vaccuum).

ABS Mesh Shirt (AT 13): An environmental bodysuit mated with a mesh armor shirt which covers the torso to the mid-thigh, back, and half of the upper arms.

ABS Mesh Shirt & Greaves (AT 14): An environmental bodysuit and mesh armor shirt coupled with arm and shin greaves. Greaves may be of mesh or battleplastics.

ABS Full Mesh (AT 15): An environmental bodysuit under mesh armor which covers most of the body in the form of a shirt and leggings.

ABS Battle Mesh (AT 16): An environmental bodysuit covered completely by reinforced mesh armor. Extra padding, in the form of cushioned duralloys and/or battleplastics protect the groin and joints.

ARMORED EXOSKELETONS

This category encompasses advanced battle armor, the toughest protection available to combatants short of Powered Armor. Exoskeletons are hard integrated plates which can deflect many attacks which would otherwise cleave through lesser armor types. Exoskeleton armor is typically a fused amalgam of hardened duralloys, ceramic plates, and battleplastics, formed soas to allow maximum maneuverability. The last two armor types in this category may be sealed against the environment as they have integral helms and life support systems.

AEX Exoskeleton Breastplate (AT 17): An exoskeletal breastplate with auxiliary plates covering the back, upper arms, abdomen and upper thighs.

AEX Exoskeleton Breastplate And Greaves (AT 18): An exoskeletal breastplate with auxiliary plates. This armor type includes greaves of hardened battleplastics which protect the forearms and shins.

AEX Half Exoskeleton (AT 19): A rigid exoskeletal armor covering most of the body. An undersuiting of mesh and resilient cloths protect exposed areas (such as the neck, groin, joints, and backs of the legs).

AEX Full Armored Exoskeleton (AT 20): A rigid exoskeletal armor which covers the entire body. Plates may overlap at the joints, imparting complete combat integrity.

3.52 SHIELDS

All four shields described below function in basically the same manner, although the range of protection may vary. In the most advanced version, the shield is worn as a lightweight belt device (several small, cigarette-case sized modules affixed to a belt). One of the modules is the shield power pack. When the device is activated it covers the body and accoutrements of the wearer (the focus) with a halo of energy, usually faintly visible as a shimmering aura — quite noticeable in darkness. It should also be noted that persons wearing activated shields are much more easy to pick up on multiscanner and sensor probes because of the energy output.

The shield forms about 2-3 cms away from the wearer's body, reacting to the surfaces like an electro-static charge. At the feet the shield dissipates out for a few inches over the floor where they touch. The shield will, however, only spread to envelop about 1/10th of a cubic meter beyond the volume of the wearer's body (himself, normal clothing, a small pack and a few weapons) without suffering dispersal. When dispersal occurs (and the GM should be alert for the potential of this to prevent PC abuse of shields) all normal subtractions of the shield are halved, and the shield energy cell has a 5% every round of going dead due to overload. This situation is applicable to volumes up to the equivalent of the wearer's unclothed body. The living flesh of the wearer is the basis for the field, though the shield's internal computer is capable of limited compensation. Shield computers are preset to the general parameters of the owner when bought, and complex to reprogram. The shield simply will not attempt to spread over a larger area than that, because of its microcomputer programming. If, when the shield is activated the shield computer realizes that too much volume is involved — volume even beyond dispersal — it overrides and will not activate. Any objects added after the shield is fully activated have no effect. The shield compresses to the surface it has formed over, leaving the new, added volume outside. A shield will, under no circumstances, spread to envelop another living being, even if the wearer attempts to embrace that being then activate his shield. The shield will simply ignore the other focus.

With the shields' spreading tendency, the natural question arises: how does one fire a weapon while wearing a shield without suffering the subtraction as the projectile/beam attempts to punch through
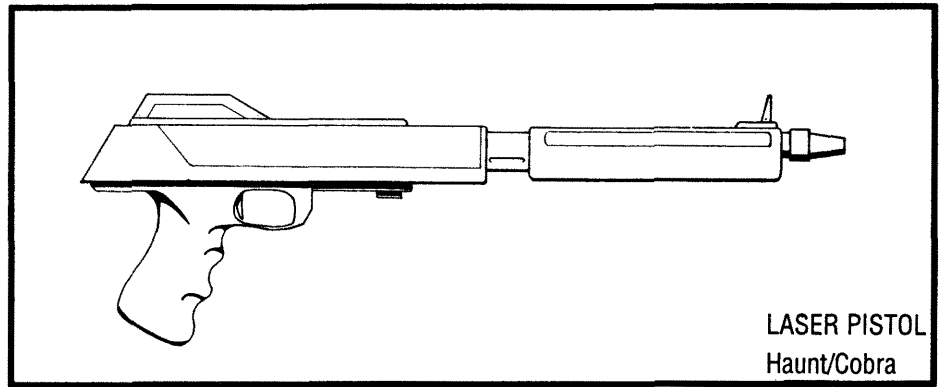
the attacker's own shield? This is, in fact, relatively easily accomplished (for those using projectile or energy weapons) with a device known as a dissipater. The dissipater is affixed to the end of the weapon barrel and acts to prevent the shield from trying to close over the end of the barrel. Interestingly, if one is armed with a weapon equipped with a dissipater and can get close enough to an opponent who is wearing a shield, he can push the barrel through the target's shield (the barrel tip must get within one inch of the opponent, truly point-blank) and annul its effects for that shot. Projectile mounted dissipation devices have been experimented with, but even *Space Master* technology is currently not up to them.

Cruder, more bulky shield models are most often worn on the back or chest, or as a suitlike garment covering the entire body. Belt weight: 3.5 kg; back/chest weight: 8 kg.

All shields require 3 full rounds after being activated to spread and establish themselves fully. Conversely, after being deactivated they require three full rounds to dissipate.

Only one shield can be operated from one focus at any given time. Though more than one could theoretically be worn, (watch encumbrances, GMs!) attempting to have both operational around the same focus at the same time will short them out (Extremely Severe malfunction).

Any two shields centered about different foci which come into contact will either ignore (in the case of a Velocity Shield) or repel each other, compressing closer to the surface they surround. This effect is not strong enough to push or otherwise bother the wearers.

Shield wearer advantage is given as a DB (listed as a subtraction); this allows combined use of shields and armor. Keep in mind that, unless the armor is equipped with a conduction grid (like spaceships with shields; all powered armor is equipped with such a grid) to properly

spread the shield, it is treated as additional volume. Note the distinction between 'missiles' and 'projectiles'. These are arbitrary term, missile being used to mean arrows, quarrels and any thrown, relatively low-velocity airborne attack, as opposed to projectiles, which are fired from a gun and have a relatively high velocity.

REGARDING SHIELD POWER USAGE

Each power pack, when fully charged, has 100 energy points. Activating the shield costs five points, and each round the shield is on drains one point. In addition, each time the shield is activated, the wearer must make an unmodified, non-open ended roll. A result of 01-03 indicates that the cell is completely dead and requires recharging. This occurs despite the power level of the cell, due to the initial immense power drain of setting up the shield. A result of 04-05 indicates a shield malfunction, and one must roll severity (1D10: 1-5: Routine; 6: Light; 7: Moderate; 8: Severe; 9: Very Severe; 10: Extremely Severe.

SHIELD TYPES

Velocity Shield : (‡) Works basically on the principle that the faster something approaches, the more resistance the shield generates. Wearer is essentially -30 vs. all regular melee attacks; -45 vs missile; -60 vs projectiles (due to greater velocity). This shield is extremely effective against projectile weapons, but useless against energy weapons, as the beam has virtually no mass to resist. An option with the Velocity Shield is a *wrist collector*, a device worn about the lower arm, and attached to the main shield belt via a light cable. The *collector* affects the shield aura in such a manner that the shield's deflective energy is concentrated more at the front of the wearer (or wherever the arm is held) much like a version of ancient physical shields. The effect adds 25 to all frontal DBs (-55 vs melee, -70 vs missile, -85 vs projectiles), however, it reduces the DB on all other facings by 20 (-10 vs melee, -25 vs missile, -30 vs projectiles).

LASER PISTOL
Haunt/Cobra

Deflector Shield: (‡) Creating a different sort of field than the Velocity Shield, this shield is very effective against energy weapons, somewhat useful against fast projectiles, but almost useless against missile and melee weapons. It uses the very energy of the incoming attack to deflect, or alter its course. It is useful against energy waves as well as material objects, if their kinetic energy is high enough. Wearer is -60 vs energy attacks, -40 vs projectiles, -15 vs Missile, -5 vs Melee.

Absorption Shield: (‡) Although useful against all forms of attack, this shield is not as effective as A or B in either. It acts to absorb and dissipate over its surface the energy of an incoming object, thus slowing (or even stopping) it. Wearer is -30 against all forms of attack.

Barrier Shield: (2‡) Able to generate a very powerful field of energy about the wearer, this is the most impressive of the four, and requires a portable reactor rather than a standard power pack (though the reactor should be treated the same as the power pack for energy drain and overload possibilities — see below). It is correspondingly bulkier and more expensive. It does, however, effectively stop all but the most determined energy weapon attacks (wearer at -90). The shield stops material objects by deflecting, or if they are moving fast enough, destroying them. Projectiles are usually completely vaporized before reaching the target. For missile and projectile attacks, treat wearer as -70; missile destroyed in the shot if stopped (unless the missile is some special material or item, in which case the GM may wish to give it a RR). For melee, treat wearer as -60; and roll a RR for the attacking weapon after each strike or attempted strike. If a metal weapon is used, wielder takes 1-10 hits during each strike, as power feedback is channeled down the weapon.

3.53 OTHER PROTECTIONS

Antipsi Helmet: (4*) A complicated and rather bulky gadget, the Antipsi helmet is available in many basic styles and with varying strengths. The Mk.# of the helmet determines its cost as well as its effectiveness, since this number is added to the user's experience level. This adjusted level is the wearer's experience level whenever a resistance roll is made versus any Psion.

Note: such equipment is extremely rare and difficult to acquire.

Riot Shield: (†) A small frontal version of the absorption shield which is worn on one forearm, the riot shield is used by law enforcement agencies on many Imperial worlds. Once activated, the shield takes a full round to actualize, forming a slightly concave disc about one meter in diameter. This transparent disc of light shimmers and hums softly, otherwise looking like a normal "left-hand shield" of old. The wearer may parry (using his DB) only one attack per round, and must be able to interpose the shield (i.e., the shield cannot stop an attack from behind). The GM may wish to allow the wearer a maneuver roll to parry flank attacks. Otherwise, the Defensive bonuses for the riot shield are the same as a standard absorption shield. Note that attacks coming around the shield (rather than through it) do not require a dissipater.

Sentinel Helmet: (†) Manufactured by Kodo Industries of Clan Detzeer, the Sentinel Helmet combines the best aspects of several familiar devices into one unit. Functions include: an ultraview faceplate (infrared and light-filtering), a filtered compressor unit, a variable headset rangefinder, and a two-way microfrequency band communicator with a range of up to one kilometer.

3.6 ▮▮▮▮▮▮
TOOLS

Laser Cutter/Welder: (†) A device consisting of a handle with a 13 cm long, slender (1 cm in diameter at the widest point) cone. A dial on the base of the handle controls width and intensity of the pinpoint laser beam, which can be used to either cut through thin material or fuse circuits. Though fairly powerful, it is not very practical as a weapon since the beam focuses about 1-5 cm from the tip of the cone.

Heavy Cutter/Welder: (‡) The heavy-duty version of the laser above, this device is more powerful: it will burn through an inch of alloyed steel in moments, able to cut a 1 meter diameter hole in a standard ships interior door in 15 seconds. The beam can be set for up to 30 cm of focus length, but is most effective at about 5 cm. It is also able to weld (useful for welding doors shut when Snee are coming down the hall).

Standard Tools: An assortment of lightweight alloy wrenches and other tools capable of performing normal mechanical repairs.

Molec Boards: The basis of modern circuitry, Molec boards are 10 cm square laminated sheets of transparent plastic with conductive and superconductive materials in the middle layers. The conductive material is electrically moved about on a molecular level to form the complex micro-circuitry used in most electronics. These sheets plug in along one edge to receptacles which tie the device together. The boards in this repair kit are blank, ready to be etched. An Etcher is, of course, necessary .

Infra-plate: (*) A 10 cm square, 1 cm thick plate of glassteel framed with a black alloy. The controls to this device are located along the edge. When placed on any surface the plate adheres and glows a dim red. Utilizing the controls the operator can gain a holographic image — which appears behind the glass exactly where it would actually be — of any solid objects behind the surface, up to a depth (viewing depth is variably controlled) of 20 cm. Excellent for viewing mechanical lock mechanisms, etc. Tools are designed to work around the plate, which is held away from the surface on tiny extensions.

Molec Board Etcher: (†) When a molec board and the appropriate circuit programming memory disk are plugged into this 12 x 5 x 8 cm unit it will 'etch' a new board to replace the defective one.

Memory Switch Panels: Standardized control panels (20 in a pack) which can be utilized to replace damaged or defective control panels and readout displays.

3.61 SMALL TOOL KIT
— Laser cutter/welder
— Standard Tools
— Molec Boards
— Infra-plate

3.62 MASTER TOOL KIT
Contains everything in the above tool kit, plus:
— Supplemental Tools
— Molec Board Etcher
— Blank Molec Boards
— Repair Scanner
— Memory switch panels
— Heavy Cutter/Welder

3.7
SURVIVAL EQUIPMENT

This section includes items useful for surviving in the wilds and wherever civilization is but a distant thought.

3.71 SHELTER

Collapsible Shelter: Capable of housing 10 comfortably, this structure is more rigid than a tent and is capable of withstanding a rougher climate. It can be sealed from atmosphere but requires a separate air supply. Folds to a 20 x 20 x 50 cm package weighing 16kg.

Life Support System: (4*) 10 cm cube unit capable of recirculating warmed or cooled air for up to ten people to breathe and live comfortably for 100 hours before requiring a new filter unit. (requires four power cells).

Portable Bed: (*) An air mattress and frame, with air pillow and veriwool blanket. A tiny pump inflates the bed and powers a warmth unit in the blanket, if desired. Weighs 2 kg and collapses into a 10 x 10 x 5 cm. package.

Pressure Tent: (*) Similar to the tent above, this unit has a double skin and can be sealed from a hostile atmosphere. It includes a pump and an air supply enough for four people to breathe comfortably for 20 hours (four Air Packs). Folds to a 20 cm cube and weighs 8 kg.

Tent: Holds four people comfortably, made of a virtually indestructible plastic material which also has superior insulating qualities. It weighs but 3 kg and collapses to a 12 cm cube when not in use.

3.72 SUSTENANCE

Air Pack: 6cm long cylinder 3 cm in diameter, holds 10 hour supply of compressed/solidified air mix. For use with filter mask and standard pumps, it is practically indestructible.

Atmospheric Compressor: (2*) A box-like device attached to a plastic mask via a breathing tube, the atmospheric compressor is used on planets where the mix of gases in the atmosphere is of a life-sustaining variety, but the density or pressure of the atmosphere is too thin to allow normal respiration. It can compress any such atmosphere up to four times its normal density (allowing humans to breathe in any air-like atmosphere with a density as low as 0.25 that of Terra). Note that the atmospheric mix must closely resemble that which is normally breathed by the wearer only the density is altered.

Coolpack: (*) Mounts on top of a six-pack of beverage (in the standard molec-cans which biodegrade one day after being opened) and chills or heats the contents to desired drinking temperature. Complete with handy carrying handle.

Filter Mask: (*) For use in areas with suitable atmospheric pressure and no gasses harmful to skin and eyes, but where the air is not capable of supporting humanoid life. The mask fits over nose and mouth, and provides breathable air for 20 hours before needing a new filter pack.

Filtered Compressor: (2*) A combination of the filter mask and atmospheric compressor, this device is used on planets where the atmosphere is not only too thin to breathe normally (down to 0.25 that which is normal for the wearer), but also contains some sort of trace elements which must be filtered out prior to compression. Like the standard filter mask, this unit can sustain normal breathing in such atmospheres for up to twenty hours before the filter must be replaced, and fits over the wearers mouth and nose.

Note: this unit does not provide any protection from gases or toxins which may be harmful to skin or eyes.

Foodpack: A more delectable if bulky form of sustenance than a Ration Tube (see below), a foodpack is a 6 cm cube. When water is added it hydrates into actual foods (although they have been somewhat 'homogenized', each retains some natural flavor). The foodpack is guaranteed against spoilage for ten years.

Gillpack: (*) For extended underwater activities, the gillpack is a 2 cm diameter cylinder 12 cm long, with a mouthpiece mounted halfway along the tube. The pack essentially allows the user to breathe air suspended in water, minimizing the problems of compression. The duration is the life of the power cell (about 100 hours in this case).

Micro-oven: (†) A miniature (30 x 30 x 20cm) microwave oven, suitable for field use

Ration Tube: A disposable plastic container (about a 6 cm cylinder 3 cm in diameter) holding a semi-liquid, highly concentrated food. Though lacking in variety and flavor (it normally has a non-offensive, if bland, taste) it is extremely nutritious and filling, and equals a full meal. A man could survive indefinitely on two a day. These rations are not subject to spoilage and are not damaged by extreme heat or cold.

Instameals: More sophisticated than Foodpacks, instameals are complete dinners with built-in warmer units, serving plate and utensils. Pull the tab on top and the dinner is hot and ready in one minute. Generally considered quite delicious, but rather bulky for survival rations.

Water Accumulator: (*) A 5 cm cylinder which can be mounted on the mouth of a 2 liter plastic bag. When activated, it condenses water vapor from the surrounding air and fills the self-sealing bag. Time to fill varies with atmosphere, though is usually 1-5 minutes. Power cell is good for about 500 bagfuls. Unit normally sold with 5 reusable, tear-resistant bags.

3.73 MISCELLANEOUS "GEAR"

Grav Belt Modulator: (1*/10 kg mass) Also known as a Weight Modulator, this smallish device is actually a mini antigrav unit. Designed to be worn on a person's belt, the modulator may be set to effectively negate some (or possibly all) of the wearer's current weight (up to the maximum level purchased). Note that the higher this maximum setting is, the more expensive the modulator is, and the more energy cells are required to power the device. Remember that the wearer's effective weight will still be averaged with his or her normal mass for purposes of determining encumbrance.

4.0 MASTER EQUIPMENT TABLE

(Mass is in kg. — Cost is in Elmonits.)

Name	Mass	Cost
PROJECTILE WEAPONS		
Conventional Pistol		
5mm Pistol	.3-.6	50
10mm Pistol	.5-.8	80
12mm Pistol	.6-1	100
Conventional Machine Pistols		
5mm Light Machine Pistol	2.5-3.0	350
10mm Medium Machine Pistol	3.0-3.5	600
Conventional Rifles		
5mm Light Rifle	3.0-4.0	250
10mm Medium Rifle	3.5-4.5	400
12mm Heavy Rifle	4.0-5.0	500
Conventional Assault Rifles		
5mm Light Assault Rifle	3.5-4.0	350
10mm Medium Assault Rifle	3.75-4.5	500
Conventional Machine Guns		
10mm Light Machine Gun	7-10	800
10mm Medium Machine Gun	8-12	1200
12mm Heavy Machine Gun	9-15	1500
Conventional Shotguns		
15mm & Sawed-off Shotgun	3-4	250
15mm Autoshotgun	3.5-5.0	700
20mm & Sawed-off Shotgun	4-4.5	300
20mm Autoshotgun	4.5-5.5	900
Needleguns		
Needle Pistol	.5-.75	400
Needle Carbine	1.5-3.0	1000
Needle Rifle	2.5-4.0	1600
Tangleguns		
Tangle Pistol	.75-1.25	700
Tangle Carbine	2-4	1300
Tangle Rifle	3-5.5	1800
Taserguns		
Taser Pistol	.75-1.25	600
Taser Carbine	2-3.5	1200
Taser Rifle	3-5	1800
Rocketguns		
Rocket Pistol	1-1.5	400
Rocket Carbine	2-3.5	900
Rocket Rifle	3.5-6	1500
Magnetic Linear Accelerators		
MLA (Linex) Pistol (†)	1-1.75	800
MLA (Linex) Rifle (‡)	3.5-6	2000
Grenade Launchers		
Grenade Rifle	3-5.5	1000
Rocket Propelled Grenade Launchers		
RPG Launcher	3-6	1200
Portable Missile Launchers		
PML	4-6.5	1400
PML Quad	5-8	1800
PML Autofeed	6-11	2400

Name	Mass	Cost
ENERGY WEAPONS		
Lasers		
Mini Laser (*)	.1-.2	120
Laser Pistol (*)	.3-.5	250
Assault Laser (†)	2.5-3.5	500
Laser Rifle (†)	3.0-4.5	750
Heavy Laser (‡)	4.0-6.0	1000
Blaster		
Mini Blaster (*)	.15-.25	150
Blast Pistol (*)	.3-.75	300
Assault Blaster (†)	2.75-4.0	550
Blast Rifle (†)	3.5-5	800
Heavy Blaster (‡)	4.5-7.0	1200
Flamers		
Mini Flamer (*)	.2-.4	100
Flame Pistol (*)	.4-1.0	200
Assault Flamer (†)	3-5	400
Flame Rifle (†)	4-6	650
Heavy Flamer (‡)	5-7	900
Energy Melee Weapons		
Force Knife (†)	.3	500
Power Sword (†)	.7	3000

Name	Mass	Cost
Stunner		
Mini Stunner (*)	.1-.2	120
Stun Pistol (*)	.3-.5	260
Assault Stunner (†)	3-4	550
Stun Rifle (†)	4-6	800
Heavy Stunner (‡)	4.5-7.0	1100
Disruptors		
Mini Disruptor (*)	.1-.3	300
Disruptor Pistol (*)	.3-.6	700
Assault Disruptor (†)	3.5-5.0	1200
Disruptor Rifle (†)	4.0-6.5	1500
Heavy Disruptor (‡)	5.0-7.5	2000
Struptorguns		
Mini Struptor (*)	.1-.3	500
Struptor Pistol (*)	.3-.6	1000
Assault Struptor (†)	3.5-5.0	2000
Struptor Rifle (†)	4.0-6.5	2800
Heavy Struptor (‡)	5.0-6.5	3500
Plasmatic Repeators		
Plasma Repeator Rifle (§)	10-12	4500
Heavy Plasma Repeator (§)	15-18	6000

PROJECTILE AMMUNITION
(**Cost** is per round unless indicated otherwise. **Mass** will vary, but the GM can use the values below for a rough estimate for the Mass of 5 rounds unless indicated otherwise.)

Name	Mass	Cost
General Purpose Round		
5mm	.1	.05
10mm	.2	.08
12mm	.3	.1
Armor Piercing Round		
5mm	.1	.06
10mm	.2	.1
12mm	.3	.12
High Explosive Round		
5mm	.1	.07
10mm	.2	.11
12mm	.3	.13
High Explosive Armor Piercing Round		
5mm	.1	.1
10mm	.2	.15
12mm	.3	.2
Standard Needlegun" Bursts"		
Pistol (magazine of 2 bursts)	.1	.5
Carbine (magazine of 4 bursts)	.2	1.5
Rifle (magazine of 6 bursts)	.3	2.5
Shotgun		
15mm	.2	.05
20mm	.2	.1
Tangler Cartridge		
Pistol	.5	3
Carbine	.5	6
Rifle	.5	9

Name	Mass	Cost
Taser Ammo		
Pistol (cartridge)	.2	3
Carbine (magazine, 5 shots)	1.0	15
Rifle (magazine, 5 shots)	1.0	15
Ammunition Modifiers		
Tungsten Core Round	(x1.5)	(x3)
Depleted Uranium Core Rounds	(x3)	(x4)
Super-Teflon Coated Rounds	(x1)	(x1.5)
Irulon Coated Rounds	(x1)	(x4)
Tranquilizer Rounds	(x0.5)	(x3)
Poisoned Rounds	(x1)	(x4)
Grenades and Portable Missiles		
General Purpose Grenades	.1k/Mk	10/Mk
Concussion Grenades	.1k/Mk	10/Mk
Shrapnel Grenades	.1k/Mk	10/Mk
Plasma Grenades	.1k/Mk	30/Mk
Smoke Grenades	.1k/Mk	4/Mk
Anti-laser Aerosol Grenades	.1k/Mk	16/Mk
Standard Unguided Missile	.2k/Mk	10/Mk
Standard Guided Missile	.2k/Mk	20/Mk
Grenade/Missile Modifiers		
Point Defense Grenades/Missiles	(x1)	(x.5)
Standard Grenades/Missiles	(x1)	(x1)
Enhanced Grenades/Missiles	(x1)	(x3)

Name	Mass	Cost
PERSONAL ITEMS		
Calculator Unit (*)	.1	10
Chronometer (*)	.02	1 - 50
Computer Map (*)	.6	60
Distance Lenses (*)	.4	20
Earphone Communicator (*)	.02	25
Elmonit Card (*)	.02	5
Glowglobe (*)	.25	1
Ident Disk (replacement)	.02	200

Name	Mass	Cost
Infra-red Goggles	.15	20
Infra-red Lenses	—	150
Light Filter Lenses	—	60
Lightrod (*)	.2	.3
Magnetic Compass	.1	1
Makeover Kit (2*)	1	45
Microcomputer (1-4*)	1	40
Molecutronic Scrambler (1*/Mk)	.5/Mk	200/Mk
Personal EW Generator (‡)	1.5	2500
Pocket Communicator (*)	.25	30

Name	Mass	Cost
Poison Detector (*)	1	500
Psion Damping Gear (4*)	.1	?
Scanners		
Multiscanner (†)	2	800
Repair Scanner (†)	2	700
Tactical Scanner (*)	1.5	300
Security Scanner (2* or †)	.5-2	varies
Signal Beacon (*)	.1	10
Ultra Goggles	.2	80
Ultra Lenses	—	350

Name	Mass	Cost
FIELD MEDICAL EQUIPMENT		
Medical Scanner (†)	2	850
Diagnostic Computer (2*)	2	1200
Dermal Closer (*)	.5	200
Tissue Knitter (*)	.5	350
Regenergun (3*)	.8	400
Arterial Sealer (*)	.5	400
Laseknife (*)	.4	250
Preservation Unit (†)	3	500
Instasplint	.1	20
Instacast	.2	30
Skeletal Field Knitter (3*)	1	800
Medtab Applicator (*)	.2	80
Auto Tab Applicator (2*)	.3	200

Name	Mass	Cost
TABS		
Medicinal Tabs		
(cost is per clip of 10 tabs, mass is .1kg for 500 tabs)		
Alerlene	—	150
Amboathorphin	—	230
Anacept	—	300
Andeline	—	100
Andrex	—	550
Antirad I through V	—	1K/Mk
Arelenex	—	15
Decilage	—	600
Doseline	—	50
Fir-Queline	—	100
Hemoflux	—	120
Hydravol	—	20
Interferon IV	—	100
Jirolene	—	2
Korteline	—	250
Luryadrenaline	—	100
Perserverine compound	—	120
Quedella Phi	—	90
Rebellis	—	650
Regenex III	—	250
Stirene	—	25
Teledrine	—	1000
Thiagorex III	—	10
Torethene	—	150
Triadrenaline	—	200
Tyreline	—	500
Verex Compound	—	100
Virlene	—	50
Yuthix	—	2000
Unmonitored/Recreational Tabs		
Gorteline	—	200
Mertinel	—	1
Myrine	—	50
Siradrel	—	200
Urlene	—	300

Name	Mass	Cost
INFIRMARY EQUIPMENT		
Scanner Bed	400	20k
Surgical Dermal Closer	.8	1,200
Surgical Tissue Knitter	.9	1,800
Surgical Regenergun	1.1	2,200
Surgical Arterial Sealer	.8	2,000
Laser Scalpel	.7	1,600
Medical Function Bed	700	200k
Medstasis Bed	450	25k
Prosthetics	varies	varies

Name	Mass	Cost
DATA STORAGE AND RETRIEVAL		
Audio Discs	.08	2
Holocamera (*)	.5	50
Hologlass	.1	15
Holoviewer (*)	1	30
Memory Disk Viewer (*)	1	70
Memory Disks	.05	20
Memory Recorder (*)	1.5	120
Recorder (audio) (*)	.2	40
Viewer With Enhance (*)	1.5	150

Name	Mass	Cost
CLOTHING		
General Clothing Examples		
Dress Clothing	varies	100
Dress Footwear	varies	20
Leisure Clothing	varies	50
Leisure Activewear	varies	10
Uniform	varies	80
Dress Uniform	varies	120
Light Jacket	varies	10
Thermal Jacket	varies	30
Thermal Suit	varies	50
Specific Imperial Milieu Clothing		
Karolinian Seal Thigh-boots	4	15k
Kashmere Dress Toga	1	800
Shimmersheer Gown	2	4,000
Static Cloak	5	500
Trueleather Pants	1.5	1,500
Urkusk Mink Coat	6	20k
Velaise Bodysuit	2	60

Name	Mass	Cost
ARMOR AND SHIELDS		
Armor		
Environmental Suit	6	750
LBA Flak Vest	1	80
LBA Extended Flak Vest	1.5	100
LBA Reinforced Flak Vest	2	150
LBA Reinforced Flak Armor	4	200
ABS Pliable Breastplate	5	1,000
ABS Pliable Brstplt &Greaves	6	1,300
ABS Pliable Half Plate	7	1,500
ABS Pliable Full Plate	8	1,700
ABS Mesh Shirt	6	1,500
ABS Mesh Shirt & Greaves	7	1,800
ABS Full Mesh	8	2,000
ABS Battle Mesh	10	2,200
AEX Exoskeleton Breastplate	7	3,000
AEX Exoskeleton Brstplt & Grvs	8	3,200
AEX Half Exoskeleton	14	3,500
AEX Full Armored Exoskeleton	18	4,000
Shields		
Velocity (chestpack, ‡)	6.5	2,000
Deflector (chestpack, ‡)	6.5	2,000
Absorption (chestpack, ‡)	6.5	2,000
Barrier (chestpack, 2‡)	8.5	15k
Velocity (belt, ‡)	1.5	8,000
Deflector (belt, ‡)	1.5	8,000
Absorption (belt, ‡)	1.6	8,000
Barrier (belt, 2‡)	2.0	60k
Other Protections		
Antipsi Helmet(4*)	1.5	5k/Mk
Riot Shield (†)	3.5	2000
Sentinel Helmet (†)	2.0	400

Name	Mass	Cost
TOOLS		
Laser Cutter/Welder (†)	.5	150
Heavy Cutter/Welder (‡)	1	250
Standard Tools	1	100
Molec Boards (10)	.5	300
Infra-plate (*)	.1	200
Molec Board Etcher (†)	1	500
Memory Switch Panel	3	400
Small Tool Kit	3	800
Master Tool Kit	7	3000

Name	Mass	Cost
SURVIVAL EQUIPMENT		
Shelter		
Collapsible Shelter	15	150
Life Support System (4*)	1	50
Portable Bed (*)	2	6
Pressure Tent (*)	8	90
Tent	3	20
Sustenance		
Air Pack	.2	5
Atmospheric Compressor (2*)	.2	10
Coolpack (*)	.2	5
Filter Mask (*)	.2	5
Filtered Compressor (2*)	.35	15
Foodpack	.08	.5
Gillpack (*)	.5	50
Micro-oven (†)	5	30
Ration Tube	.05	.2
Instameals	.5	1
Water Accumulator (*)	.5	5
Miscellaneous Gear		
Grav Belt Modulator (1*/10kg)	.1	50
Grav Belt (‡)	2	3,500
Grav-pack (*)	1	20
Gravchute (2*)	.1	25
Heat Dissipation Gear (*)	2	75
Reflective Coveralls	2	170

Name	Mass	Cost
POWER CELLS		
Cells •		
Utility Cell	.01	5
Weapon Cell	.02	8
Flamer Cell	.05	5
Cartridges †		
Utility Cartridge	.2	30
Weapon Cartridge	.3	50
Flamer Cartridge	.5	15
Packs ‡		
Utility Pack	4	100
Weapon Pack	4	200
Flamer Pack	6	60
Microfusion Reactors §		
Utility Reactor	5	1,000
Weapon Reactor	2	1,200

BLAST PISTOL
P3/Devcomm

Grav belt: (‡) Not so much a vehicle as a personal device, the grav belt is a small gravitic generator strapped to the back with a wide belt. From the generator, control appendages extend forward to a position convenient for the wearer. The belt is capable of full lift and maneuverability.

Grav-pack: (*) A large backpack capable of neutralizing the weight of anything placed in it, up to 50 kg or .5 cumet. Care must be used, however, as the inertial mass of the pack, of course, is the same. Maneuvers are at -5/10 kg.

Gravchute: (2*) A very simple version of the gravbelt, it is a harness which can be donned quickly (in an emergency) and will allow the wearer to float safely to the ground in an environment of up to 3 G's and from an altitude of up to 20 km — or any combination. The belt is only good for one use, regardless of the distance of the fall. Most modern air and spacecraft stock them.

Heat Dissipation Gear: (*) Survival equipment for desert and jungle biomes, Heat Dissipation Gear is worn at strategic locations all over the body. It allows the wearer to ignore the exhaustion modifier for hot environments by quickly dispersing body heat into the surrounding atmosphere, thus keeping the body's temperature down. Heat Dissipation Gear may not be worn over or under any sort of body armor or encumbering clothing.

Reflective Coveralls: An anti-LASER defensive complement which may be worn in combination with any other personal armor type. A target wearing Reflective Coveralls has 10 added to his or her defensive bonus versus LASER attacks only.

3.8 ▮▮▮▮▮
POWER CELLS

Almost every item of personal equipment in Space Master (except for most projectile weapons, of course) requires a power supply to keep it functioning properly (or functioning at all for that matter). There are basically four general categories of personal equipment power supplies, the cell, the cartridge, the pack and the microfusion reactor. Each is physically larger and more powerful than the one that preceeds it in the listing. Each category then has several representative types. For instance, there are utility cartridges, weapon cartridges, and flamer cartridges. What follows is a breakdown of the various personal equipment power supplies.
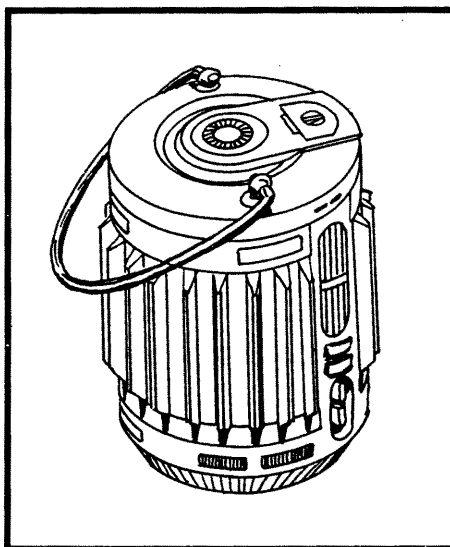
CELLS

A piece of equipment which requires the use of an power cell is marked with a (*). If multiple cells are needed, the notation (2*) or (3*) will appear, meaning that two or three cells are used to power the equipment. Cells are generally small discs of negligable weight. The various power cells include:

1) **Utility Cell:** Used to power a wide variety of low power consumption equipment, and some Mini Energy Weapons.
2) **Weapon Cell:** Used to power small Lasers, Blasters, Stunners, and Disruptors.
3) **Flamer Cell:** Used to power small Flamers. These cells are significantly larger than the other power cells.

CARTRIDGES

A piece of equipment which requires the use of a power cartridge is marked with a (†). If multiple cartridges are needed, the notation (2†) or (3†) will appear, meaning that two or three cartridges are used to power the equipment. Cartridges are generally short cylinders or blocks which slide into recepticles in the equipment. They have moderate weight. The various power cartridges include:

1) **Utility Cartridge:** Used to power some larger pieces of equipment, including Linex Weapons.
2) **Weapon Cartridge:** Used to power Assault Energy Weapons and Energy Rifles like Lasers, Blasters, Stunners, and Disruptors.
3) **Flamer Cartridge:** Used to power medium sized Flamers. Flamer cartridges are, by necessity, rather large, as they contain the Flamer's volatile chemical mix.

PACKS

A piece of equipment which requires the use of a power pack is marked with a (‡). Packs vary significantly in size and weight, with the determining factor being the sophistication of the producers, and their level of technology. They may be small enough to be attached to the piece of equipment they power. More often, it is the case that power packs are chest or back-slung, with a power cable running from the power supply to the equipment. The various power packs include:

1) **Utility Pack:** Used to power large pieces of field equipment.
2) **Weapon Pack:** Used to power Heavy Lasers, Blasters, Stunners, and Disruptors.
3) **Flamer Pack:** Used to power Heavy Flamers. These power packs are exceptionally encumbering, and are typically back-slung when transported by a man.

MICROFUSION REACTORS

A piece of equipment which requires the use of a microfusion reactor is marked with a (§). Microfusion reactors are quite small, considering their power output. They are about the same size as a small power pack, but somewhat heavier. When an equipment failure roll results in a "power source depleted" result, any given microfusion reactor does not suddenly become an expensive piece of scrap metal, (that only happens on a subsequent D10 roll of 1). On the contrary, all that is required is a refueling of the reactor, which can be accomplished by simply adding more water to the unit. There are two types of Microfusion Reactors:

1) **Utility Reactor:** This durable field unit is capable of powering a wide variety of heavy gear. Given the proper adaptor, a Utility Reactor could conceivably power any piece of equipment short of a Flamer Weapon.
2) **Weapon Reactor:** The Weapon Reactor is the only device capable of powering a Plasmatic Repeater. Given the proper adaptor, a Weapon Reactor could conceivably power any energy weapon except a Flamer.

SUMMARY OF CODING:	
Energy Cell:	(*)
Cartridge:	(†)
Pack:	(‡)
Microfusion Reactor:	(§)

THE ROLE OF COMPUTERS

"I wouldn't do that if I were you, Dave."

"Discovery" Computer
Prelmp 9694
Orbiting Juptiter

It would no doubt be an understatement to say that computers play an important part in the universe of *Space Master*. Indeed, they are everywhere, expediting every facet of life in the far future. They are miniaturized to near-microscopic size in many cases, and can perform functions of amazing complexity at speeds truly approaching instantaneous.

State of the art computer circuitry memory storage is done on a molecular level; memory units are organic and, in a way, alive. This allows far more dense storage and faster relays. Many larger units are voice-controlled, able to interpret and respond to verbal commands — though of course only in languages for which the computer has been programmed. For accuracy and efficiency, however, computers on board most starships and other complex vehicles are still manually controlled to a great extent. This is not a reflection of the machine's limitations, but rather of the being who must give it instructions. Direct mental links from the human brain to computers have been tried, but proved ineffective and even dangerous; the human mind is simply not disciplined enough to give coherent commands which are not accompanied by a flurry of aberrant irrelevant 'mental chatter'. And vocal commands are not precise because of the inevitable inaccuracies of any sentient-based language. The idea of a computer language to be used by sentients was proposed, but the effort of learning it outweighed the advantages. The alternative of a ship virtually under the command of a computer was also dismissed (except for unmanned ships, of course) because of man's continuing resistance to the idea of being 'controlled' by a computer.

Thus, even in *Space Master*, the weak link in any such sentient-computer interface is just that: the delay which occurs between the sentient visualizing and deciding on the action, and the delivery of the action command to the machine.

In *Space Master*, though, the computer has been able to take over very complex tasks (such as continuous evasive maneuvres in a starship battle, even when coordinating gunner fire) the details of which need not concern the sentients in charge.

Obviously, to attempt to cover the entire range of software available in the universe of *Space Master* would be absurd. Instead, below are detailed typical programs.

5.1

PROGRAMS AND DESCRIPTIONS

Below are brief descriptions of the various computer programs available in the most advanced areas of the *Space Master* universe. All programs may not be available everywhere, or, if available, they may only be 'partial'.

Remember when purchasing programs that each has two important volume factors, in addition to the cost: *Processing Capacity* and *Memory Volume*. This reflects the concept that certain programs, such as Archive Reference and the Research programs, consume a vast amount of *Memory* volume because of the sheer mass of data. However, their data retrieval system is relatively simple, and requires only a small amount of *Processing* capacity. Complex, demanding

programs, such as Evade and Predict, consume very little *Memory* volume, but, depending on how demanding or sophisticated, a lot of *Processing* capacity. The volume and capacity for a specific standard computer are determined by its Mark (Mk.) number: the processing volume capacity is exactly equal to the Mk.#, while the memory volume is 2 x the Mk. #. Available programs always use memory volume *but* only use processing capacity when being used. In addition, standard computers have what is called *Reserve Storage*. It is not as easily accessible as Memory, but has a much larger capacity — ten times the Mark number in storage volume. However, this memory storage is not as easily accessible: it requires one round per memory unit to transfer the program from Reserve Storage to memory, where it can be easily accessed and used. In this capacity,

therefore, Reserve Storage is useful for Archive and Research data, but probably not for regular combat program storage, since it would require too much time to "call up" the necessary programs from Reserve Storage.

Example: *Teruk has an Mk. 50 computer. Its processing capacity is 50, and its memory is 100 units. It has a Reserve Storage volume of 500 units.*

The reference to *memory units* refers to a discreet unit of data. As many as desired (or one can afford, or one can pack into their computer) may be purchased. However, there is a declining rate of return, based on the idea that the mass of information reduces the efficiency of the processor. It also reflects the idea that after a point the additional data in memory is more peripheral, and increasingly less relevant to the topic.

For those programs which have a cost per memory unit pick, the initial purchase provides a +5 bonus to the appropriate research/technical activity/maneuver (counting as the initial investment as well as the first 'rating pick'). Each additional pick adds another +5 to the appropriate bonus, up to a total of +50. The eleventh through twentieth picks, though they cost the same, only supply a +2 bonus per pick. Any additional picks beyond twenty add +1 per rating pick.

It is assumed that each pick fills one computer unit, regardless of the bonus. See individual programs for whether the volume is consumed in *Memory* or both Processing and Memory (if it takes up a unit of processing space, it must take up at least the same amount of space in memory for storage while not in use).

PROGRAM DESCRIPTIONS

General Reference: An encyclopedic database, referenced by subject with multiple cross-references. Includes very basic information on Terran general history, the sciences, the arts, literature, etc.

Xeno Gen. Ref: The complement to the General reference database above, this file covers all Terran colonies as well as any general data on other races encountered by Civilization. By necessity, this file is even more general than the above, having to cover a wider field.

Archive Reference: This file covers the same areas as the General Reference program, but in much greater depth, especially in the non-science fields. The detail and referencing is exhaustive; however, it does not approach some of the planetary Archive databases; consuming as much as 10,000 Storage units, they might truly hold what could be called the "sum of human knowledge".

RESEARCH REFERENCE

Physics: Each memory unit pick adds a bonus to all research done on this topic. Note that this total is cumulative with a lab bonus, but cannot exceed the lab bonus.

Chemistry: As Physics, above.

Biology: As Physics, above.

Planetology: As Physics, above.

Astronomy: As Physics, above.

Cultures: Each memory unit pick adds a bonus to all anthropological and cultural research.

Medicine: As Physics, above.

Mechanical Engineering: As Physics, above.

Genetics: As Physics, above.

Computers: As Physics, above.

Weapons Design: As Physics, above.

Power Systems Theory: As Physics, above.

Cybernetics: As Physics, above.

TECHNICAL REFERENCE

Mechanical: Each memory unit pick adds a bonus to all repairs and construction related to this topic. Use appropriate table.

Weapons: As Mechanical, above.

Electronics: Includes all electrical systems. As Mechanical, above.

Communications: As Mechanical, above.

Computers: As Mechanical, above.

Power Systems: As Mechanical, above.

Stardrive: As Mechanical, above.

Crime Systems: As Mechanical, above.

Medical Systems: As Mechanical, above.

Cybernetics: As Mechanical, above.

Genetics: As Mechanical, above.

Basic Systems Monitoring: Automatic ship's log and minor systems control (lighting, portal control, etc.)

Recreation: Games, movies, etc.

Life Support: Maintains environment.

Galley: Food synthesis.

Xeno Galley: Food synthesis for exotic tastes / other races.

Astrogation Reference:

Star Chart: A complete map of the known galaxy is available, though the total volume would be prohibitive. Astrogation is made "Easy" if within an area on file. See cost chart for price per memory unit.

Preset Course: Astrogation for such a course is "Routine".

Astrogation Plotting:

Hyperspace Course: Computes Hyperspace Course. Without program, computation is "Absurd". (However, every day spent by a trained individual with proper references lowers the degree of difficulty by 1.)

N-Space Course: Computes N-Space Course. Without program, computation is "Absurd". (However, every *day* spent by a trained individual with proper references lowers the degree of difficulty by 1.)
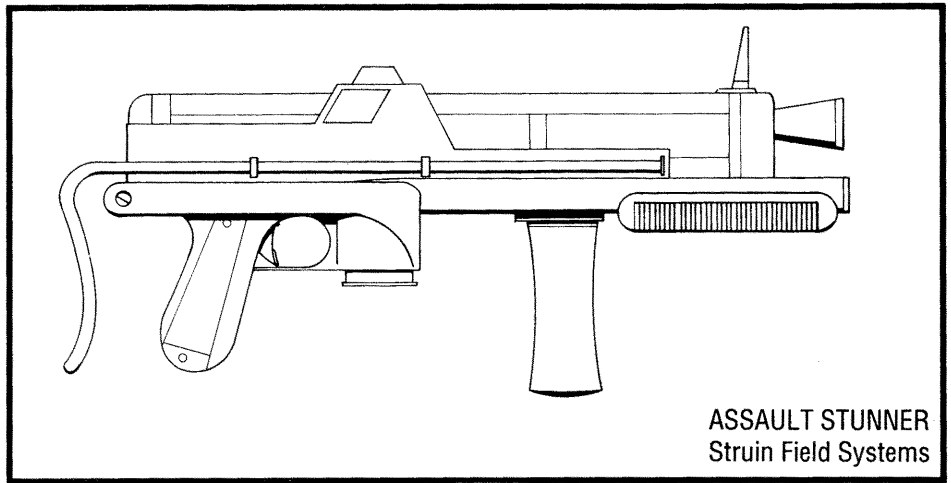
ASSAULT STUNNER
Struin Field Systems

PILOT INTERFACE

Hyper Jump: Controls Antimatter flow to Translight Engines.

Autopilot: Can maintain a course, or carry out Preset N-space course

Evade: Each processor unit pick adds a bonus to ship DB due to computer controlled evasive maneuvering. (1 unit processing and one unit memory per pick)

Tactics: Each processor unit pick adds a bonus to ship initiative. (1 unit processing and one unit memory per pick)

Power Distribution: Controls and monitors distribution of power to all ship systems.

Damage Control: Malfunction alert and flame detection/control. Seals doors to contain decompression unless overridden.

Security: Monitors and can restrict movement of specific beings within installation. Requires .1 memory unit per being.

Cybernetic Monitor: Controls robotic assignments. Requires .5 memory unit per special system.

Communications: Allows Com Tech bonus on Transmission / Reception, including both Tachyon Beam and Microwave signals. Each processing pick adds a bonus, and 5 Light-years of Tachyon Beam range.

EW Distribution: One pick for every 10 points of EW (actual EW equipment purchased separately) is necessary for manual control of EW/Stealth screens. Each Processing pick also adds a bonus for all EW activity (no matter how many operators). (1 unit processing and one unit memory per pick)

Target Lock-on: Allows shipboard Heavy Energy Projectors to be committed on any target in Sensor range (see ship construction for ship sensor ranges). Energy attacks without this program are at -30 (in addition to any other factors).

Central Gun Control: Allows any number of ship's guns to be fired from central control with controller's gunner bonus (-10 to bonus for every gun over one controlled).

Gunner Interface: Allows inclusion of individual gunner's fire bonus for Heavy Energy Projectors.

Predict: Each pick adds a computer bonus for Heavy Energy weapons fire. (1 unit processing and one unit memory per pick)

Missile Targeting: Each pick adds a computer bonus for missile targeting. (1 unit processing and one unit memory per pick)

Defense (screens): Arranges and maintains shields. Processor and memory required is 1 per 10,000 tons (1 unit minimum).

Star System Analysis: Reference data; each pick adds a bonus to sensor analysis, and fills one memory cell — in addition to the base volume of 3.

Planetary Analysis: Reference data; each pick adds a bonus to sensor analysis of planetary and stellar bodies, and fills one memory cell — in addition to the base volume of 3.

Bio Analysis: Reference data; each pick adds a bonus to sensor analysis of life forms, and fills one memory cell — in addition to the base volume of 3. Range for such analysis is no more that a high orbit above scanned planet.

Construct Analysis: Reference data; each pick adds a bonus to sensor analysis of artificial constructs and energy sources, such as other spacecraft, ground-based installations, etc., and fills one memory cell — in addition to the base volume of 3.

Medical Diagnosis: Reference data; each pick adds a bonus to medical scanner analysis of patients, and fills one memory cell — in addition to the base volume of 2.

Medical Procedure: Reference data; each pick adds a bonus to surgical or medicinal procedures performed and fills one memory cell — in addition to the base volume of 2.

Xeno Medicine: Reference data; each pick adds a bonus to medical diagnosis of another life-form (than homo-sapiens or derivativea) and fills one memory cell — in addition to the base volume of 2.

5.2 PROGRAM SIZE AND COST TABLE

Program/Database Name	Size Processing	Memory	Cost (Elmonits)
General Reference	5	20	5,000
Xeno Gen. Ref	5	30	8,000
Archive Reference	5	5 + Special	5,000 + 500/Memory data unit pick
Research Reference			
Physics	4	20	1,000 base + 500/memory unit pick
Chemistry	4	20	"　　"　　"　　"　　"
Biology	4	20	"　　"　　"　　"　　"
Cultures	4	20	"　　"　　"　　"　　"
Medicine	4	20	"　　"　　"　　"　　"
Engineering	4	20	"　　"　　"　　"　　"
Technical Reference			
Mechanical	1	5	1,000 base + 300/memory unit pick
Armaments	1	5	"　　"　　"　　"　　"
Electrical	1	5	"　　"　　"　　"　　"
Communications	1	5	"　　"　　"　　"　　"
Computers	1	5	"　　"　　"　　"　　"
Power	1	5	"　　"　　"　　"　　"
Stardrive	1	5	"　　"　　"　　"　　"
Field Science Systems	1	5	"　　"　　"　　"　　"
Medical Systems	1	5	"　　"　　"　　"　　"
Basic Sys Monitoring	Special		500/1000 tons
Recreation	1	1	500
Life Support	Special		100/10 beings
Galley	1	1	300
Xeno Galley	1	1	800
Astrogation Reference:			
Star Chart	1	Special	2,000/storage cell (100,000clr)
Preset Course	0	1/course	500/course
Astrogation Plotting:			
Hyperspace Course	3	3	3,000
N-Space Course	3	3	4,000
Pilot Interface			
Hyper Jump	3	3	2,000
Autopilot	5	5	8,000
Evade	Special		5,000 base + 2,000/pick
Tactics	Special		5,000 base + 1,000/pick
Power Distribution	2	2	5,000
Damage Control	2	2	3,000
Security	1	Special	1,000 + 100/being
Cybernetic Monitor	Special		5,000 + 2,000/system
Communications	1	1	8,000
EW Distribution	Special		5,000 base + 1,000/ 10 pts of EW
Target Lock-on	2	2	7,000
Central Gun Control	.1/gun	1	12,000
Gunner Interface	1/gnr	1	2,000/gunner
Predict	Special		5,000 base + 1,000/rating pick
Missile Targeting	Special		5,000 base + 1,200/rating pick
Defense (screens)	Special		1000/10,000 tons
Star System Analysis	3	3 + Special	1,000 base + 500/memory unit pick
Planetary Analysis	3	3 + Special	"　　"　　"　　"　　"
Bio Analysis	3	3 + Special	"　　"　　"　　"　　"
Construct Analysis	3	3 + Special	"　　"　　"　　"　　"
Medical Diagnosis	2	2 + Special	1,000 base + 200/memory unit pick
Medical Procedure	2	2 + Special	"　　"　　"　　"　　"
Xeno Medicine	2	2 + Special	2,000 base + 500/memory unit pick

5.3 SPECIAL ROBOTICS PROGRAMS TABLE

As an option for those players wishing to insert special software programs into their robots so that they can become more specialized, see the listing below. A robot which is running the appropriate program while executing the given operation is given a bonus equal to his computer Mk. # when determining the success of that operation. Note that these programs are specially designed for robots and are therefore not compatible with any other computer system. Additionally, each program is available in a number of computer languages, so players must be careful that they are purchasing a program which their robot can understand.

Many of the programs require the robot to meet certain physical parameters and/or be of a certain class.

Most of these programs work exactly the same as the character skills of the same name.

Program Name	Size Processing/ Memory	Cost (Elmontis)	Notes/Requirements
General Programs			
Data Acquisition	0.1/0.1	200	Allows robot to record data into free memory space.
Etiquette	0.2/0.2	300	A separate protocol program is required for each culture. Req: human relations bot with oratory rtg 7
Atmospheric pilot	2/2	1750	Each type of craft requires its own program. Req: mech interface, or manipulate rtg 9 and intellect rtg 3.
Marine pilot	1/1	900	Each type of craft requires its own program. Req: mech interface, or manipulate rtg 7 and intellect rtg 2
Driving	1/1	950	Per vehicle type. Req: mech interface, or manipulate rtg 8 and intellect rtg 7.
Disarm traps	0.4/0.4	1000	Req: multiscanner equipment interface and manipulate rtg 9.
Pick locks	0.4/0.4	950	Req: multiscanner equipment interface and manipulate rtg 9.
Special Programs			
Linguistics	1/1	1000	Per language grouping. Req: oratory rtg 3-6 for non-computer languages.
Forgery	1.2/1.2	5000	Req: multiscanner equipment interface and manipulate rtg 10.
Counterfeiting	1.2/1.0	5000	Req: multiscanner equipment interface and manipulate rtg 10.
First aid	0.2/0.2	100	Per species. Req: medscanner equipment interface, intellect rtg 2 and manipulate rtg 8.
Technic Programs			
These programs can only be used for maintenance and equipment modifications.			
Mechanical technics	0.5/0.5	1000	Req: manipulate rtg 7.
Weapons technics	0.5/0.5	1000	Req: manipulate rtg 7.
Electronics technics	0.5/0.5	1000	Req: manipulate rtg.7.
Computer technics	0.6/0.6	1400	Req: manipulate rtg 8.
Power systems technics	0.5/0.5	1200	Req: manipulate rtg 7.
Crime technics	0.5/0.5	2000	Req: manipulate rtg. 7.
Medical technics	0.5/0.5	1000	Req: manipulate rtg 9.
Cybernetic technics	0.5/0.5	1100	Req: manipulate rtg 8.
Combat Programs			
Airborne assault	0.4/0.4	1700	Req: maneuvering rtg 7 and sensor rtg 5/
Combat pilot	2/2.5	6000	Req: mech interface with sensor rtg 5, perception rtg 4, intellect rtg 5 and manipulate rtg 2. Per craft type.
AFV crewmember	0.3/0.5	4000	Req: mech interface or manipulate rtg 8. Per vehicle type and position.
Missile Artillery	0.3/0.03	3900	Req: mech interface or manipulate rtg 6. Per weapon type.
Heavy energy projector	0.3/0.3	4000	Req: mech interface or manipulate rtg 7.
Astro Programs			
Orbital pilot	0.7/1	5000	Req: mech interface.
N-space pilot	0.7/1	5000	Req: mech interface
Hyperspace pilot	2/3	10000	Req: mech interface.
N-space astrogation	2.5/3	7000	Req: mech interface with intellect rtg 4.
Hyperspace astrogation	3/3.5	11000	Req: mech interface with intellect rtg 6.

ROBOTS AND ANDROIDS

"Gort, Klattu barados nikto"

A Visitor to Terra
c. Day the Earth Stood Still

"Danger! Danger, Will Robinson!"

Some Robot
Aboard the *Jupiter 2*

6.1

ROBOTS

A vast range of machines, but defined here as being an intelligent, self-propelled machine. Robots (with the exception of special Combat Bots) are usually no larger than two meters tall, and possess manipulative limbs suitable for repair, manual labor, or mechanical interface, or weapons operation. Some robot designs are vaguely man-like in form, possessing arms and legs, but are distinguished from Androids in that they are clearly machines (being metal encased, etc.) and not *designed* to imitate humans, except as necessary for their function.

6.11 GENERAL ROBOT TYPES

Service Bot: The standard model is short and squat (1 meter high), with several extendable limbs fitted with interchangeable manipulative devices. The Bot's Mk. 10 computer can be programmed with any Technic data (see Section 4.3) or it can be purchased pre-programmed (add program cost separately). It has a +50 Manipulate bonus, in addition to the programmed Technic skill. Remember that it is at -25 to all repairs with no applicable skill in its computer. It has normal audio/visual pickup ability, and a Computer Mech Interface, to receive computer data. It can be programmed to understand any language, but 'speaks' only BIVOC (the Binary Vocabulary of computers).

Mech Interface Bot: Less than a meter high and roughly cylindrical, this robot is basically a mobile computer. With an Mk. rating of 20 it can run several sophisticated programs simultaneously. See "Service Bot" above for references to computer input. Available interfaces: Pilot, Heavy Energy Projectors, Sensors, EW and Computer. Beyond a few small manipulative arms and the interface hookup, this Bot is unadorned. It has short range audio/visual pickup, and it can be programmed to understand any language, but 'speaks' only BIVOC (the Binary Vocabulary of computers).

Cyborg Relations Bot: Probably the most 'humanoid' of the robots, this device is just under 2 meters tall, has legs, arms and a head, but there the resemblance ends. The Relations Bot's prime function is liaison between humans and robots, and as such most of its Mk. 5 computer is taken up with language data. It can freely translate between any language and BIVOC.

Combat Bot Type I: Three and a half meters tall, this fearsome machine mounts an Mk. 3 laser on each arm. It has a 500m Sensor range, as well as normal audio pickup and visual normal and infra-red. Its shields add 50 to its DB; it speaks and understands only BIVOC — instructions must be programmed.

Combat Bot Type II: Slightly more mobile than Type I, this Bot is 2.5 meters tall and walks like a man. One arm is an Mk. 5 Laser, the other is a mechanical hand with +10 manipulate skill. On the shoulder is mounted an Mk. 5 Heavy Machine Gun. It stores 100 bursts of ammunition. This Bot has normal audio pickup, and visual into infra-red. Its shields add 50 to its DB. It can only communicate in BIVOC.

Combat Bot Type III: Perhaps the most terrifying of the three Combat Bots, this one floats on silent gravitics, and +30 stalking skill. It is 3 meters tall and mounts 2 Mk. 5 Blasters on the shoulders, and a Plasma Repeater Rifle on one arm. The other arm has a hand with +20 manipulate capability. It has a 10km Sensor range, as well as normal audio pickup and visual normal and infra-red. Its shields add 60 to its DB (the rest comes from maneuverability and superior armor). It also has +40 in Intellect and can speak up to 3 human languages fluently.

6.12 SPECIFIC ROBOT EXAMPLES

Following is a selection of robots of varying use and availability in the Empire.

TECHNICAL ASSISTANCE AND REPAIR BOT 412 SERIES

The TAR 412 series is considered by most to be one of the best repair bots in the universe. This small (1.6m), humanoid bot is extremely independent. The TAR 412 is programmed to diagnose and repair a piece of equipment without assistance from a tech. The bot can be purchased with any one of the following Technical Skills (at +70): Mechanical, Weapons, Power Systems, or Cybernetics Technics. The TAR 412 is in no way practical for use during combat situations. However, it is completely capable of functioning independently from starship power sources and personnel in a number of different "hostile" (Xeno-)environments for short periods of time (30 hours).

ROBOT NAME: TAR 412
TYPE: Service
WEIGHT(KG): 272.2
COMPUTER Mk.#: 8.1
PROGRAM: Sensor Analysis (Mk .3)
PROGRAM: Perception (Mk .8)
PROGRAM: Intellect (Mk 2)
PROGRAM: Manipulate: (Mk 2)
PROGRAM: Technical Practice (Mk 2) see below
PROGRAM: Xeno-environments (Mk 1)
POWER SOURCE: Batteries; 30 hour charge
MOTIVE FORM: Walk; 20m per rnd
MANEUVERING: +20
ARMOR: AT 15
HITS: 20
SHIELD: None
OB TOTAL: N/A
DB TOTAL: 0
DATA OUTPUT: 30cm diag. screen
AUDIO/VISUAL EQPT.: Holocamera; 9m range
WEAPONRY: None
SENSOR/RANGE: Multisens/9m; +15
EW/STEALTH: None
INTERFACE W/: Starship Technical Reference computers; +60
    Multiscanner; +20
LANGUAGE: BIVOC
OTHER FUNCTONS:
    #1- Xeno-environments: +50
    #2- Perception: +40
    #3- Intellect: +70
    #4- Manipulate: +70
    #5- Technics: +70
TOTAL COST: 451,310 Elmonits

ADVANCE RECONNAISSANCE AND COMBAT (ARC) SCOUT

The ARC Scout is specially designed to be both an information gathering device and a deadly offensive weapon. It is armed with a Mk. I Grenade Launcher and has the storage capacity of up to 20 standard size explosives (any type). The ARC Scout also sports a Mk. III blaster for close combat and as an anti-personnel weapon. It is equipped with a video-relay camera (lens has infra-red and light filter capabilities) which produces an image on a 16cm remote monitor screen up to 300km away. Also, sensor readings are constantly relayed to a portable computer (included in price) for use in the field. The ARC scout can be programmed and manipulated using this terminal by a skilled Computer Tech.

The ARC Scout is very fast and highly maneuverable. From the side the ARC Scout appears as a dark, horizontal, streamlined cylinder approximately 2m long and .5m wide. The video-relay camera is mounted just under the nose of the ARC and has a 360 degree view radius. The blaster and grenade launcher are concealed inside the bot until activated, when they are revealed from behind two receding panels. The blaster lowers from the base of the bot and has a 360 degree fire radius. The grenade launcher rises from the top of the bot and can be aimed by the Targeting program and/or the Computer Tech.

ROBOT NAME: ARC Scout
TYPE: Combat
WEIGHT(KG): 439.5
COMPUTER Mk.#: 6.5
PROGRAM: Electronic Warfare (Mk1)
PROGRAM: Sensor Analysis (Mk 1)
PROGRAM: Evade (Mk 1) +10 to DB
PROGRAM: Targeting +10 to
    Grenade Launcher OB (MK 1)
PROGRAM: Energy Weapon (Mk 1)
PROGRAM: Stalk/Hide (Mk .5)
PROGRAM: Perception (Mk .5)
PROGRAM: Intellect (Mk .5)
POWER SOURCE: Internal Fusion
    Reactor; 30 days w/out refueling
MOTIVE FORM: Med. Gravitic;
    200 kph
MANEUVERING: +40
ARMOR: Aligned Crystalline Steel:
    AT 20 (-50)
HITS: 300
SHIELD: +40
OB TOTAL: +60 Grenade Launcher
    +50 Blaster

DB TOTAL: +150 (+10 Evade, +40
    Shield, +50 Stealth, +50 Armor)
DATA OUTPUT: 16cm Diagonal
    screen
AUDIO/VISUAL EQPT.: Holographic
    camera; 30m range
WEAPONRY: 1 Mk. I Grenade
    Launcher +50 bonus
        1 Mk.III Blaster +50 bonus
    +10 Targeting program
SENSOR/RANGE: Multisensor
    (reads life forms, power source,
    construct)/30m; +50
EW/STEALTH: Jamming capability
    1km/+50 DB
INTERFACE W/: Portable computer;
    +50
LANGUAGE: BIVOC
OTHER FUNCTIONS:
    #1- Stalk/Hide: +25
    #2- Perception: +25
    #3- Intellect: +25
TOTAL COST (CUSTOM BUILT):
    874,500 Elmonits

DIPLOMATIC/PUBLIC RELATIONS BOT

Originally designed by Maircon Cybernetics for use as advertising tools in large corporations, the DPR Bot is highly skilled in Diplomacy, Oration, Etiquette, and Acting. These Bots were sent all across the universe as product promoters or flashy traveling salesmen. The excitement over this advertising gimmick was, however, short-lived. Maircon Cybernetics, in order to avoid bankruptcy, began to unload any and all of their remaining stock of DPR Bots (accepting any reasonable offer) on anyone who would take them. Most of the DPR Bots are able to interface with a starship's communications console and are often requested to use their diplomatic prowess to avoid serious conflicts with possible enemies or, in some cases, the law.

The DPR Bot is humanoid in form and of average size. It is able to speak and understand up to 3 languages (Imperial Standard plus two others depending on programming). In addition, the DPR Bot understands the mannerisms and quirks (etiquette) of the cultures associated with the languages they speak.

ROBOT NAME: DPR
TYPE: Human Relations
WEIGHT(KG): 196
COMPUTER Mk.#: 11.1
PROGRAM: Sensor Analysis (Mk 1)
PROGRAM: Perception (Mk 1)
PROGRAM: Oration (Mk 1)
PROGRAM: Intellect (Mk 1.5)
PROGRAM: Etiquette (Mk .6)
PROGRAM: Linguistics (Mk 3)
PROGRAM: Diplomacy (Mk 2)
PROGRAM: Acting (Mk 1)
POWER SOURCE: Batteries,
    40 hour charge
MOTIVE FORM: Walk; 20m per rnd
MANEUVERING: +50
ARMOR: AT 20
HITS: 150
SHIELD: None
OB TOTAL: None
DB TOTAL: 0
DATA OUTPUT: 6cm diagonal screen
AUDIO/VISUAL EQPT.: Holographic
    camera; 15m range
WEAPONRY: None
SENSOR/RANGE: Multisensor/15m;
    +25
EW/STEALTH: None
INTERFACE W/: Starship Communications consoles; +70
LANGUAGE: BIVOC
    Imperial Standard see below

OTHER FUNCTIONS:
- #1- Perception: +50
- #2- Oration: language skill rank 10
- #3- Intellect: +60
- #4- Etiquette: +70 each culture
- #5- Diplomacy: +70
- #6- Acting: +50

TOTAL COST (CUSTOM BUILT):
350,000 Elmonits

SYNTHETIC ORBITAL, N-SPACE, AND HYPERSPACE ASTROGATOR/PILOT

After years of market research, the Trevco Universal Bot Corporation designed the SONHAP; one of the most cost efficient, "user-friendly" bots ever made. The SONHAP is an affordable, mass market product which was originally targeted toward fashionable tourists who enjoyed travel, but did not wish to waste leisure time piloting and astrogating. However, the popularity of the SONHAP line grew. A few of the major starship construction companies began selling SONHAPs at discount rates with the purchase of a ship. Now, both new and used SONHAPs can be found rather easily in just about any highly populated area.

The SONHAPs come in a wide variety of designer colors. These bots are tall (1.9m), cylindrical, and very slender (25cm in diameter). The SONHAPs speak fluent Imperial Standard and are programmed to make cheerful small talk and exchange witticisms with passengers and crew members alike.

Despite their flippant air, the SONHAPs are quite adept at all space piloting and astrogation skills. Their extremely high intellect level allows them to control the ship's helm independently 25 hours a day.

ROBOT NAME: SONHAP
TYPE: Mech Interface
WEIGHT(KG): 208
COMPUTER Mk.#: 15.1
PROGRAM: Sensor Analysis (Mk .4)
PROGRAM: Perception (Mk .8)
PROGRAM: Linguistics (Mk 1)
PROGRAM: Intellect (Mk 2)
PROGRAM: Orbital Pilot (Mk .7)
PROGRAM: N-space Pilot (Mk .7)
PROGRAM: Hyperspace Pilot (Mk 2)
PROGRAM: Atmospheric Pilot (Mk 2)
PROGRAM: N-space Astrogation (Mk 2.5)
PROGRAM: Hyperspace Astrogation (Mk 3)
POWER SOURCE: Batteries; 20 hour charge
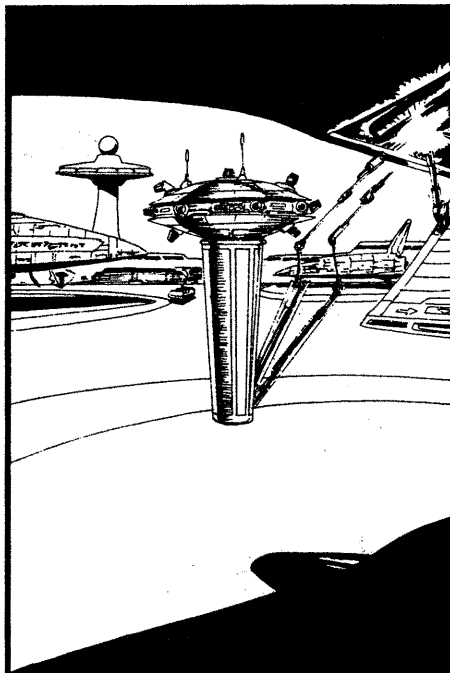
MOTIVE FORM: Slow Wheeled; 10m per rnd
MANEUVERING: +25
ARMOR: AT 13
HITS: 100
SHIELD: None
OB TOTAL: N/A
DB TOTAL: 0
DATA OUTPUT: 15m range holographic projector
AUDIO/VISUAL EQPT.: Holographic camera; 12m range
WEAPONRY: None
SENSOR/RANGE: Multisensor/12m; +20
EW/STEALTH: None
INTERFACE W/: Starship Pilot/ Astrogation consoles; +70
LANGUAGE: BIVOC Imperial Standard
OTHER FUNCTIONS:
- #1- Perception: +40
- #2- Oration: language skill rank 9
- #3- Intellect: +70
- #4- Orbital Pilot: +60
- #5- N-space Pilot: +70
- #6- Hyperspace Pilot: +60
- #7- Atmospheric Pilot: +70
- #8- N-space Astrogation: +70
- #9- Hyperspace Astrogation: +70

TOTAL COST (CUSTOM BUILT):
235,900 Elmonits

DRONES

Drones are fully automated "quasi-vehicular' constructs. All of a drone's functions (piloting, weapons systems, sensors, etc.) are controlled by its computer/Bot brain. Most are programmed to speak several key languages (depending, of course, on where and who's they are), and are well-versed in the Perception and Oration functions.

Robotic orbital relay beacons: Also known as "Orbots." Orbots are often found in geosynchronous orbits above planetside Spacefaring Ports, where they handle incoming traffic, supply planetary data or warnings, send out Port directives, request and verify Passage Codes, etc. Basically, they serve to take some of the load off the communications personnel at the Port. Orbots may also be left to guard planets, moons, ships, or whatever — most Orbotic systems are modular (insuring that no two Orbots need be exactly alike), and many contain advanced weaponry.

Stellar and planetary survey drones: Often referred to as "Rovers" Survey Drones are employed by most Imperial and Provincial scout services. Equipped with extensive memory storage, high Intellect and Participant Research programs,they are capable of taking large amounts of accurate readings in a comparatively short time. Very large survey drones (with capacity for a small crew) are often constructed above Omega Worlds (or any worlds which require a lengthy and detailed analysis), and serve as fully automated, artificially intelligent research laboratories. Such laboratories are generally equipped with some form of high security system. Smaller Drone models are often scattered from an orbiting survey ship which awaits and correlates their findings.

Jettisoned evacuation and recovery pods: Large passenger-carrying Drones which are used as "returning lifeboats," JERPS are designed to protect unskilled personnel in the event of an emergency. Stored in a standard shuttle or fighter bay, they are loaded and launched at the first sign of danger, and make their own decisions regarding piloting until the danger ends and they return to the ship (they may, of course, be programmed not to return to the ship, to head for the nearest moon, to hold a tight orbit, etc).
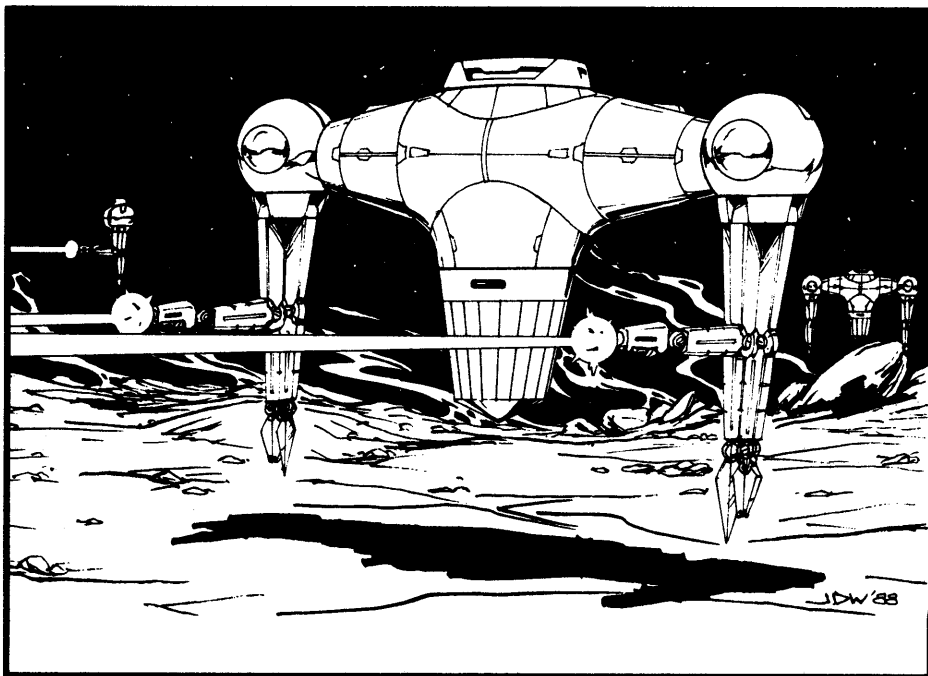
JERPs are usually equipped with high Perception, Oration, and Intellect ratings, and many possess Evade programs or even (defensive) weaponry.

Search and destroy drones: Employed to ruthless effect in many guerilla activities, SDDs are deathly perceptive and intelligent recon and combat units. Often equipped with manipulative "limbs" for weaponry, SDDs are always well armed and well shielded. Sensors, EW/Stealth, Xeno-Environments, Stalk/Hide, and Ambush are all very popular SDD functions. They are designed to make strategic decisions, collect large amounts of military intelligence quickly and quietly, perform any combat functions they deem necessary, and return to a preprogrammed location. Truly awesome constructs, they are also extremely expensive. Imperial Search and Destroy Drones (ImpSaDDs) are the bane of many a would-be revolution.

6.3
ANDROIDS

An Android is a robot designed to closely resemble a human being or other sentient race. Androids have an artificial, Molecutronic brain, but are highly intelligent: capable of self-programming and extremely versatile. The highest-quality models are indistinguishable from real sentients except by sensor (or other artificial) scan. Androids are often much stronger and/or quicker than their sentient counterparts. They also *learn*, gathering experience and increasing their skills just like humanoids.

While Androids can be 'programmed' during the activation with various skills, loyalties and abilities, it is not the same as programming a robot or computer. Androids are nearly human in their thought processes and most tend to develop 'personalities'.

6.31 BASIC TYPES

While Androids are always custom-designed, below are listed four general categories which most production companies use as 'series' guidelines.

Warrior: What else need be said? Intellect was not a priority, except to instill an almost animal cunning. Large and muscular in appearance, these Androids can be programmed with certain absolute loyalties, and other 'morals' as desired (there are legal minimum requirements in most areas). Popular as bodyguards, they are considered a status symbol on the densely populated, highly-civilized worlds.

Pilot: Preprogrammed with +50 to as many as 5 piloting /driving skills, these are very useful to large companies needing pilot/chauffeurs, etc.

Tech: Similar to the Pilot, the Tech is purchased with 5 Technic skills (purchaser's choice) with a +50 bonus in all.

Protocol: Trained with a variety of customs and local etiquettes, this Android is rarely seen outside of the high-society "inner worlds". They are invariably attractive, but often somewhat bland (this by nature, as diplomats need to be bland to avoid causing offense).

6.32 SPECIFIC EXAMPLES

While there are many Android producing corporations in the Empire, three stand out as the premier producers of Androids: *Humanadyne, Universal Robotics,* and *Virtual Humanatronics.* Among these three, Virtual controls a commanding market share, and indeed pioneered self-programming molecutronic brains. All three companies construct androids in nearly every Humanoid subrace. The Virtual Humanatronics 'Jym-bob' series was immensely popular, and the models V through XII are still considered to be state of the art. Naturally, V.H. also produces a number of other models, but the JB series remains a staple.

VIRTUAL HUMANATRONICS

Jym-bob: Usually Explorers or Armsmen, the Jym-bobs were originally designed as agri-techs for use on remote farming planets (and look the part). They gained popularity, however, and the later models are quite sophisticated.

Sheri: Medics and/or Researchers, the Sheri series is popular with the Imperium.

Alex: A technical wizard, the Alex models are very dexterous and mechanically oriented.

Tama: often a pleasure model.

HUMANADYNE

Metanira: A very popular pleasure model and sometimes pilot.

Jason (J. Mk VII): Usually an Armsman, the Jason series is sought after for personal guards.

Jesse (J. Mk. VIII): A restricted series only available to the KIN (Kashmere Intelligence Net), this series is said to match the best V.H. can put out.

6.4
ROBOTIC PROGRAMMING

Robots are made more specialized by their programming. The *Robotics Programs Table* (5.3) lists a number of popular softwares with which a robot owner can 'customize his 'bot.

BIOLOGICAL CONSTRUCTS

By the time of *Space Master,* Terran science has perfected the techniques of gene replication and manipulation. While the morality of the more complex results of this ability is hotly contested (and banned outright on many worlds) there are still many organizations who carry out genetic manipulation on a large scale.

Without genetic control there would be no molecutronics (so, in a way, all advanced computers and Androids also fall under this category). However, the principals behind the growth of these tissues are far different than the genetic manipulations of human tissues which are necessary to create clones and humanoid Alterant Replications.

7.1
MICRO-ORGANISMS

Micro-organisms have been engineered since the very dawn of human civilization, before man had even achieved viable interplanetary spaceflight. In fact, mankind barely learned how to biologically control his environment before poisoning his planet beyond repair.

In the Fifth Century of the Terran Empire, micro-organisms are carefully controlled and monitored, easily engineered to do anything from eat garbage to create healing substances. They are a mainstay of civilization, and most are incredibly mundane.

7.2
CLONING

See Section 12.3 for construction rules on cloning. Since it is by necessity a rather personal operation, the potentials of purchasing clones 'off the shelf' are rather limited.

7.3
CYBORGS

Cyborgs (Cybernetic Organisms) are, as the name implies, a combination of cybernetic and organic construction. Technically, a Cyborg is anything from a humanoid with a mechanical prosthesis to a robot with living external tissue to simulate a real organic being. The definition in this case leads more towards the latter, as the 'construction' portion of such cyborgs is equally organic and mechanical. The GM must regulate such creations and decide for himself the technic and legal ramifications of cyborgs in his game.

7.4
ALTERANT REPLICANTS

Also called simply "Replicants", these are beings created from sentient genetic material but altered using Recombinant DNA and other techniques to create an "improved model". It is scientifically possible to perform Alterant Replication upon animals, plants, and most sentient species. Below are listed the four most "popular" Human Replicant types and their general functions. They are not as dependable as Androids, but somewhat less expensive and easier to maintain.

Ironically, Replicants — though created out of humanoid genetic material — are considered less 'human' than Androids. They are rarely 'custom' grown, and are invariably programmed and conditioned through intense psychological and psycho-neuronic patterning. The process irreparably damages one Replicant brain out of ten, but this is considered an acceptable loss rate.

GENERAL TYPES

Below are listed a few of the basic 'off-the-shelf Replicant types.

Warrior: Strong and agile, they can be purchased with skill in almost any weapons combination. Also have +25 skill in Stalking/Hiding Climbing, and other physically-oriented skills.

Tech: Identical to the Android Tech, but start with up to +50 in 3 Technic skills.

Clerical: Well-organized memory (perfect short-term memory) makes this Replicant an excellent secretary.

Recreation: This Replicant is primarily versed in the skills of *Gaming, Acrobatics, Singing, Dance, Gambling, Music,* and of course, *Seduction.*

Laborer: Often untrained, sometimes even brain-damaged from failed programming, these types are inexpensive and capable of only the most simple manual tasks. They are considered 'disposable' by their owners. This type is decried as an abomination by most governments, but still is used in many locations where cheap manual labor is required and robotics maintenance is expensive.
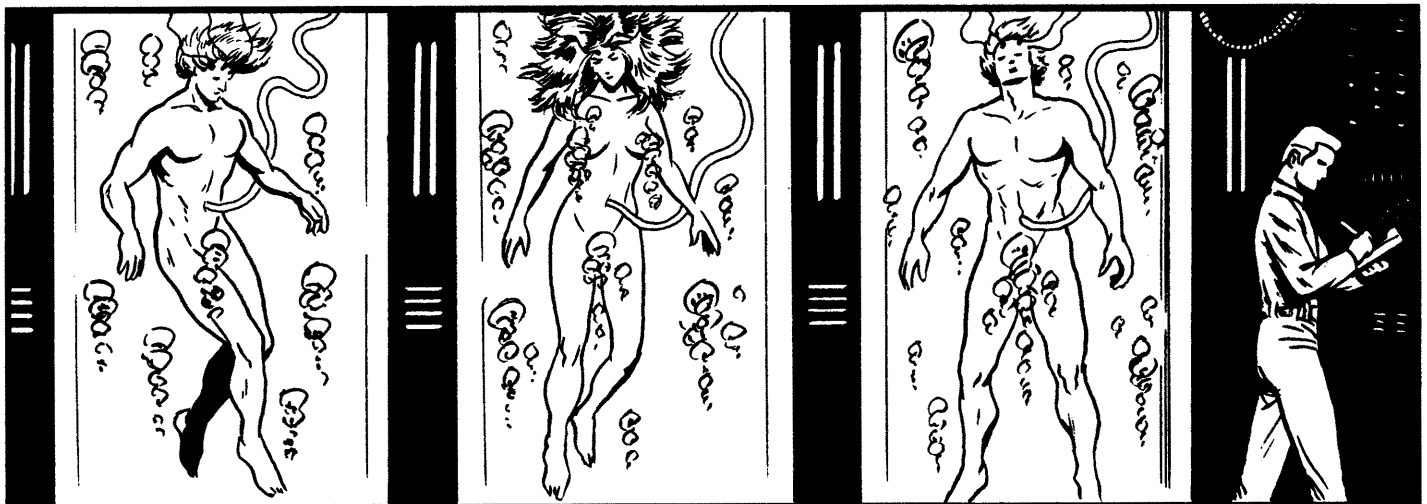
ROBOT/DRONE/ANDROID/REPLICANT COST CHART

TYPE	MOTIVE FORM	HITS	AT	(DB)	ARMAMENT (OB)	PWR	COST	NOTES
Robot								
Service Bot	S WHEEL	50	20	(0)	—	¥	50,000	
Mech Interface Bot	S WHEEL	100	20	(0)	—	¥	65,000	
Cyborg Relations Bot	WALK	80	12	(10)	—	¥ ·	40,000	
Combat Bot Type I	S TRACK	200	20	(90)	2 Mk. 3 Lsrs (63)	§	100,000	
Combat Bot Type II	WALK	240	20	(100)	1 Mk. 5 Lsr (50) 1 Mk. 5 HMG (70)	§	120,000	
Combat Bot Type III	M GRAV	300	20	(200)	2 Mk. 5 Blstrs (80) 1 Mk. 5 P Rep Rfl(100)	§	180,000	
TAR 412	WALK	200	15	(20)	—	¥	70,000	
ARC Scout	M GRAV	300	20	(150)	1 Mk 1 Grnade Lnchr(50) 1 Mk 3 Blaster (60)	§	150,000	
DPR	WALK	150	20	(0)	—	¥	25,000	
SONHAP	S WHEEL	100	13	(0)	—	¥	40,000	
Drones								
Orbot	(thrusters)	200	20	(0)	—	§	20 - 80,000	Various models
Rovers	(thrusters)					§	20 - 500,000	Various models
JERPs	(varies)					§	100 - 800,000	Various models
SDDs	F GRAV	300+	20	(200+)	Varies	§	1 - 3 mil	Various models
Androids								
Warrior	—	220	11	(50)	+150/+100/+80 any weaps	§	100,000	
Pilot	—	180	4	(30)	+80/+50 any weaps	§	70,000	
Tech	—	180	4	(30)	+50 one weap	§	60,000	
Protocol	—	150	4	(20)	—	§	50,000	
Jym-bob VIII	—	230	4	(25)	varies	§	110,000	Armsman
Jym-bob XII	—	200	4	(35)	varies	§	150,000	Pilot
Sheri XII	—	180	4	(30)	varies	§	140,000	Scientist
Alex VI	—	180	4	(30)	varies	§	130,000	Tech
Tama IV	—	180	4	(35)	varies	§	120,000	Entertainer
Metarina	—	150	3	(25)	varies	§	100,000	Entertainer
Jason VII	—	200	11	(25)	varies	§	130,000	Armsman
Jesse VIII	—	225	4	(35)	varies	§	(180,000?)	Restricted
Replicants								
Type I (Warrior)	—	200	1	(40)	+100/+80/+50 any weap		20,000	
Type II (Tech)	—	130	1	(20)	+50 one weap		25,000	
Type III (Clerical)	—	80	1	(10)	—		20,000	
Type IV (Recreation)	—	80	1	(30)	+50 one weap		15,000	
Type V (Labor)	—	60	1	(0)	—		5,000	

KEY:

MOTIVE FORM: Refer to the Vehicular Movement Chart (pg 43) for the explanation of these terms. The humanoid types obviously move as humans.

AT (DB): The Armor type is listed, with the standard Defensive Bonus (DB) in parenthesis afterwards.

ARMAMENT: Any and all armament. The total Offensive Bonus (OB) for each weapon type. Android and Replicant bonuses are applicable to any handheld weapon desired.

PWR: The type of powersource for the unit. ¥ = internal batteries, usually with a charge of 10-50 hours, rechargeable on any fusion converter. § = microfusion reactor, usually internal. Replicants, being organisms, eat to gain energy.

COST: The average cost for the Robot/Android/Replicant in Elmonits.

VEHICLES

*"We'll have fun, fun, fun
'till Daddy takes the T-bird away"*

Unknown
Pre-starflight Poets

The vehicles described below are for the most part limited to small machines, designed to carry no more than ten persons. The craft are either vehicles for private use, small research parties, or exploration.

DEFINITIONS

Below are described a number of commonly used vehicles of different types and purposes. These are for quick reference and general use. Some general terms used throughout the section are defined here:

GEM: (Ground Effect Maneuvering) Using powerful fans to create an air cushion, this system requires an atmosphere of a density range similar to Terra. Altitude is usually fixed at no more than one meter.

Gravitic: Utilizing a gravitic field to partially nullify gravity's effect upon the vehicle. Unless otherwise specified (such as for air and spacecraft) they have a limited lifting power to an altitude limit of 3 meters. For vehicles like cars, their altitude is fixed at about .5 meters.

Hydrofoil: A fin or set of fins so designed as to lift a ship's hull out of the liquid and reduce friction, thus allowing an increase in speed. This general principle is applied with some modifications here. Such craft are usually propelled by hydrojets: jets which pump tremendous amounts of water (or whatever the travel medium is) out with great force, driving the craft forward.

SMAC: (Singly Manned Attack Conveyance): A type of space fighter used for short-range missions.

8.1

GROUND CONVEYANCE VEHICLES

This definition applies to all vehicles which require a solid surface on or above which to act — and of course gravity to pull the vehicle towards that surface.

SCOOTERS

Gravbike: An open machine about two meters long, the gravbike is designed for one occupant, either crouching forward or reclining, depending on the design. There is a small storage area under the seat, though these vehicles are designed primarily for recreational travel. They have very limited gravitic lift (normally only up to about 5 meters). The faster models are equipped with a *static field*, a low-power energy shield which protects the rider from the strong airflows.

Buzzer: A small, quick two-seater powered by Fast Gravitics, the Buzzer looks like two enclosed sidecars connected by a horizontal bar between them. Model II is equipped with Mk. 5 Heavy Lasers. Both models have full gravitic lift.

Gravskooter: One-seater transports, Gravskooters are often used for short hops and courier service. They can be used to tow a Grav Sled, and are not sealed versus the environment. The skooter comes in a variety of styles and is often used for recreation and by those who prefer something more exciting than a gravcar. They have full gravitic lift and a static field.

A more expensive (and less 'sporty') model called the ScoutSkooter is available with a forward mounted Mk. 5 Heavy Laser, a greater operating duration, and EW and shields capabilities. Scoutskooters are standard on Imperial Survey vessels.

CARS

Vehicles for transporting passengers or supplies. These have minimal interior environmental control (heat/cool/humidity) and are not suitable for any environment other than standard Terran.

Wheeled Car: This refers to any sort of vehicle which depends upon the friction of wheels against a solid surface for propulsion. In more sophisticated versions the wheels are of some soft material or an inflated polymer. This cushions the ride for any passengers and equipment. These 'tires' are often the most vulnerable part of such craft.

GEM Car: Any GCV which uses air cushioned suspension falls into this category. These craft tend to have a 'skirt' of some flexible material around the bottom of the vehicle to better contain the air cushion. If this skirt is severely damaged the air cushion will not function properly, greatly hampering the craft maneuverability.
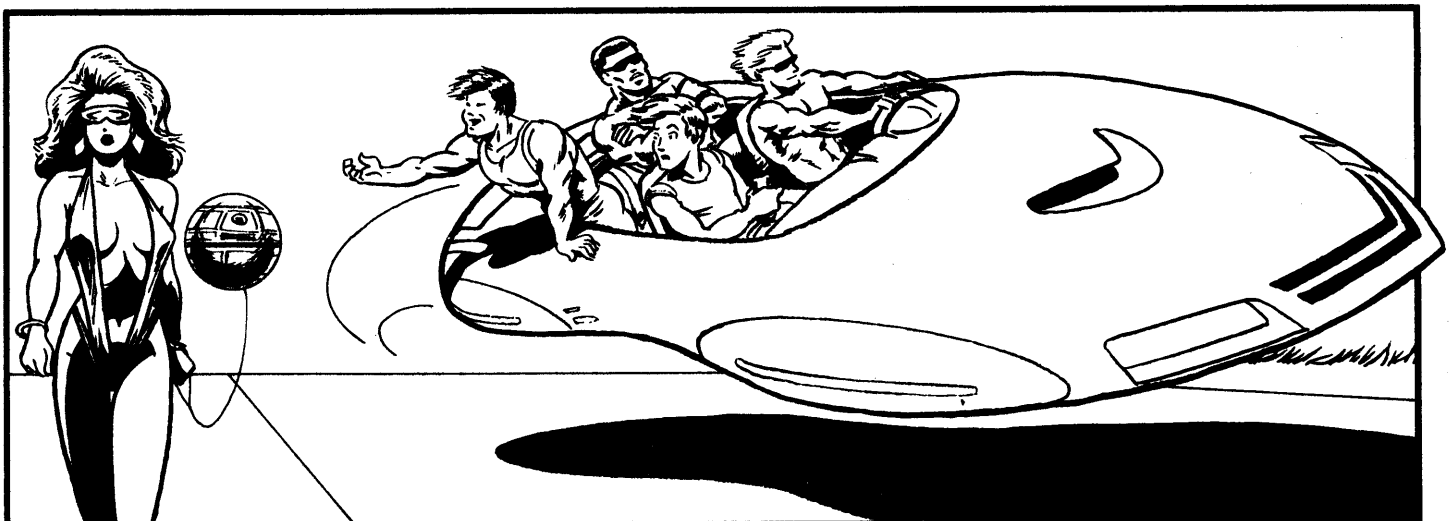
Gravitic Car: The highest technology personal land conveyance medium, such vehicles have a built-in stabilized gravitic field which holds them suspended above any solid (or, if so programmed, liquid) surface. Lateral power is usually provided by compact, quiet turbofans for slower (under 100 KPH) vehicles, while jets, turbo-gravitics, or even small rocket engines are used on high-speed craft.

EXPLORERS

These have full environmental control for 10 days per passenger (minimum) and are equipped with 3000 km/orbital com units, 200 km range Sensors, visual scanners, viewports, and an Mk. 40 computer.

Exploration Walker: Very maneuverable, these vehicles are usually conveyed by four to six "legs", computer coordinated so that the machine literally walks over uneven terrain. These are more stable than gravitic craft, but slower; and the legs are somewhat vulnerable to damage.

GEM Explorer: These are more maneuverable, but usually lighter than the above AFV because of the enormous power expenditure to lift the machine. GEM Explorers are uncommon, mainly because it is difficult to protect the delicate lifting fans and skirt adequately.

Gravitic Explorer: This craft has a variable altitude capability, able to rise up to 100 meters before encountering stability problems.

8.2 ▬▬
MARINE SHIPS

Although called *marine*, these craft are appropriate for navigation through any liquid material which would not prohibit such travel for some other reason. The correctly designed craft, for instance, might employ a type of hydrofoil to travel through the liquid hydrogen oceans of Jupiter's 'atmosphere'.

Open Speedboat: Unprotected standard craft, powered by a hydroprop.

Open Airboat: Built to skim the water's surface, this open-air craft is propelled by one or more large fans which push the vehicle forward. This craft is ideal for shallow or viscous liquid.

Open Hydrofoil: the passenger area of this ship is either completely open or protected by a limited-environment control cabin. It is basically a large speedboat with collapsible foils which engage when the craft attains a certain speed (about 50 kph) lifting it out of the liquid and allowing for greater velocity.

Exploration/Xenoenvironment Hydrofoil: Much larger than the open version, with an interior environment completely controlled. Such a craft might have exploration equipment or be for travel between floating stations on a planet of non-Terran environment (such as a Gas Giant).

Hydroskimmer: An improvement on the hydrofoil design, though only practical for very small, high-speed designs. One open and one enclosed version is listed.

Research Submersible: Small, relatively slow underwater craft, fitted with exploration equipment like the Explorer craft above. These are capable of submerging into liquids where pressures far exceed even the deepest oceans of Terra. Basically short-mission craft.

Exploration Submersible: Larger, more long-range than the Research subs, these vehicles are usually also equipped with high-speed submersible functions such as an aerofilm or electrostat fields to reduce liquid friction to a minimum.

8.3 ▬▬
AIRCRAFT AND SMALL SPACECRAFT

Embracing atmospheric as well as small N-space craft, this section includes all vehicles whose main mode of travel is independent of any solid or liquid environment. Naturally, prop craft require an atmosphere through which to pull the ship; and jet propelled aircraft require the appropriate oxygen/nitrogen atmosphere. Shuttles, SMAC fighters and other N-Space craft are all capable of atmospheric travel and ground landing unless otherwise noted.

Helicopter: A highly maneuverable though fragile vehicle which is lifted and moved laterally by use of a large overhead rotor (or rotors). These require an atmosphere to operate.

Prop Plane: Utilizing wing surfaces for lift and stability, these craft are propelled by forward-facing rotors. They require an atmosphere to operate. It should be noted that such craft are often preferred over combustion jets in *Space Master* because they can be powered by clean electricity, are more efficient and, with new alloys and aerodynamics, can move almost as fast as most such jet craft.

Gravprop Plane: Identical to the prop above except that it is capable of vertical lift-off and landing because of gravitic lifting boost. This also reduces energy consumption to maintain the plane's altitude. Wings are smaller, and the craft is capable of greater speeds. These require an atmosphere to operate.

High-speed Jet: Used for long-range planetary travel where suborbital flight is impractical, these craft are extremely fast. They require an oxygen-nitrogen atmosphere to operate.

Gravitic Belt: Not so much a vehicle as a personal device, the gravitic belt is a small gravitic generator strapped to the back with a wide belt. From the generator, control appendages extend forward to a position convenient for the wearer. The belt is capable of full lift and maneuverability.

Gravitic Sled: A small oval platform about two meters in length, the sled is designed for a standing pilot who controls the sled via small console mounted on a column at the front of the sled. The sled is capable of full lift and maneuverability.
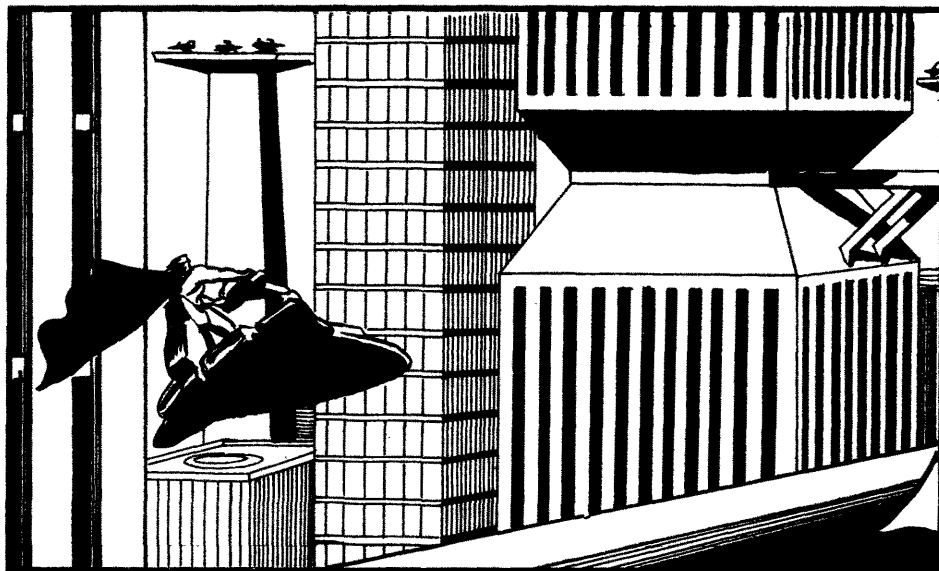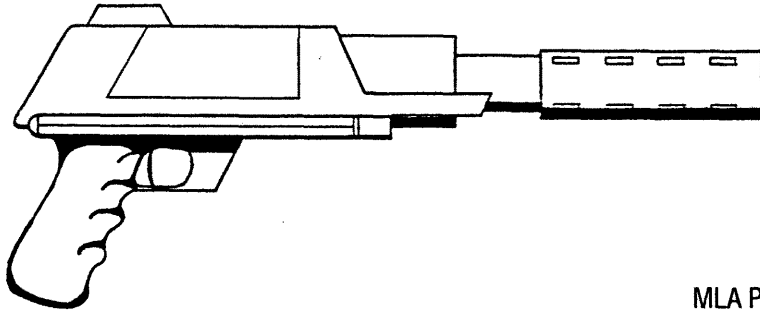
MLA PISTOL
Cobra/Haunt

Gravitic Flitter: Coming in a variety of forms from recreational to exploration, these work on the same principle as gravitic cars, except that their vertical lift is much more powerful and can be manually controlled, allowing the craft to fly at altitudes of even kilometers. They are not as fast as some planes, but very maneuverable and ideal for light survey/exploration work.

Runabout: A popular fan flitter which seats four people with room for cargo, the Runabout is not sealed against the environment, making it a bit more affordable than a Grav Prop plane. Motive power is supplied by two great adjustable turbofans, one on each side of the mostly transparent cabin.

Suborbital Shuttle: With complete interior environmental control, these vehicles are designed for very swift planetary travel. Usually rocket powered with gravitic lift, they rise to suborbit level and make most of the journey at high speed where there is little atmosphere to create friction.

Maintenance Pod: A very small craft powered only by thrusters and incapable of atmospheric maneuvering. Used for repairing ships in Space Dock or other stable, orbit situations. They are equipped with a standard docking collar and have full interior environment control.

Orbit Shuttle: Designed for ground-to-orbit transfer of passengers and supplies, these ships are rocket-powered with gravitic lift for landing and takeoff. They are equipped with a standard docking collar and have full interior environment control.

Courier Shuttle: For interplanetary journeys, these ships are capable of landing on most planetary surfaces and have powerful N-Space engines for swift travel. Like the shuttle above, they have a standard docking collar and full interior environment control. Storage for supplies to sustain each passenger for 5 days.

Hypershuttle: Primarily for short interstellar journeys, Hypershuttles are light, fast vehicles designed to transport personnel or materials as quickly as possible. Like they other shuttles, they have no armament and possess only navigational deflectors, not useful in combat. They possess the usual standard docking collar and full interior environment control, and have a capacity to carry supplies for twenty days per passenger.

DEBARTON

SMAC Fighter: These vehicles are small but swift and equipped with powerful weapons. Some have shields, but others even forgo this protection to allow for more deadly armament. SMACs usually use energy weapons because of their lower mass. They have full interior environment control but only space for one pilot/gunner (some have Robot interface capability). These machines of war have gravitic landing capability, but often operate from a large "carrier" ship nearby, as SMACs are very short-range.

Lifeboat: (A more sophisticated Drone version — normally used in passenger liners — is noted in the Robots/ Drones section). Lifeboats are installed in all starships and space vessels larger than a shuttle. Invariably they are very basic craft with a one-man console and ten to twenty acceleration couches. The console has simplified Astrogation/ piloting/ sensor controls allowing someone with basic skills to manage a planetary landing. Some have automatic settings which direct the on-board computer to locate (for instance) the nearest habitable planet. Power is provided by a small fusion reactor, and the lifeboat is driven by an N-Space drive rated at 5 or less, with basic gravitics for landing. Lifeboats are almost never Hyperspace capable. All have automatic TBD distress beacons and Microfreq communicators. They generally have medkits and twenty-day food supplies, a few hand stunners and survival equipment. Better versions also have 1-2 Medstasis beds for injured passengers.

Orbital Surveyor: A fully equipped planetary survey ship, it is designed to be dispatched from an orbiting starship. Surveyors have a Mk. 50 computer, extensive sensory and analysis equipment, and environmental support for a crew of 8 for 50 days. The craft has a three-man cockpit, a small lab, and a living area with eight bunks and five retractable acceleration couches. With powerful Fast Gravitics and a Fusion Drive, the ship is free to travel the planet surface and land just about anywhere. A Surveyor is theoretically capable of interplanetary travel (N-Space Rating 3) but has limited fuel.

VEHICLE STAT AND COST CHART

VEHICLE TYPE	MOTIVE	PSNGRS	CARGO	ENVIR	MASS	CAT	(DB)	ARMAMENT	MI	PWR	COST
SCOOTERS											
Buzzer	F GRAV	2	1	semi	2	22	(55)	—	—	¥	30,000
Buzzer II	F GRAV	2	1	semi	5	22	(55)	1 Mk5 Laser	—	§	35,000
GravSkooter	M GRAV	1	0	none	4	21	(30)	—	P	¥	25,000
SkoutSkooter	M GRAV	1	0	none	10	21	(40)	1 Mk5 Laser	W	§	28,000
CARS											
Wheeled Sedan	M Wheel	5	3	semi	2	22	(20)	—	N	¥	5,000
Wheeled Truck	M/S Wheel	2	60	semi	25	22	(10)	—	N	¥	50,000
Wheeled Van	M Wheel	8	6	semi	10	22	(15)	—	N	¥	10,000
Wheeled Sports Car	F Wheel	2	2	semi	2	22	(30)	—	N	¥	8,000
GEM Sedan	M GEM	5	4	semi	2	22	(30)	—	N	¥	8,000
GEM Truck	M/S GEM	2	50	semi	20	22	(20)	—	N	¥	80,000
GEM Van	M GEM	8	6	semi	10	22	(25)	—	N	¥	16,000
GEM Sports Car	F GEM	2	2	semi	2	22	(50)	—	N	¥	15,000
Gravitic Sedan	M Grav	4	2	semi	2	22	(35)	—	N	§	15,000
Gravitic Truck	M/S Grav	2	50	semi	20	22	(25)	—	N	§	150,000
Gravitic Van	M Grav	8	7	semi	8	22	(30)	—	N	§	30,000
Gravitic Sports Car	F Grav	2	2	semi	2	22	(60)	—	N	§	25,000
Explorers											
Exploration Walker	Walker	6	10	full	50	23	(20)	—	N	§	150,000
GEM Explorer	M GEM	8	8	full	30	23	(10)	—	N	§	100,000
Gravitic Explorer	M GRAV	6	4	full	15	22	(20)	—	N	§	180,000
MARINE CRAFT											
Open Speedboat	F HYPROP	4	2	none	1	21	(20)	—	N	¥	4,000
Open Airboat	M PROP	2	4	none	1	21	(10)	—	N	¥	
Open Hydrofoil	F HYFOIL	4	2	none	3	22	(30)	—	N	§	15,000
Seascout (explorer)	S HYFOIL	6	10	full	18	22	(20)	—	N	§	100,000
Discovery II (explorer)	F HYFOIL	8	12	full	25	23	(40)	—	P	§	160,000
Hydroskimmer	HYSKIM	2	3	none	2	21	(20)	—	N	¥	
Hydroskimmer	HYSKIM	4	8	full	3	21	(40)	—	N	§	60,000
Research Submersible	S SUBM	2	2	full	4	24	(10)	—	N	§	30,000
Exploration Submers.	F SUBM	6	10	full	18	24	(20)	—	N	§	100,000
AIRCRAFT											
Helicopter											
1-man	S PROP	1	5	none	1	21	(30)	—	N	§	6,000
2-man	S PROP	2	1	semi	2	22	(30)	—	N	§	15,000
Prop Plane											
2-man	M PROP	2	1	semi	1	21	(20)	—	N	§	12,000
4-man	M PROP	4	2	semi	3	22	(20)	—	N	§	25,000
Gravprop Plane											
2-man	F PROP	2	2	full	2	21	(30)	—	N	§	50,000
4-man	F PROP	4	4	full	5	22	(40)	—	N	§	90,000
High-speed Jet											
4-man	F JET	4	4	full	6	22	(30)	—	P	§	110,000
8-man	F JET	8	10	full	15	23	(40)	—	P	§	250,000
Gravitic Flitter											
Gravitic Belt	S GRAV	1	0	none	.005	N/A		—	N	¥	3,500
Gravitic Sled	M GRAV	2	1	none	.5	21	(30)	—	N	¥	12,000
2-man	F GRAV	2	3	full	1	22	(30)	—	N	§	80,000
6-man	F GRAV	6	4	full	4	22	(30)	—	P	§	200,000
10-man	F GRAV	10	6	full	12	22	(30)	—	P	§	500,000
Runabout	F PROP	4	2	semi	4	21	(10)	—	—	§	75,000
SPACECRAFT											
Suborbital Shuttle											
6-man	FUSION RCKT	6	10	full	20	23	(50)*30		P	§	800,000
20-man	FUSION RCKT	20	25	full	75	23	(50)*30		P	§	3,000,000
Small Spacecraft											
Maintenance Pod	N-Space Thrstr	2	2	full	3	21	(10)	—	N	§	30,000
Lifeboat (small)	N-Space 5	10	10	full	50	23	(10)	—	—	§	500,000
Lifeboat (large)	N-space 4	20	10	full	100	23	(10)	—	P	§	750,000

VEHICLE TYPE Orbit Shuttle	MOTIVE	PSNGRS	CARGO	ENVIR	MASS	CAT	(DB)	ARMAMENT	MI	PWR	COST
6-man	FUSION RCKT	6	10	full	25	23	(50)	—	P	§	1,000,000
20-man	FUSION RCKT	20	30	full	90	23	(50)	—	P	§	3,600,000
Courier Shuttle	N-SpRtg 20	4	10	full	100	22	(90)	—	P	§	10,000,000
Hypershuttle	N-SpRtg 10/TLRtg 12	6	12	full	150	22	(90)	—	P	§	15,000,000

KEY:

MOTIVE: refer to the *Vehicular Movement Chart* for the explanation of these terms. For the spacecraft, the N-Space Rating indicates the acceleration capability x 10 kilometers per second[2]. TL Rating is the number of light-years travelled per day.

PSNGRS: indicates the number of persons the vehicle is designed to carry comfortably — including pilot and crew. In an emergency each cumet of cargo space could be used for 'passengers', but only for limited periods, as it overloads the environmental control systems.

CARGO: additional cargo space available, in cubic meters (cumets).

ENVIR: amount of interior environmental control: *none* means that either there is no cabin or that the cabin has not atmospheric control; *semi* means that the cabin is enclosed but not necessarily sealed, and provides heat/cooling and some humidity control; *full* means that the cabin is completely insulated and sealed, and is equipped with complete environmental support. the number in parenthesis is how many days of environment (air, etc) are available per passenger (assuming enought fuel).

MASS: mass of the craft (empty) in tons. Multiply this number time 20 to determine the number of hits the vehicle can withstand.

AT (DB): The Armor type is listed, with the standard Defensive Bonus (DB) in parenthesis afterwards. This does not include any shield bonus.

ARMAMENT: Most vehicles do not have weapons, but it is possible to have weapons installed on some vehicles

MI: indicates whether the craft is equipped with a Mech Interface terminal for a robot. The space either has an 'N' (for "no interface"), or one or more of the following: "P" (Pilot Interface), "W" (Weapons Interface), "S" (Sensor Interface).

PWR : Either batteries (¥) which last 10 to 50 hours of continuous operation; or a fusion reactor (§).

COST: the average cost for the vehicle in Elmonits.

VEHICULAR MOVEMENT CHART

(all speeds in kph unless otherwise noted)

MOTIVE FORM	Road	Trail	Clear	Dwnslope	Upslope	Rough	Woods	Swamp	Water	Ocean	Submrg	DnseAtm	ThinAtm
Slow Wheeled	50	30	30	+10	-10	10	—	—	—	—	—	—	—
Med. Wheeled	100	60	50	+20	-20	20	—	—	—	—	—	—	—
Fast Wheeled	300	200	150	+20	-20	20	—	—	—	—	—	—	—
Slow Tracked	35	30	30	+10	-10	25	10	—	—	—	—	—	—
Med. Tracked	50	40	40	+10	-10	30	15	—	—	—	—	—	—
Fast Tracked	150	100	80	+10	-10	40	20	—	—	—	—	—	—
Walker	50	40	40	-5	-10	40	20	10	—	—	—	—	—
Slow GEM	50	50	50	+10	-10	40	10	50	50	40	—	—	—
Med. GEM	100	100	100	+10	-10	80	20	100	100	80	—	—	—
Fast GEM	300	300	300	+20	-10	100	30	150	150	120	—	—	—
Slow Gravitic	100	100	100	+20	-5	100	50	100	100	100	—	100*	—
Med. Gravitic	200	200	200	+20	-0	200	50	200	200	200	—	300*	400*
Fast Gravitic	500	500	500	+20	-0	300	50	300	300	300	—	500*	800*
Slow Submer.	—	—	—	—	—	—	—	—	15	15	10	—	—
Med. Submer.	—	—	—	—	—	—	—	—	40	40	30	—	—
Fast Submer.	—	—	—	—	—	—	—	—	120	100	150	—	—
Slow Hydrofoil	—	—	—	—	—	—	—	30	60	50	—	—	—
Fast Hydrofoil	—	—	—	—	—	—	—	50	150	120	—	—	—
Hydroskimmer	—	—	—	—	—	—	—	40	250	200	—	—	—
Slow Hydroprop	—	—	—	—	—	—	—	20	40	40	—	—	—
Fast Hydroprop	—	—	—	—	—	—	—	35	75	60	—	—	—
Slow Prop	—	—	—	—	—	—	—	—	—	—	—	150	120
Med. Prop	—	—	—	—	—	—	—	—	—	—	—	400	350
Fast Prop	—	—	—	—	—	—	—	—	—	—	—	750	700
Slow Jet	—	—	—	—	—	—	—	—	—	—	—	500	1000
Med. Jet	—	—	—	—	—	—	—	—	—	—	—	1000	2500
Fast Jet	—	—	—	—	—	—	—	—	—	—	—	1800	3200
Chem Rocket	—	—	—	—	—	—	—	—	—	—	—	2000	4000
Fusion Rocket	—	—	—	—	—	—	—	—	—	—	—	2400	5000

* indicates speeds only attainable by gravitic vehicles capable of high—altitude lift.

MANTA RAY EXPLORER

Front View

Hatch
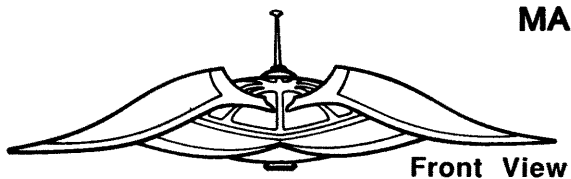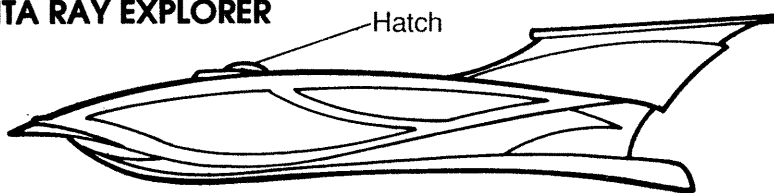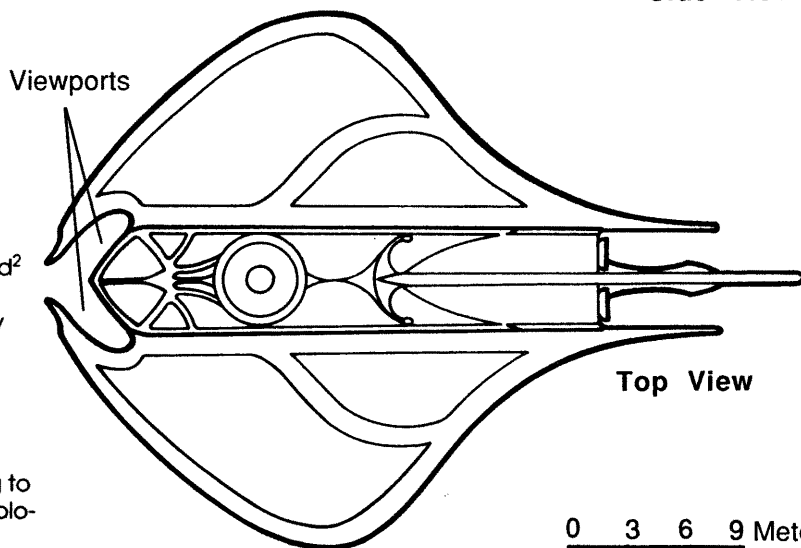
Side View

CLASS: Explorer
PRODUCER: Cygnus Shipyards/Kashmere
TONNAGE/HITS: 1200
COMPUTER Mk#: 50
ARMOR TYPE: 23
DB BREAKDOWN: (+35 EW, +30 Screens)
EW VALUE: +35
DEFLECTOR SCREEN RATING: +30
RQ'D CREW: 1 Astro/Pilot; 2 Tech
CARGO CAPACITY: 600 cumets
MAX SUBLIGHT ACCEL: Rating 16 = 130 km/second^2
MANEUVERING THRUSTERS: Rating 16 = 13 km/rd^2
TRANSLIGHT DISPLACEMENT: Rating 14 = 12 LY/day
OPERATING RANGE: 200 LY
LANDING CAPABILITY: Yes
WEAPONRY:
— two forward-mounted Mk 10 Laser Cannons
NOTES: This versatile ship is not only capable of
   planetary landing but underwater maneuvering to
   a considerable depth. It is ideal for in-depth explo-
   rations of earthlike worlds.

Viewports

Top View

0   3   6   9 Meters

Cabins

Hatch Access (Top & Bottom)

Matter/Antimatter Reactor

Lab

Cygustar Twin
Hyperdrive Engines

Astrogation

Helm

Medical

Library
Computer

System Access
Grids in Floor

Storage

Head

Kitchen
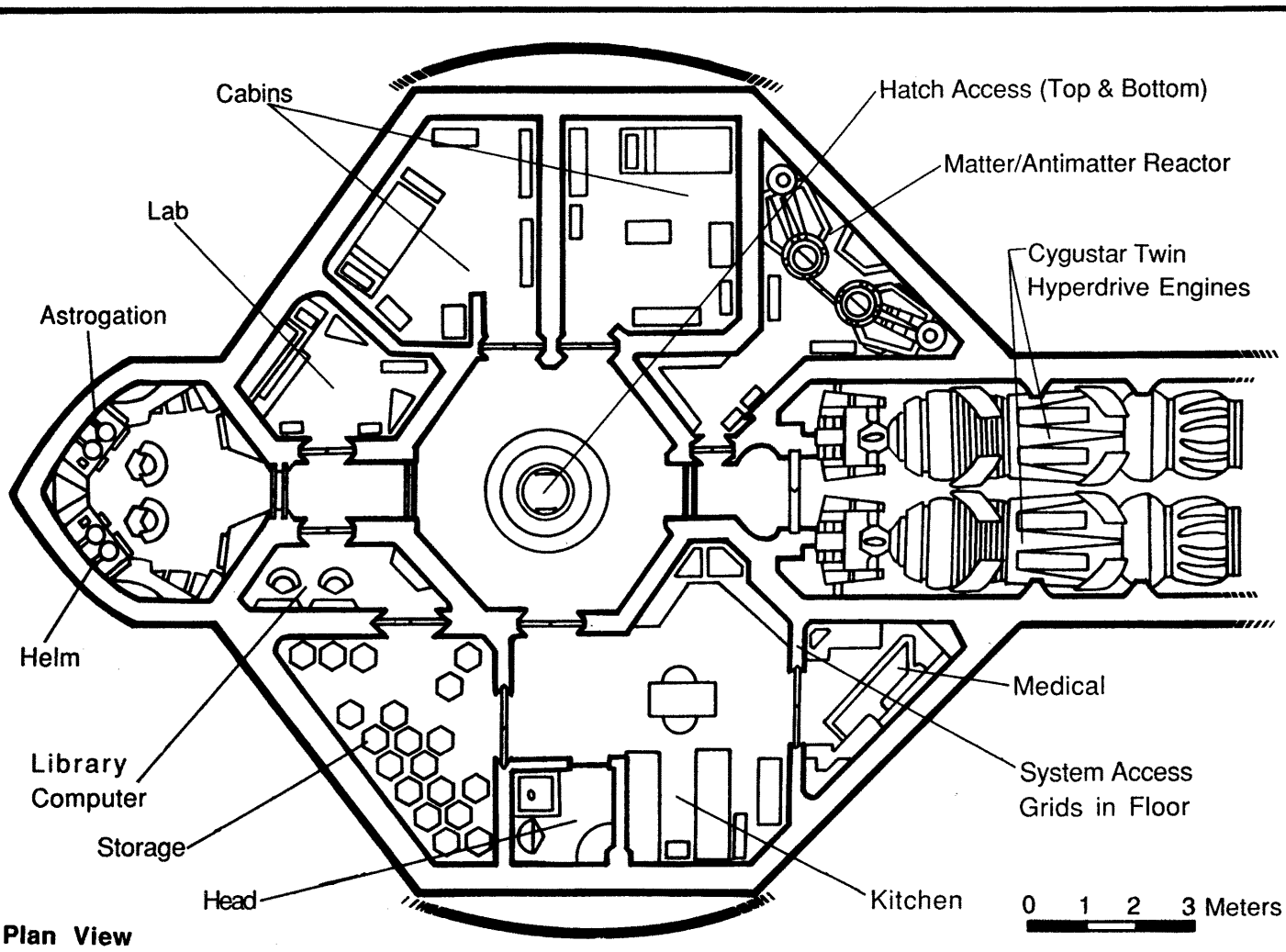
0   1   2   3 Meters

Plan View

DEBARTON COURIER
Interstellar Courier

CLASS: Light Courier
PRODUCER: Imara Shipyards (Carlisle)/Hayes Hyperdyne
TONNAGE/HITS: 60
COMPUTER Mk#: 15
ARMOR TYPE: 22
DB BREAKDOWN: (+10 screens, +30 evade, +30 EW)
EW VALUE: 30
DEFLECTOR SCREEN RATING: 10
RQ'D CREW: 1 Astro/Pilot/Tech
CARGO CAPACITY: 5 Cumets
MAX SUBLIGHT ACCEL: Rating 20 = 150 km/sec^2
MANEUVERING THRUSTERS: Rating 20 = 15 km/rnd
TRANSLIGHT DISPLACEMENT: Rating 25 = 16.25 LY/day
OPERATING RANGE: 200 light-years
LANDING CAPABILITY: Yes
WEAPONRY: None
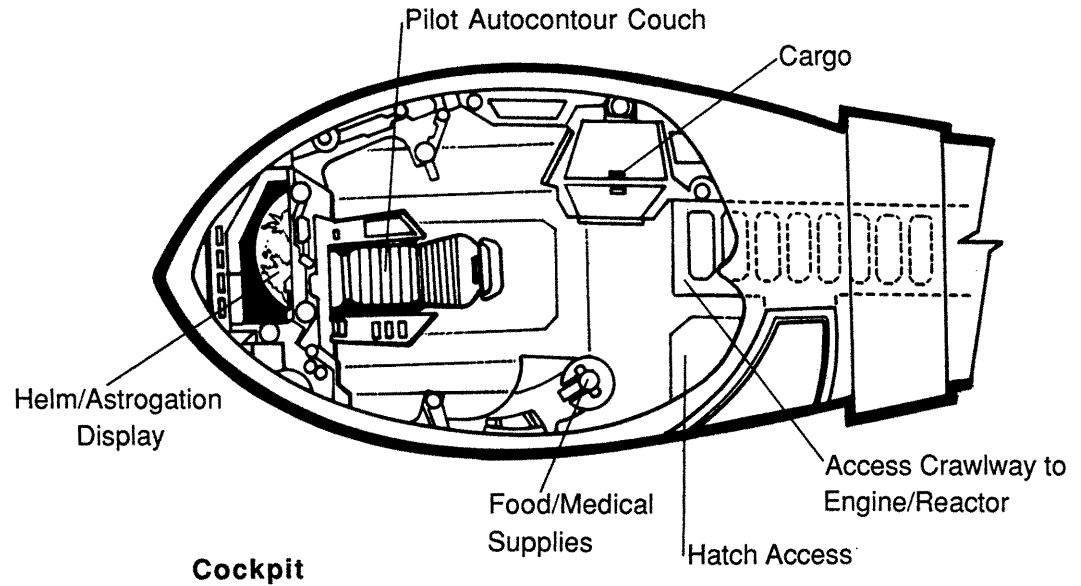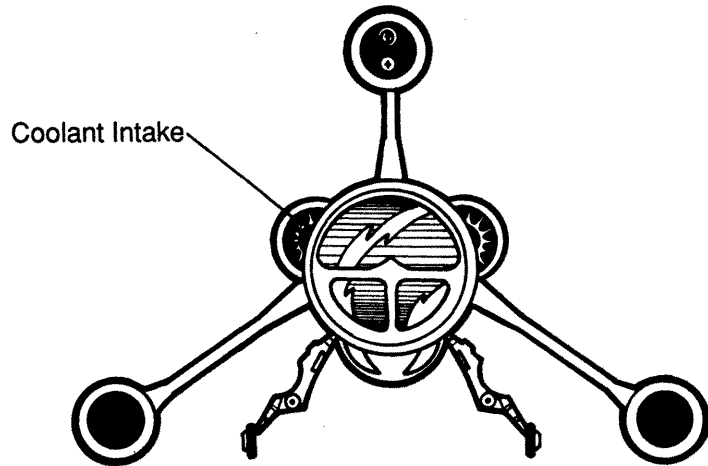
0 .5 1 Meters

Pilot Autocontour Couch

Cargo

Helm/Astrogation Display

Food/Medical Supplies

Hatch Access

Access Crawlway to Engine/Reactor

Cockpit

Coolant Intake

Front View

0 2 4 Meters

Laserfreq Comm Array

Graving Ring

Hatch

Viewport

DB

Hyperdrive
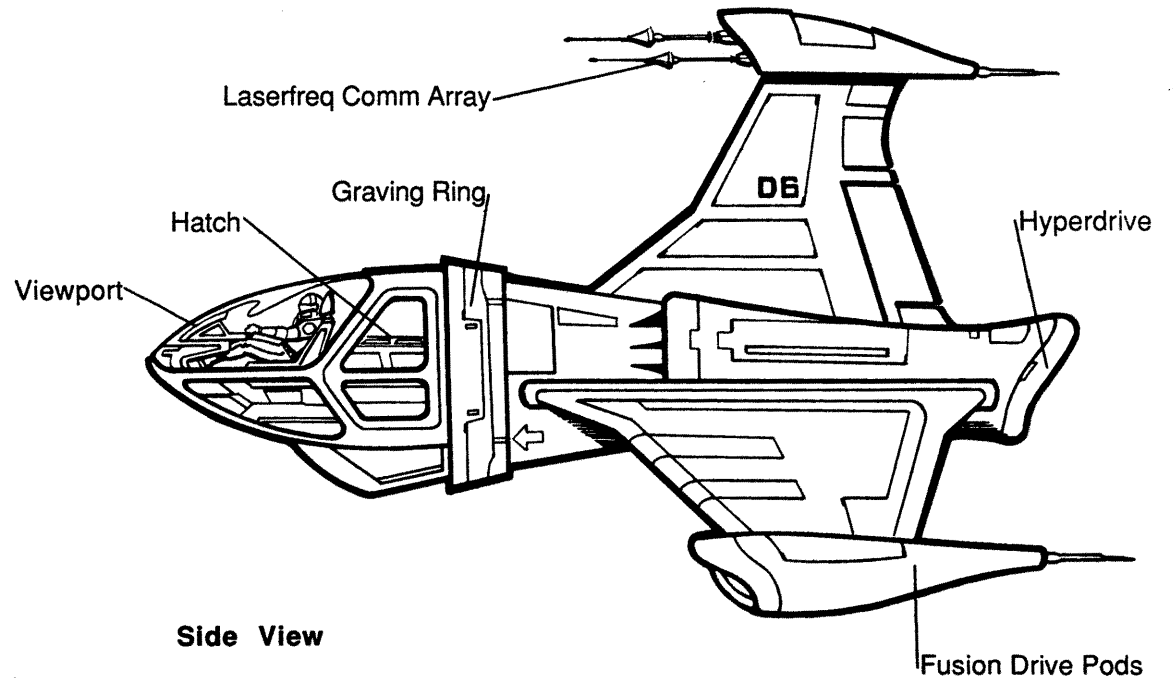
Fusion Drive Pods

Side View
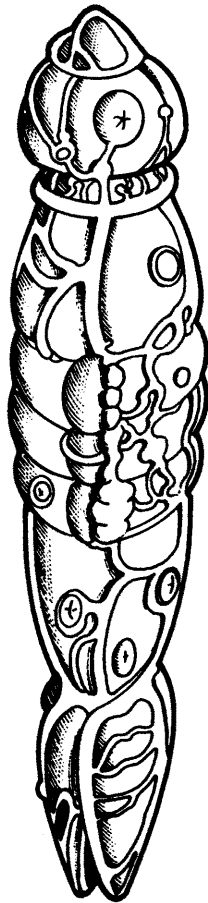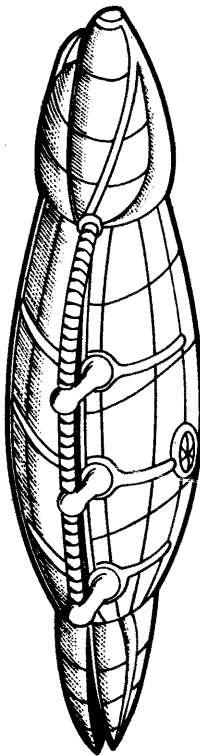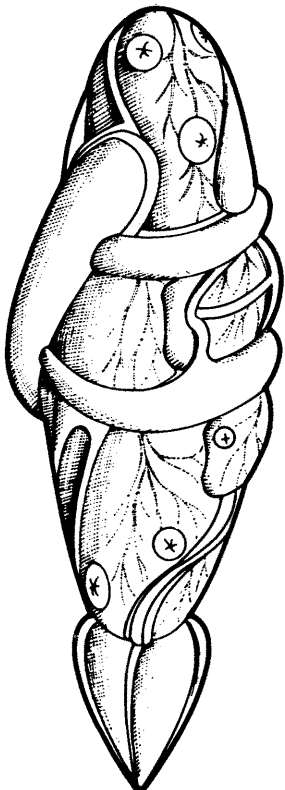
A - Operations
B - Control
C - Stores
D - Processing
E - Fusion Drives
F - Residence
G - Entry/Exit Points

0
50
100
150
300 Meters

Older 'Childbearer'

Newer 'Childbearer'

Primary Type

Middle Section Cutaway

Upper and Lower Sections

EED SHIPS
CLASS: Primary
PRODUCER: Eed
TONNAGE/HITS: 100,000
COMPUTER Mk#: ?
ARMOR TYPE: 25
DB BREAKDOWN: (+60 screens, +30 evade)
DEFLECTOR SCREEN RATING: 60
RQ'D CREW: None
PASSENGERS: 100
CARGO CAPACITY: 10,000 cumets
MAX SUBLIGHT ACCEL: Rating 12 = 110 km/sec²
MANEUVERING THRUSTERS: Rating 12 = 11 km/rnd
TRANSLIGHT DISPLACEMENT: 14 = 12 LY/day
OPERATING RANGE: 500 light-years
LANDING CAPABILITY: No
WEAPONRY:
— 360° Mk 20 Autocannon

COLUMBARI

Top View

Side View

Service Deck (3)
- Galley
- Medical
- Shop/Lab
- Rec Room

Cargo Deck (1)
- Cabins
- Head
- Stores
- Iris Valve Hatch (Access Down to Engines)
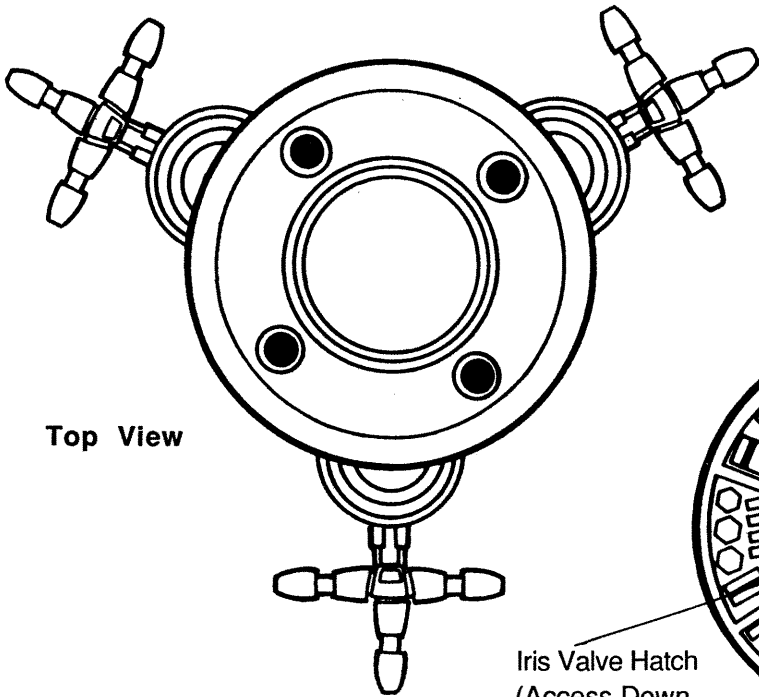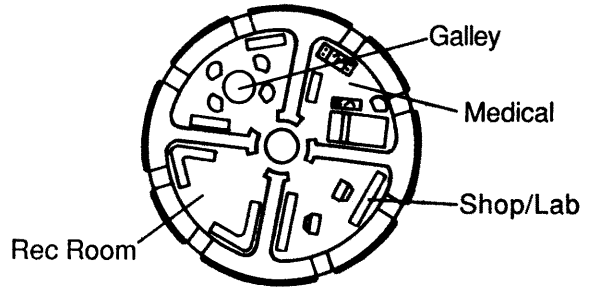
Control Deck (4)
- Astrogation
- Auxiliary
- Helm
- Sensors
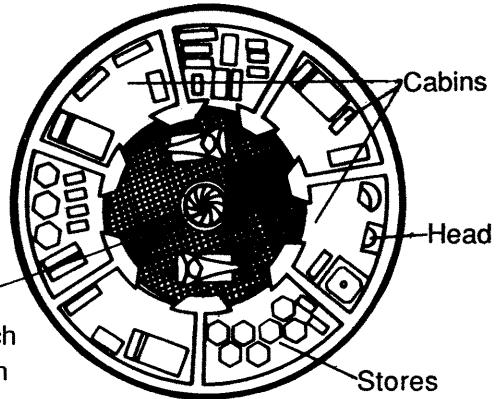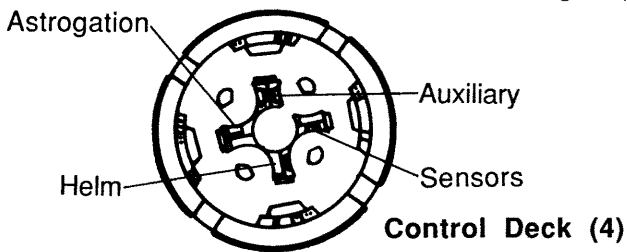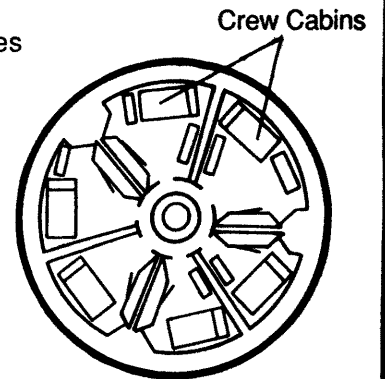
Cabin Deck (2)
- Crew Cabins
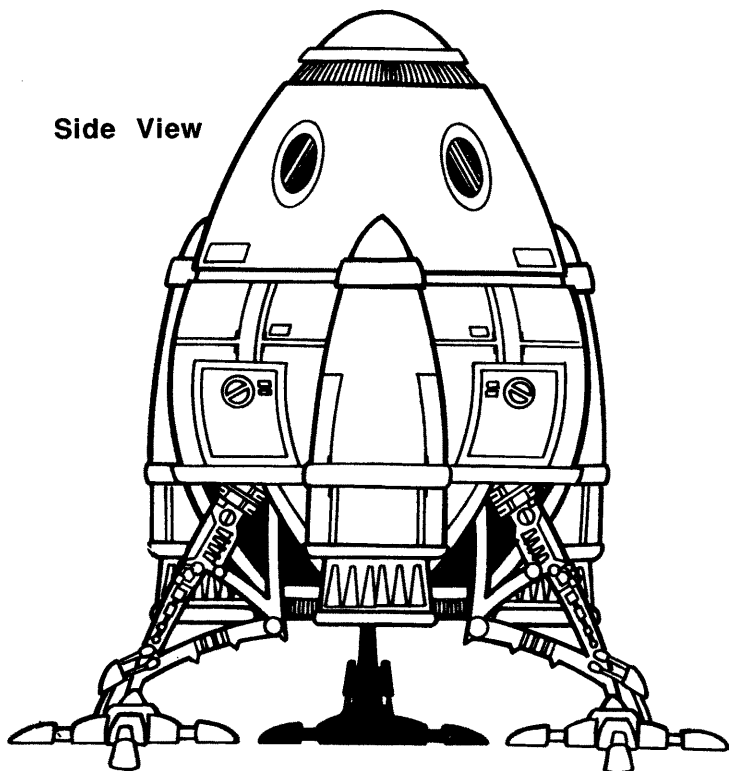
SHIP NAME: Columbari
PRODUCER: Red Star SSPI
OWNER: Imperial Shippers
CLASS: Medium Orbital Freigter
TONNAGE/HITS: 2,500
COMPUTER: Mk.45
ARMOR TYPE: 23 (+10 screens)
EW VALUE: 0
DB BREAKDOWN: (+10 screens)
SCREEN RATING: 10
CREW: 3 ASTRO, 6 TECH
PASSENGERS: 0
MAX SUBLIGHT ACCELERATION: RATING 3 = 30 KM/SEC/SEC
TRANSLIGHT DISPLACEMENT; RATING 0 = No Translight Capability
OPERATING DURATION: 6 Decadays
LANDING CAPABILITY: Yes
WEAPONRY: None
CARGO: 4,500 cumets

0 1 2 3 4 5 Meters

SHIP NAME: Fort Keberus
PRODUCER: Jade Voidmasters
OWNER: Imperial Science Institute
CLASS: Long-Range Survey
TONNAGE/HITS: 2,750
COMPUTER: Mk.50
ARMOR TYPE: 23 (+20)
EW VALUE: 0
SCREEN RATING: 20
CREW: 4 Astro, 8 Tech, 8 Support
PASSENGERS: 12 (or 36 in Cryo)
MAX SUBLIGHT ACCELERATION: Rating 16 = 130 km/
    sec/sec
MANEUVERING THRUST: Rating 16 = 13 km/rnd/rnd
TRANSLIGHT DISPLACEMENT: Rating 10 = 10 LY/day
OPERATING RANGE: 500 LY
LANDING CAPABILITY: No
WEAPONRY: None
NOTES: This class is sent on extended-duration explo-
    rations of the Frontier. The living areas spin to
    simulate gravity, an energy-saving device (bridge
    and mechanical areas have no gravity). As many
    as three of the pods on the spin section can be
    replaced with orbital landing vehicles.

FORT KEBERUS
Translight Long Range Explorer
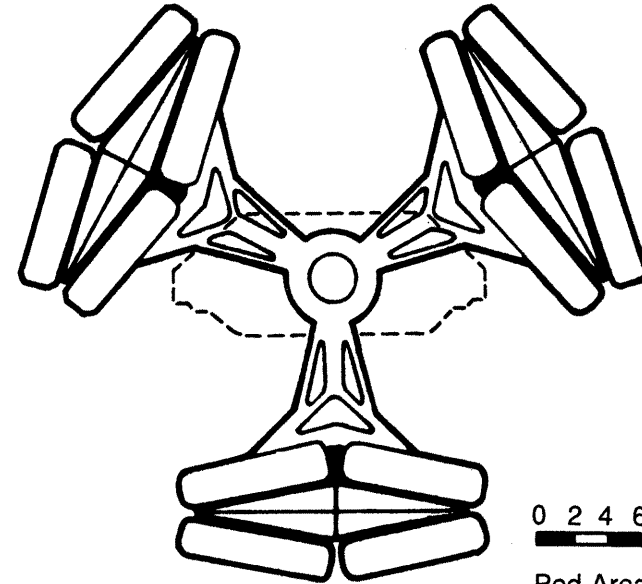
0 2 4 6 Meters

Pod Area Along
Spin Axis
(12 Pods In All)

Cabin Pod (1 of 4)

48

Micro/Laser/TBD Array

Engines

Systems

Sensor Array

'Spin' Section

Bridge Area

London Translight Drive

Engine Monitoring

Subsystems Control

TBD/Comm

Engineering

Helm Crib

Sensors

Computer

Astrogation
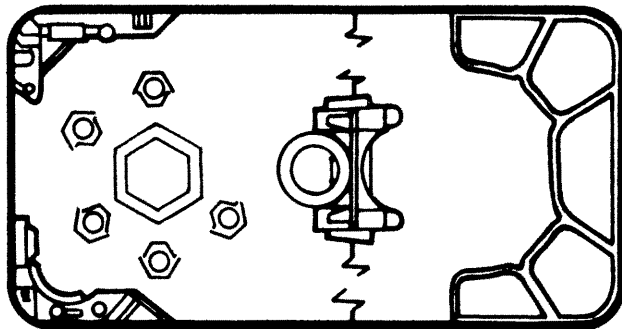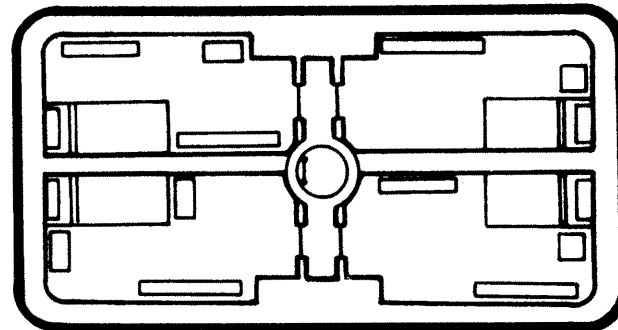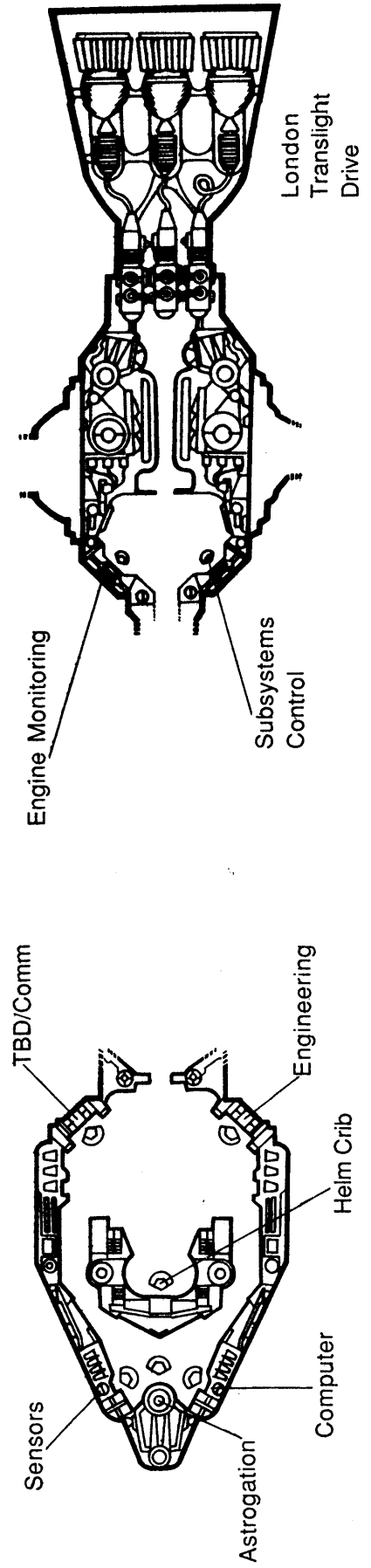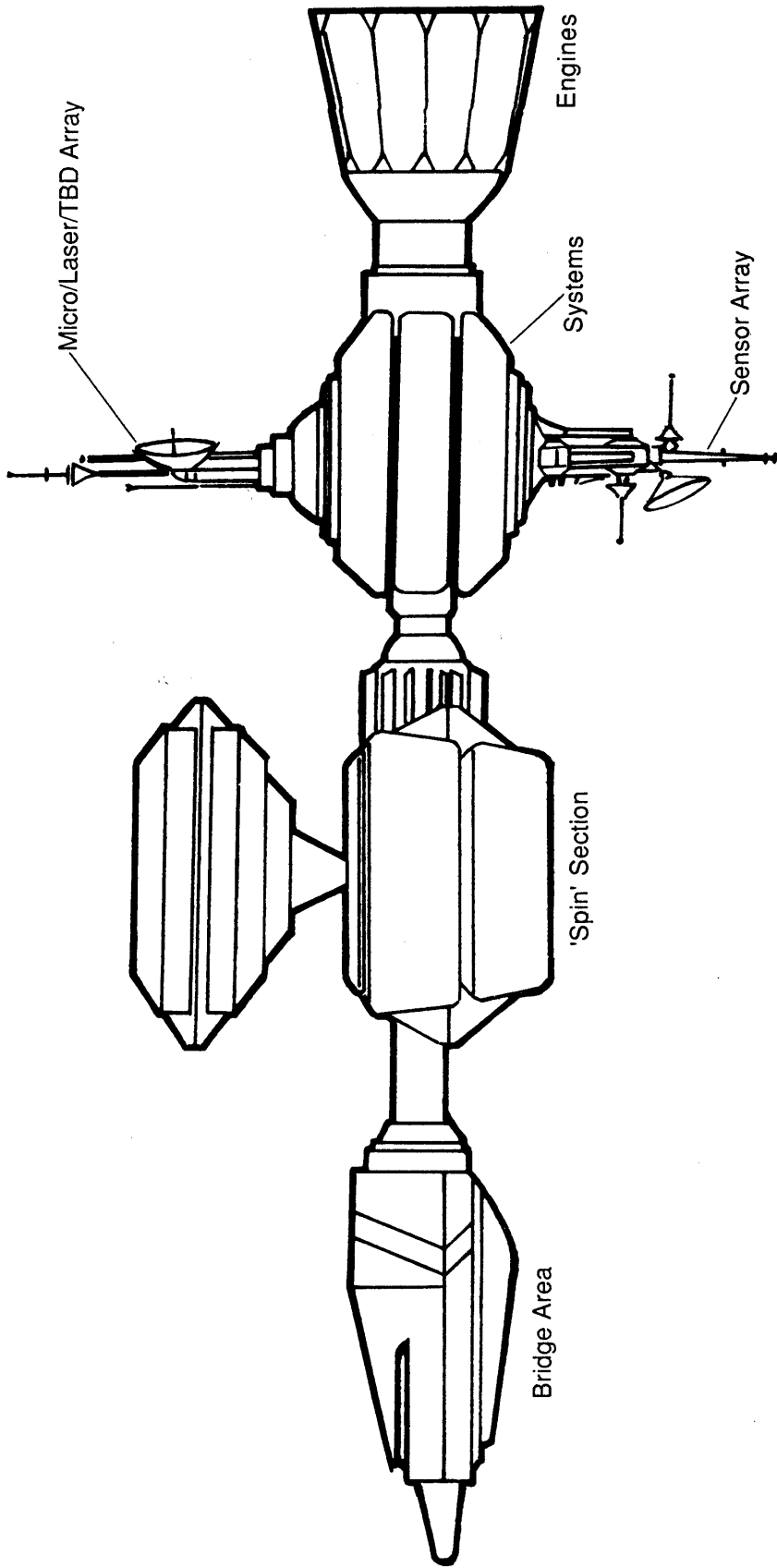
Bridge

0 2 4 6 Meters

SPRINT BLANC

Milgraum/Kock

Fusion Drive
Nacelles

Viewport

SHIP NAME: Sprint Blanc
PRODUCER: Vott-Messerschmitt
OWNER: Xantha Express
CLASS: Planetary Shuttle
TONNAGE/HITS: 450
COMPUTER: Mk.20
ARMOR TYPE: 22
DB BREAKDOWN: (+10 Screens, +10 EW, +10 Armor)
EW VALUE: 10
SCREEN VALUE: 10
CREW: 1 Pilot, 1 Tech
PASSENGERS: 4
MAXIMUM SUBLIGHT ACCELERATION: Rating 17 = 135 km/sec^2
MANEUVERING THRUST: 14 km/rnd^2
TRANSLIGHT DISPLACEMENT: Rating 0
OPERATING DURATION: 2 Decadays
LANDING CAPABILITY: Yes
WEAPONRY: none

Top View

Microfreq Antenna

Hatch **Side View**

0 2 4 6 8 10 Meters
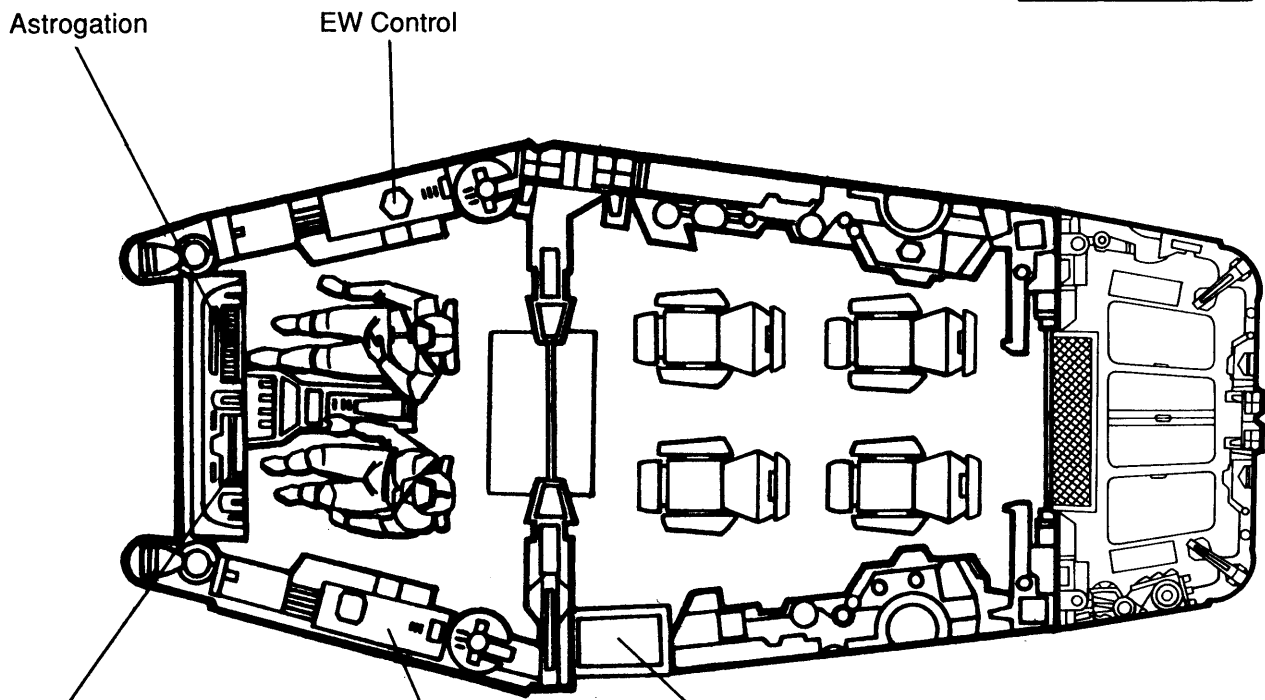
Astrogation

EW Control

Pilot

Deflector Screen Control

Mini Head

Storage

0 1 2 Meters

HYPERSHUTTLE

CLASS: Hypershuttle
PRODUCER: Cygnus Shipyards/Kashmere
TONNAGE/HITS: 600
COMPUTER Mk#: 50
ARMOR TYPE: 22
DB BREAKDOWN: (+40 EW, +40 Screens)
EW VALUE: 40
DEFLECTOR VALUE: 40
RQ'D CREW: 1 Astro/Pilot; 1 Tech
PASSENGERS: 6
MAX SUBLIGHT ACCEL: Rating 16 = 130 km/second2
MANEUVERING THRUSTERS: Rating 16 = 13 km/rd^2
TRANSLIGHT DISPLACEMENT: Rating 14 = 12 LY/day
OPERATING RANGE: 200 LY
WEAPONRY: None
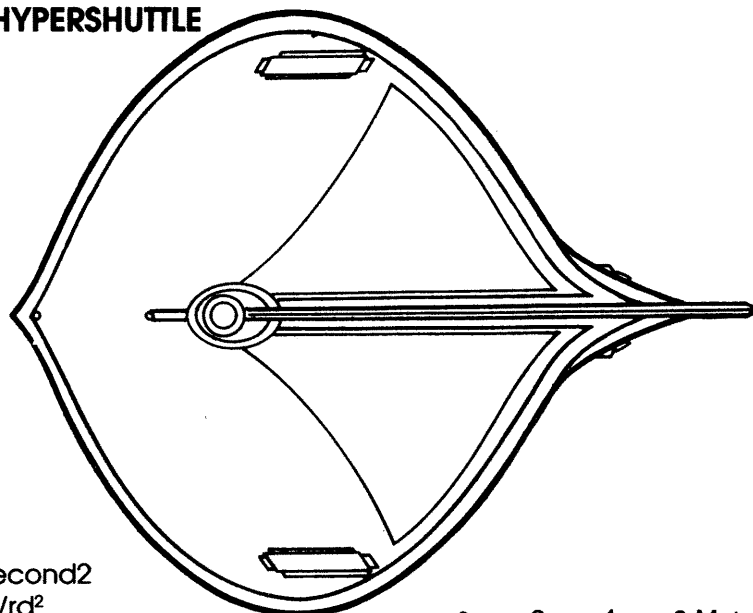
Top View

0   2   4   6 Meters

Front View

Side View

Astrogation Console

Head

Galley

Exit Ramp
(Extends Beneath Vehicle)

Engine Room

Cockpit

Talus/Horbia
Hyperdrive

Delphis Fusion Drive

Pilot Console

Strut

Storage
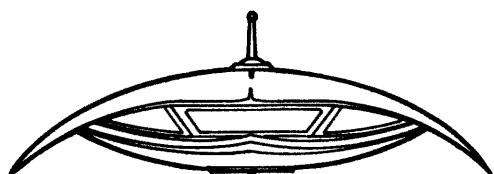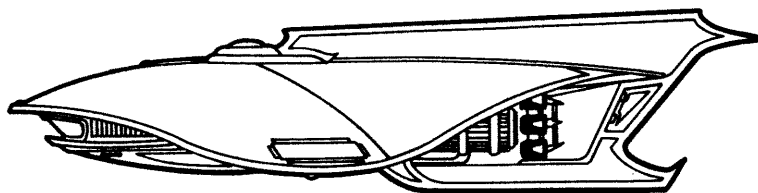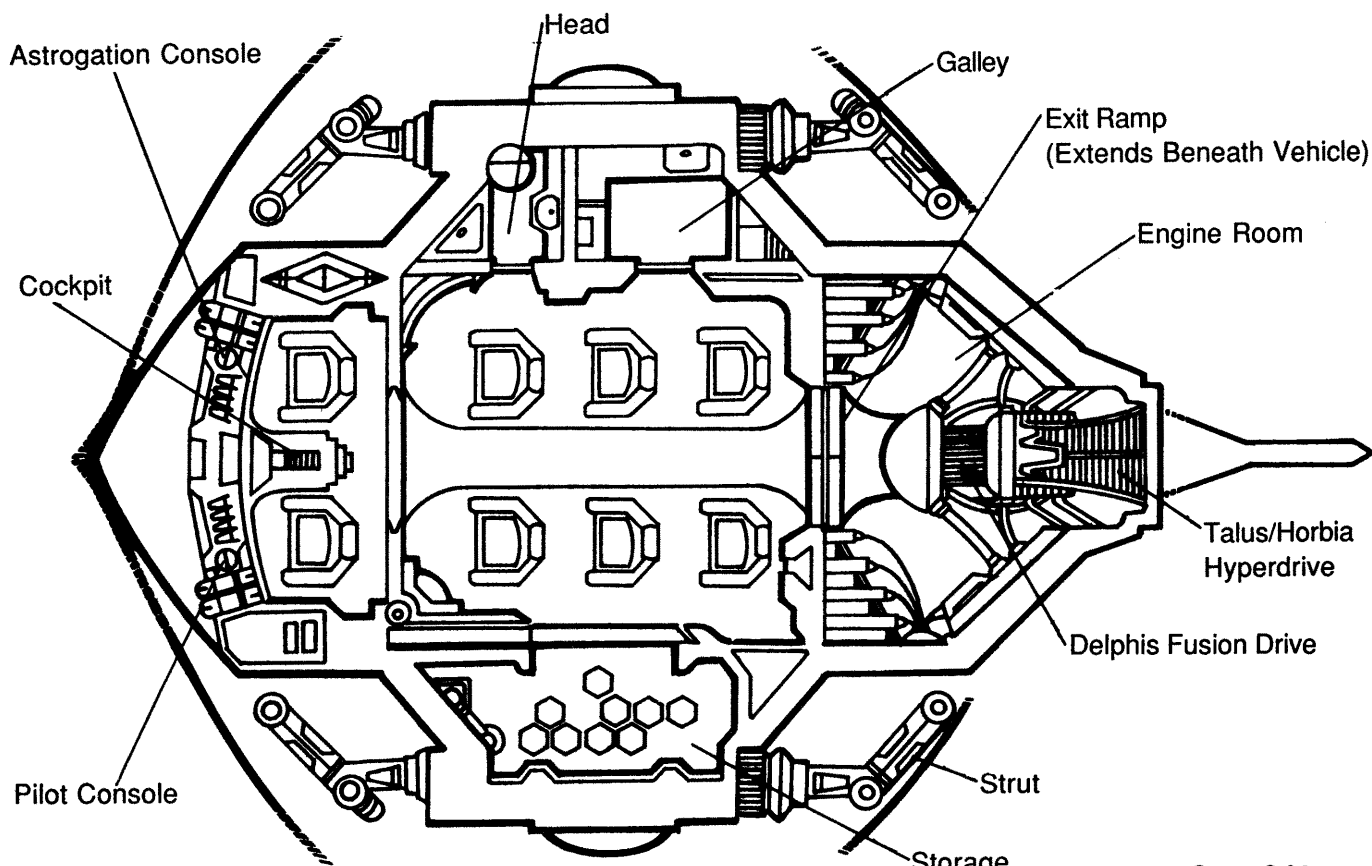
Plan View

0   1   2   3 Meters

COLBURA MORANN

Side View

Sensors

Communications
Array

Gravitic Control Ring

Top View

Weapons

Front View

Viewport
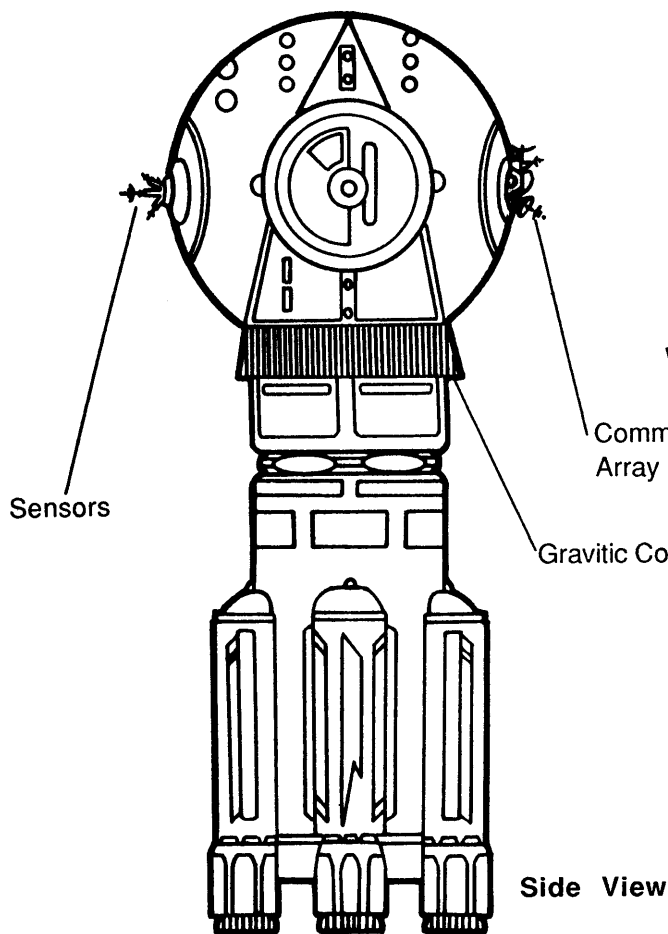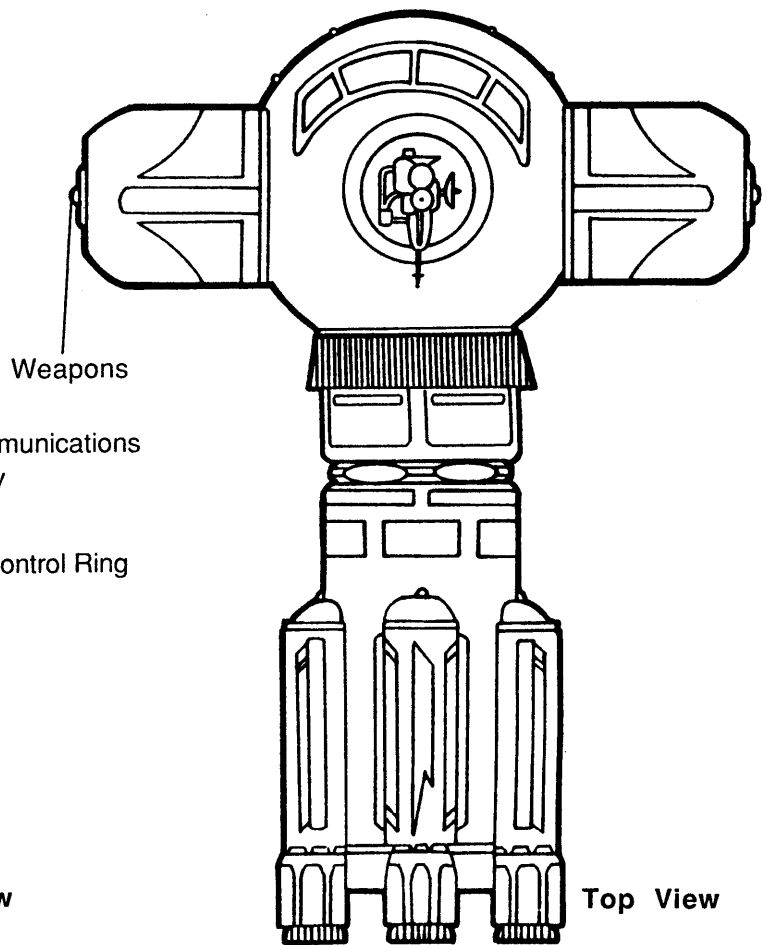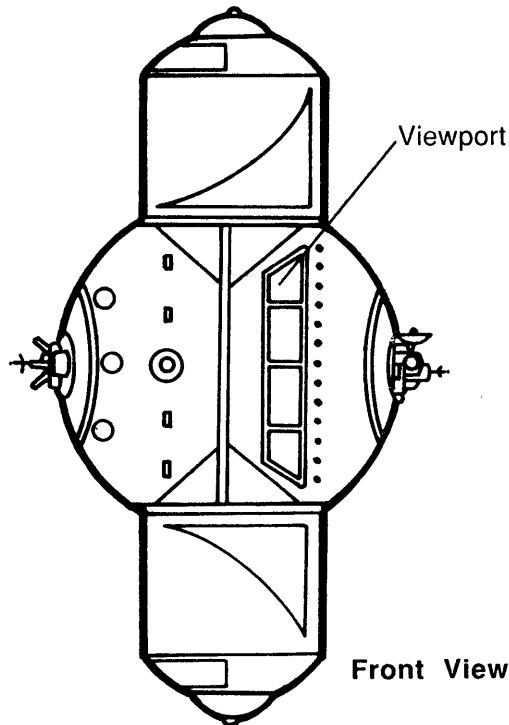
SHIP NAME: Colbura Morann
PRODUCER: Kubischev-Lloyd Amalgamated
OWNER: Gilliam Transvoid
CAPTAIN: Torus Fenelton Golmesh
CLASS: Small Hyperfreighter
TONNAGE/HITS: 3,150
COMPUTER: Mk.50
AUX COMPUTER: Mk.20
ARMOR TYPE: 23
DB BREAKDOWN: (+40 Screens, +30 Evade, +10 EW)
EW: 10
SCREENS: 40
CREW: 3 Astro, 5 Tech
PASSENGERS: 4
CARGO: 3000 cumets
MAX SUBLIGHT ACCELERATION: Rating 12 = 110 km/
    $second^2$
MANEUVERING THRUST: 6 km/rnd/rnd
TRANSLIGHT DISPLACEMENT: Rating 10 = 10 LY/day
OPERATING RANGE: 200 LY
LANDING CAPABILITY: Yes
WEAPONRY: 4 x Mk.15 Lasers
NOTES: A very popular spacecraft, the Colbura has
    proven its worth throughout the Empire. Thou-
    sands are still in service decades after their con-
    struction.

Weapons Crib

Auxiliary/Comm

Helm

Astrogation

Sensors

Data Access

Access To Reactor

Storage

Weapons Crib

Upper Deck (3)

Medical

Lab/Shop

Medbed

Access Shaft

Cabins

Engines

TO ENGINES

Main Deck (2)

Galley

Stores

Head

Crane

Storage
(On Movable
Gravitic Grids)

Cargo Deck (1)
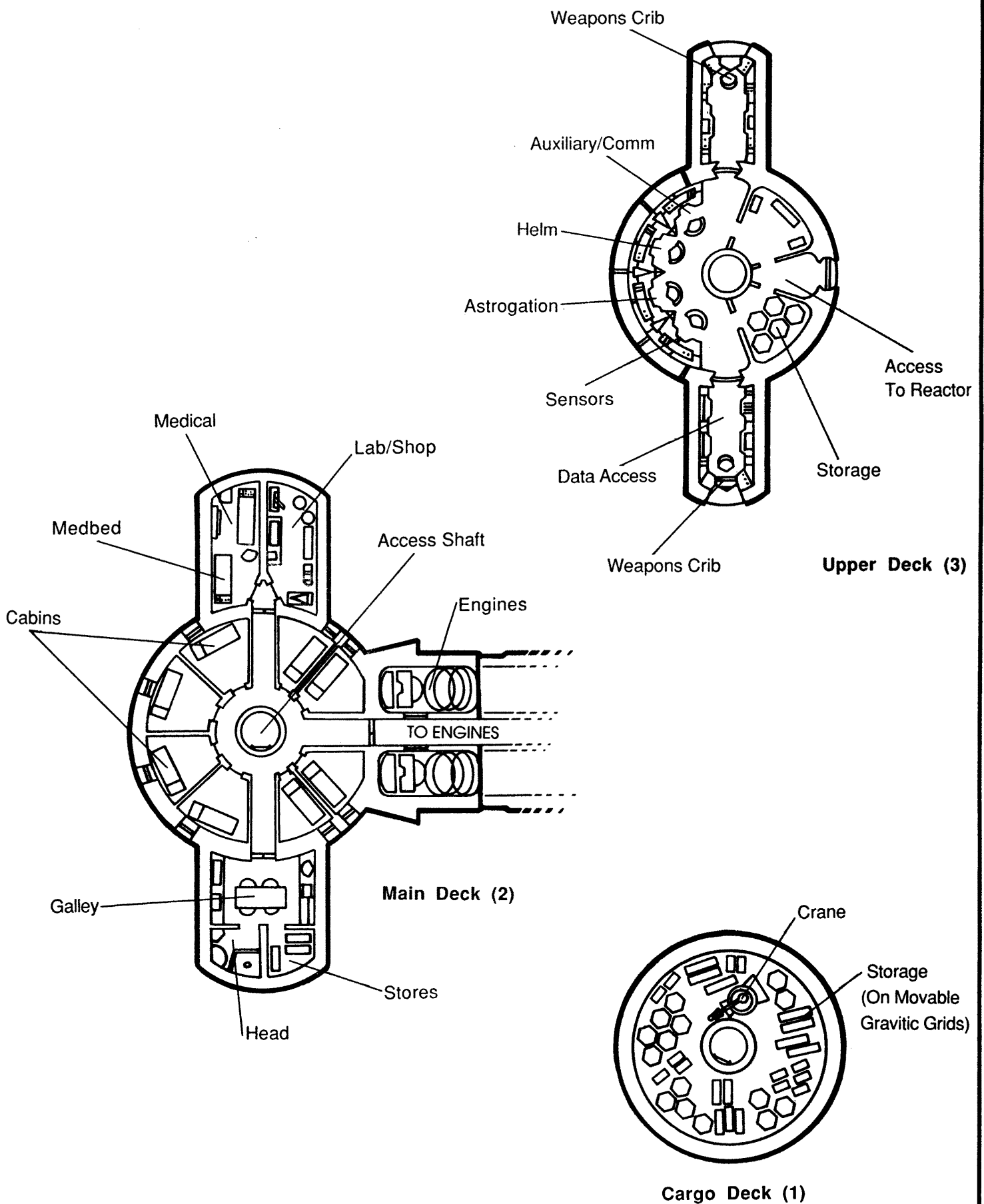
SURVEY (FLYING MERINO II)

Front View

Side View

Twin Laser Cannons
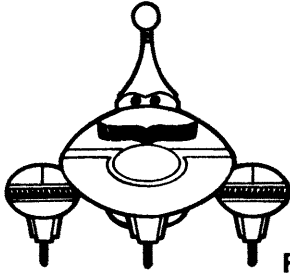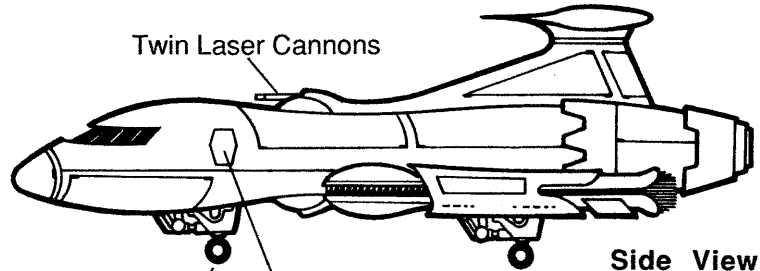
Landing Gear

Hatch

CLASS: Explorer/Scout
PRODUCER: Devon Transtar
TONNAGE/HITS: 1200
COMPUTER Mk#: 70
ARMOR TYPE: CAT 23 (80)
DB BREAKDOWN: (+30 EW, +50 Screens)
EW VALUE: 30
DEFLECTOR SCREEN RATING: 50
RQ'D CREW: 1 Pilot, 2 Tech (can be combined)
PASSENGERS: 6
CARGO CAPACITY: 800 cumets
MAX SUBLIGHT ACCEL: Rating = km/second²
MANEUVERING THRUSTERS: Rating 16 = factor 13
TRANSLIGHT DISPLACEMENT: 14 = 12 LY/day
OPERATING RANGE: 300 LY
LANDING CAPABILITY: Yes
WEAPONRY:
— two turret-mounted Mk 10 Laser Cannons;
— twin fore-mtd Mk 10 M/A torpedo tubes
Notes: A staple of the IAI And ISI, the Survey scout is a
   convenient size for small crews sent on long voy-
   ages.

Top View

```
0    3    6         12 Meters
```

Consoles
(.75 Meters Tall)

Cabins

Twin Laser
Cannons

Jairus Translight Drives

Cabin

Galley

Magnetic
Andrium
Storage

Accellerators

Flow Control

Astrogation

Accellerators

Lab

Helm/Command

Twin Fusion Drives

Sensors

Cabin

Airlock

Cabin

Cabin

Medical

EVA Equipment

Cabin

System Access Via
Floor and Ceiling Grids
Drive Access

```
0    2    4      6 Meters
```

54
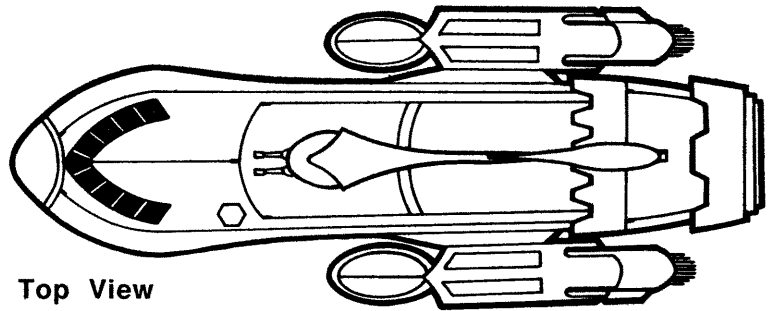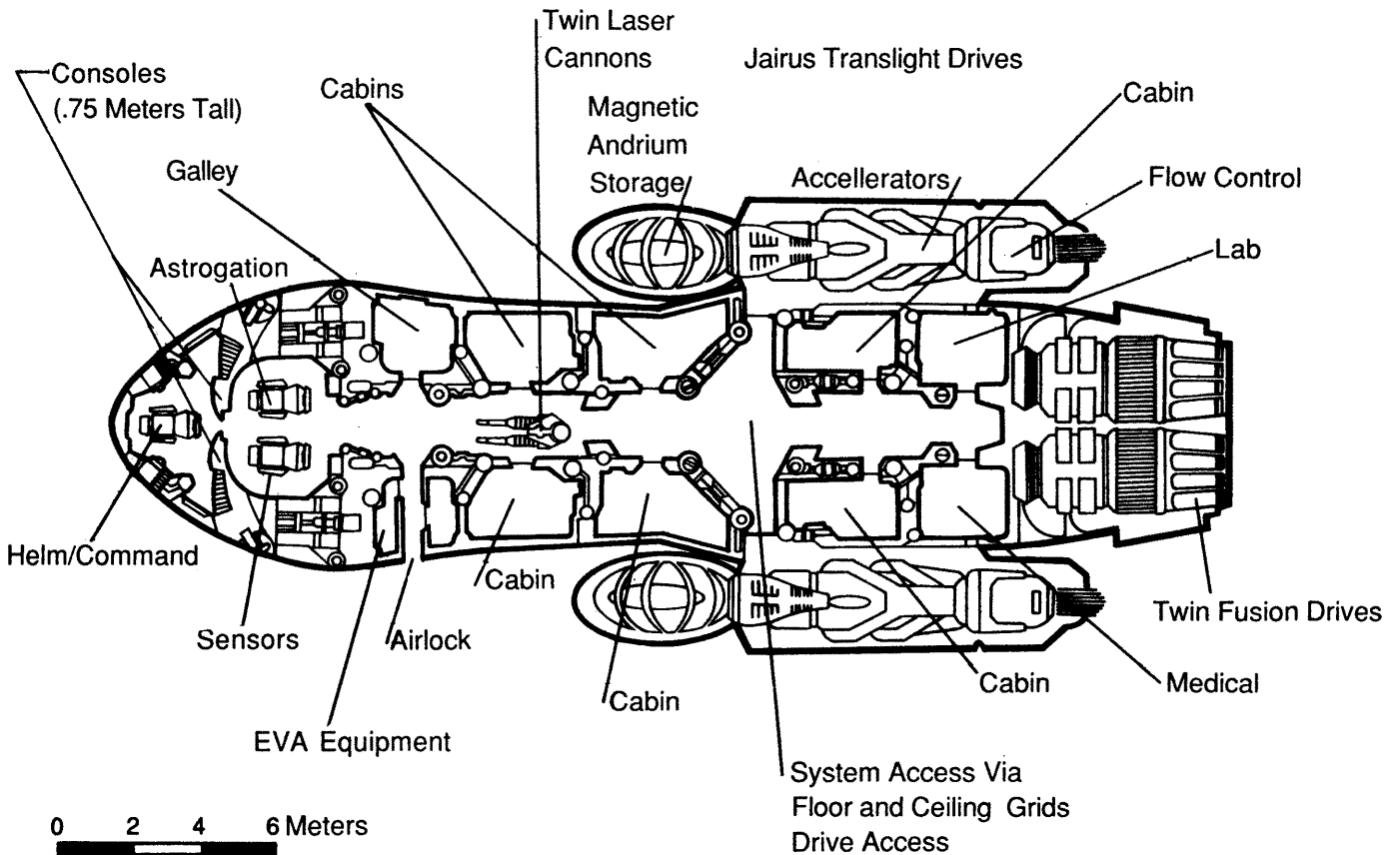
"It is true that I am a wretch. I have murdered the lovely and the helpless; I have strangled the innocent as they slept, and grasped to death his throat who never injured me or any other living thing. I have devoted my creator, the select specimen of all that is worthy of love and admiration among men, to misery..."

Frankenstein, by Mary Shelly
Terra Prelmp 9864

10.0

USING THE CONSTRUCTION/ RESEARCH CHART

Most construction and research refers to the *Construction/Research Chart* (pg.61).

This chart, like the maneuver charts, has a number of different "Difficulty Ratings", from Routine to Absurd. The appropriate difficulty must be assigned by the GM before a roll is made, with additional modifiers if applicable.

By glancing over the Chart one can see that the majority of the boxes have two numbers: the first one indicates — for research — the percentage of total desired research data acquired after the effort represented by that particular roll. For construction it indicates the percentage chance that the item will function properly initially after construction. Obviously, a test after the roll will reveal whether or not the item operates, though that can become involved (or even dangerous) with complex machines/organisms. It is suggested that in the case of complex construct and organisms such as Replicant and Clones that the PC be instructed to roll until a 100% total accumulated chance of success is achieved (or utter failure, or the creator gives up). If the item fails, successive rolls with a cumulative chance of success are permitted.

The second number in each box on the chart indicates how much time is expended to achieve the result. This is actual time at work, so sleep and break time should be added in when days or weeks become involved to calculate an actual time span.

Note: Research is performed using Scientific skill bonuses; Construction is done using Technic skill bonuses. If a project seems to fall under more than one skill category, average the appropriate ones to get the skill bonus to be applied.

DIFFICULTY RATINGS

When assigning difficulty, a few general guidelines should be kept in mind:

Routine: Is for very simple operations only, such as improvising wiring on an available generator to recharge an energy cell, or assembling a simple, modular device. With regard to research, this applies to checking one easy reference.

Easy: Applies to most elementary construction tasks, assembling a small apparatus with pre-made parts, for example. Research is slightly more involved than one reference; perhaps two or three sources need to be checked for 100% completeness.

Example: Sanvok has a 40 bonus in Weapons Technology, and decides to take his Laser Pistol apart and put it together again (just for kicks). The GM determines that this is "Easy", and Sanvok rolls a 27 (plus 40 = 67). A 67 result in the easy column says that, after ten minutes the Laser Pistol is to the point where there is a 95% chance that it will operate correctly. Sanvok tests it — probably by shooting at something. He rolls an 03 (Note that this roll is unmodi-

fied and not open-ended). The Laser Pistol fails to work. He rolls again on the Easy column, getting a 67 (total, including bonus: 107). This reports a 99% after one more minute. The percent is cumulative, so there is a 100% chance the item now works. (Of course, there is still always the chance that the pistol will malfunction in normal action, as reflected in the Failure range of the weapon chart.)

Moderate: For slightly more sophisticated operations, yet still in the 'simple' range.

Example: Norvin, in his fully equipped workshop, decides to build a small power cell recharge device to run off his portable fusion reactor, so its easier to recharge his Blaster Rifle Power Packs. Abruptly he realizes (i.e., the GM tells him) that he has no idea of the specifics of the voltage/wattage of the Power Pack or how to alter the current. He goes to the handy Reference Computer (not necessarily a feature of a workshop, but invaluable for research) and calls up the Engineering Technical Reference Memory. The GM decides that all the data required for reasonable success in this operation will probably have to come

from three or four sources (Power Pack specs, Portable Fusion Reactor specs, and current alteration details). He informs Norvin that this is a Moderate Research project. Norvin has a 60 skill bonus in Electronics and a 40 skill bonus in Power Systems Theory as Scientific Skills (the GM having determined that this is a Electronics and Power Systems Theory project, since the weapon itself really has little to do with it, Weapons Design is not applicable) so so Norvin's net add is 50 (average of 40 and 60). Norvin rolls a 78 (78 + 50 = 128). 128 cross-indexed on the chart reveals 100% completion in 20 minutes. Thus, Norvin gleans all the necessary information he needs in half an hour. The next step is actual construction, which requires the appropriate Technics skills. Once again, Electronic and Power Systems Technics are involved. Norvin bonuses in these are both 40, so the average is (not surprisingly) 40. Norvin's shop is, as we have noted, fully equipped, so the GM need not impose additional penalties for insufficient equipment and supplies. The GM determines that this operation is also Moderate. Norvin rolls 56 and adds his 40 bonus = 96. The result on the table reveals that after 20 minutes, Norvin has completed the project to the point where there is a 95% chance that the device will work. Norvin tests it, and rolls an 87 (well above the required 06+). It works (and will continue to work, under normal operation/malfunction rules).

Hard: To be used for more complicated construction, perhaps involving the custom tooling or wiring of a complete unit; or simple organism synthesis (such as reproducing a drug). Also for the lower range of involved research or a creative design.

Complex: Appropriate for Cloning, non-experimental Replication, and extended Eugenics planning. Also used for creative micro-organism work (based on comparable research) and the construction of relatively basic new devices from 'raw' materials — a different type of multiscanner, for instance (again, based on comparable successful research). Detailed research with possible numerous cross-references uses this column.

Very Complex: This column should be used for Construction of sophisticated new systems and new types of Alterant Replication (based on research) and extremely detailed research, with at times unclear data.

Example: Trevoc, after successfully completing research on creating a special Alterant Replicant with superior night vision, goes to his fully equipped lab and begins the necessary chromosome and gene alteration on the Replicant fetus. He rolls a 76, plus his 60 Genetic Engineering bonus, a total of 136. On the Very Complex table, the result is 50% complete after 57 days. He rolls again: 89 (plus 60 = 149) the result is an additional 55% (bringing his total to 100%) and an additional 53 days of work. Thus, the fetus is altered and developing in the growth tank after 110 days of work. Note that this does not include the 100 days while the fetus is in the tank, growing to maturity. See Section 12.0 for more details on Replication and Cloning.

Absurd: Use this column for things which would normally be *Hard* to *Very Complex*, but when there are important facilities/supplies unavailable. Caution is advised, however. Even in the universe of *Space Master*, some things are "impossible", and if the GM deems something to be impossible, he should say so rather than allowing a roll.

Example: Trevoc, with his total Genetic Engineering bonus of 60, and has gathered all the chemical components of the human body (water, salt, various trace metals, etc.) and announces to the GM that he wishes to create a Replicant, using no equipment. This, of course, is beyond Absurd; the GM calmly and reasonably informs Trevoc that unless he acquires the proper materials and equipment, he cannot even attempt the task. (then the GM goes home and screams)

GENERAL FACTORS

Once a column has been selected reflecting the empirical difficulty of the project, a few general factors are very important to consider, and to represent these, a numerical modification to the roll is suggested.

If Research:

- Are there adequate information sources available for the data- gathering in question — Or has some vandal stolen the needed volume?
  Suggest: Full data: ±0; Near Full -20; Partial: -30; Fragmentary: -50

- Is the environment conducive to research (no interruptions)?
  Suggest: Quiet: ±0; Rare Distractions: -20; Noisy: -30; Disruptive: -50

- Is the data appropriately recorded so that, when used, it will be accurate?
  Suggest: (storage type) Datadisc: ±0; Tapes: -20; Written Text: -30; Disorganized format: -50

If Construction:

- Are the tools and facilities available the appropriate ones?
  Suggest: Complete Equipment: ±0; Near Complete -20; Partial: -30; Sorely underequipped: -50

- Are there adequate materials, and are they of suitable quality?
  Suggest: Complete: ±0; Near Complete -20; Partial: -30; Wanting: -50
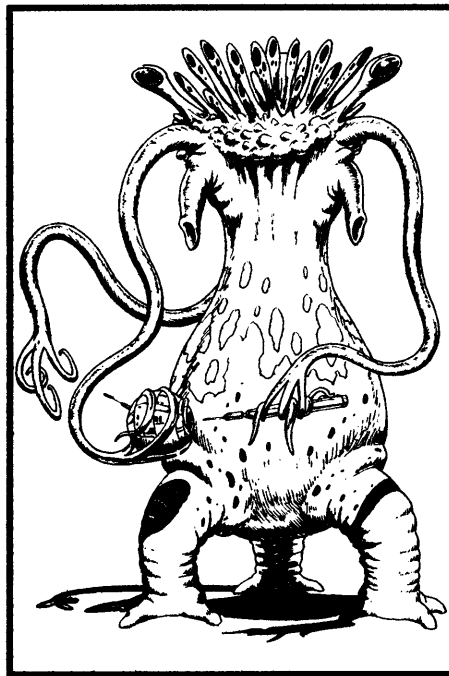
- Is the environment suitable and conducive to the delicate work involved (i.e., not aboard a small spaceship under attack or a town during an earthquake)?
  Suggest: Quiet: ±0; Rare Distractions: -20; Noisy: -30; In Motion: -50 — -100 (varies).

- Are the plans/instructions/source data complete and accurate?
  Suggest: Full data: ±0; Near Full -20; Partial: -30; Fragmentary: -50

The research/construction roll(s) are made and modified by these factors as well as the PCs skill rank in the appropriate area. For very complex machines, several rolls should be made: one for each system, each possibly with different modifiers and complexities.

It is important to be aware at all times the cost of materials. In the Example above, Norvin was able to build his recharge device because his workshop was "fully equipped". This of course meant that it was fully stocked with the tools and materials needed. After the device is built, the workshop is no longer "fully equipped", and Norvin will have to pay a certain amount to restock it. This involves a determination of the *Cost in Parts*.

This important concept comes up in all types of construction, and repair of devices when they are seriously damaged. Naturally a complete price list of all conceivable mechanical and electronic parts would be tedious and extreme, so it is suggested that the GM review the general price lists and estimate a cost value. Remember that *in general* a Cost in Parts is about half the cost of an assembled machine or device (due to cost of labor, equipment, etc). However, if the players are stuck in some low-tech outpost, the price could be quite extreme (or the items could be completely unavailable!).

GROUP RESEARCH AND CONSTRUCTION

Group research is almost always more productive than individual, and below are the factors to be included. Keep in mind that adequate facilities for the group are necessary for their full efficiency to be realized.

SINGLE SCIENCE/TECH PROJECT

A situation in which one skill is clearly the central one and any others are relatively irrelevant. Everyone on the 'team' must possess this skill bonus, and all the people's bonuses are averaged. The roll is also modified by the number of people in the team: for each person (more than one and up to ten) on the team, add +5 to the roll; for every one over ten (up to 20) add +2; every one after twenty add +1. The time listed on the chart should also be halved each time a person is added.

Example: A project that would take one person 100 hours takes two people 50 hours, three people 25 hours, four people 12.5 hours, etc.

MULTIPLE SCIENCE/TECH PROJECT

When a project seems to fall under several categories, the major applicable skills are averaged. Each person on the team need only know at least one of the necessary skills. Bonuses are as above, and the time is also halved as above.

MACHINES

"While man is a marvellous machine indeed, I think I might have done better given a few million years and an entire planet to work with. I shall do better in a fraction of the time and at negligible cost."

Paal Fractiis, Founding President
Virtual Humanatronics
Alpha Centauri, Prelmp 5655

11.1

WEAPONS/SMALL DEVICES

Perhaps the most straightforward of the construction operations, these are normally handled with one roll. Standardized parts and other construction materials are readily available in most areas of reasonable technology, so construction, with proper instructions, should rarely be more than *Hard.*

11.2

ANDROID CONSTRUCTION

Constructing an Android is conceptually somewhere between constructing a Robot and creating an Alterant Replicant, and usually more expensive than either. It is recommended that the GM read over the Replicant rules to familiarize him/herself with the general concepts and difficulties so that they will better understand the mental facets of Android construction. Scientists designing an Android use the averaged skills of Cybernetics and Electronics. Techs building an Android use the average of their Cybernetic Tech and Electronic Tech skills. Android body construction should be considered a *Very Complex* procedure, and linking the body to the Molecutronic brain is another, *VeryComplex*, operation.

ANDROID MATERIALS AND EQUIPMENT COSTS

Equipment/Material	Cost
Molecutronic Brain	50,000
Complete Workshop	1,500,000
Vocal System	2,000
External (appearance) System	2,000
Energy/Power System	10,000
Muscular System	3,000
Nervous System	5,000
Skeletal System	2,500
Visual Sensors (eyes; 2)*	2,000
Audio Sensors (ears; 2)*	1,000
Compact Repair Kit	300
Simulskin refill (repairs 200 hits)	20
Major Repair Kit	2,500

* Superior versions can be obtained (at a higher cost).

See below for details on cost multipliers for superior systems. The Complete Workshop contains all tools and equipment necessary to construct an Android, including a computer and interfaces to program the Molecutronic brain, but no actual supplies.

11.21 STAT DEVELOPMENT AND BONUSES

An Android should be considered as being in two distinct and separate parts: the body and the mind, the 'mind' in this case being the Android Molecutronic Brain, a semi-living substance which stores and processes information in a way similar to that of the human brain — although more quickly and efficiently. Molecutronic brains also 'die' if their supply of energy is cut off, losing all memory. It is possible to place such a brain in another housing, such as a robot or vehicle, but it is generally considered a waste of the brain's unique learning (self-programming) potential.

Character Development stats are used here, so if another system is being used the GM should convert the given stats as closely as possible to his system. Five of the ten stats are linked to the Brain: Intuition, Empathy, Self-Discipline, Memory, and Reasoning, while the other five are associated with the body: Strength, Quickness, Presence, Constitution, and Agility.

PHYSICAL CAPABILITIES

GM Note:*The following rules are suggested guidelines for the creation of a player character Android. The GM should read over them carefully and make any modifications he sees fit before allowing a player to consider being an Android. Androids produced by companies in the* **Space Master** *Milieu will be of varying sophistication, the type listed here as appropriate for players is 'above average.'*

The theoretical standard Android body has 100's in all of its physical attributes (Temporary and Potential), reflecting a +25 bonus. This bonus can be enhanced further by using improved, more expensive systems, instead of the 'standard parts'. See the cost chart at the end of the section for the standard system prices.

Since they are no more difficult to install, these systems do not make the construction roll more difficult. They *are* more costly, as can be seen below:

Cost Multiplier	System Bonus*
(x2)	+ 5 voice or appearance.
(x5)	+5 muscular or skeletal; +10 voice or appearance.
(x10)	+5 energy or nervous; +10 musculature or skeleton; +15 voice or appearance.
(x20)	+10 energy or nervous; +15 musculature or skeleton; +20 voice or appearance.
(x50)	+15 energy or nervous; +20 musculature or skeleton; +25 voice or appearance.
(x100)	+20 energy or nervous; +25 musculature or skeleton; + 30 voice or appearance.
(x200)	+25 energy or nervous; +30 musculature or skeleton.

* Note that this is the cost and bonus for a system; to be applied as stat bonuses, two or more systems are involved:
- Improved Strength: (skeletal and muscular systems)
- Improved Quickness: (muscular and nervous systems)
- Improved Agility: (muscular and nervous systems)
- Improved Presence: (voice, appearance)
- Improved Constitution: (skeletal and energy systems)

Example: *Ryk the Engineer has done his research to build an Android and is purchasing the needed parts. He wants his Android to have a +10 Presence and +10 Agility (i.e., a + 35 total in each, including intrinsic bonuses.) To do this, his Android must have +10 quality versions of all the following: Musculature, Nervous system, Voice, and Appearance. Note that other factors which only have one applicable enhanced system (such as Strength, for instance, for which only Musculature was improved) gain no bonus, because the skeleton could not take the strain should the improved muscles be used to capacity. Thus, Strength is +0. If Ryk spent the money to buy a +10 skeleton, his Android would thus have a +10 Strength bonus as well. (Then he would only need to buy a +10 energy system to enhance his Android's constitution....)*

After construction, the physical systems cannot be altered without a complete physical overhaul (a *Complex* operation).

The stats of the molecutronic brain, once activated, are all 90 (Temporary) To determine potentials, roll one D10 adding two points. Potentials are rolled, then each is assigned to a desired stat. Android mental stats move toward their potential just as the humanoids' do. Note that this can generate stats as high as 102.

General attitudes and tendencies can also be programmed in, such as aggressiveness, compassion, specific fears, hatreds or loves, and prohibitions (such as refusing to kill a humanoid), and loyalty to a specific individual. Although none of these are absolutely guaranteed, as the brain is self-programming, and, after a point, self-motivating, the Android should be almost incapable of disobeying explicit program directives.

Note: The GM may wish to institute a "secret" percentage chance of a hidden flaw in the Android Brain, such a hidden hatred; homicidal tendencies triggered by an unlikely event, etc. This 'unreliability' would explain a racial dislike for Androids in some areas, if that is desired.

11.22 SKILL DEVELOPMENT

The Android chooses a profession, and makes skill picks, etc. It 'matures' after a fashion, as it goes through a ten year period of development during which it gains its adolescent and apprenticeship skill levels (this ten year period can be bypassed via intense programming, but this involves expensive "Background Data", as well as an additional Complex operation. Also, this data is rather basic, and of necessity lacking in trivial — yet helpful — background 'experience'). In general though, an Android develops and learns just like a PC with the following exceptions: Androids cannot be Telepathic; and they do not pick Body Development. See below for Android repair information.

11.23 ANDROIDS IN COMBAT

In combat and most other areas of day-to-day play, an Android should be considered a sentient being: subject to attacks and criticals as would a normal sentient. For example, an Android would 'bleed' precious lubricating and power fluids, and it could be 'stunned' by a serious strike which might temporarily incapacitate its system (the GM may wish to have Androids more resistant to stuns, however, perhaps being stunned for only half as long, or, for instance, subtracting 1 from any stun total).

However, Androids do not 'lose consciousness'; all take 200 hits plus their total Con bonus before being incapacitated. Most Androids have a built-in safety mechanism which causes them to 'play dead' long before that point is reached, so they can repair themselves later (unless analysis of the situation tells them that playing dead will do no good).

Another important factor about Androids is their superior AT: Android flesh is AT 4 (rather than normal sentient AT 1). Furthermore, Androids with a musculature and skeleton of +20 or better have an effective AT of 12.

11.24 ANDROID PHYSIOLOGY AND REPAIR

Androids do not eat, although they can drink and process liquids, eliminating them the same way sentients do. Their body extracts any needed hydrogen to fuel their internal high-efficiency microfusion reactor: the Android power center ("heart"). Supplemental water is stored in the stomach area to keep eyes and mucous membranes moist, for a complete 'living' appearance. Androids seem to breathe, though it is an artificial convention, as are pulse and heartbeat.

The most advanced Android designs are absolutely indistinguishable from a living being to human senses, and some are fully capable of all applicable sentient physiological functions (this is a necessity for the advanced pleasure models). Some cultures consider Android capability of certain functions to be an abomination.

Androids can be equipped with 'special abilities' just as Alterant Replicants and mutations. The GM should review the special abilities section (In the **Player Book,** 12.5) and assign costs for each. Naturally, an Android would not have corresponding physiological problems associated with most special abilities. In addition, other special sense or manipulation skills (e.g., infra-red vision, heightened tactile sense) are possible.

Androids do not 'heal' as do living sentients; they must be repaired. Simple concussion hit damage can be dealt with using a Compact Repair Kit, which includes a container of substance nearly identical to the Android flesh, and a device very similar to the Medical Dermal Closer. The Android (assuming he has boxes in Cybernetic Technics and is not incapacitated) can perform these simple repairs easily at the rate of 10 hits per round. Destroyed sections of skin cannot be cosmetically repaired in every detail the field; this requires appropriate facilities (a Major Repair Kit will do).

For more severe damage, such as 'muscle' or 'bone' damage, a Major Repair Kit is necessary. This "kit" is actually a set of two 1/3 cumet containers holding a portable computer and a number of very specialized devices and materials. The computer is programmed with necessary specialized Android anatomy data, and acts as a guide for repair/construction purposes. For these serious repairs, the Malfunction/Repair Chart should be consulted. Match the severity of the critical with the repair column: Routine = "A"; Light = "B"; Moderate = "C"; Severe = "D"; Very Severe = "E" (not using the Extremely Severe column) and use the critical roll(s) as a subtraction from the repair roll(s). Treat "66" as "100". Separate criticals require separate repairs.

Example: An 87 "C" critical is rolled on Billy the Android. Therefore, to repair the damage, the Moderate column of the Repair/Malfunction table is used. Billy's owner Ryk has a 60 Cybernetic Tech bonus, and rolls a 65. 65 + 60 = 125, minus 87 equals 38. Thus, a 38, which reads 20 minutes to repair with 10% CIP (cost in parts). The 10% is ten percent of the damaged area, which the GM must subjectively decide the approximate value of.

Naturally there will be inconsistencies between the actual critical to the Android and the written crit on the table designed for living beings, but the GM is urged to extrapolate to the nearest mechanical equivalent. In some instances (such as a destroyed eye or heart) a replacement is obviously necessary, and the Repair Chart alone is not enough. Unless there are specific replacements available (they could be purchased ahead of time) the Android will be crippled until such replacements can be found.

11.3 ■■■■■■■
LARGER CONSTRUCTS

The custom construction of larger machines than small devices will be dealt with in excruciating detail in future *Space Master* products, however, the GM may wish to extrapolate the general guidelines given above and allow his characters to build larger constructs such as robots, vehicles and even spacecraft.

ORGANISMS

In the universe of *Space Master* some cultures have made an art of genetic manipulation. Engineered microbes and other tiny organisms serve as everything from food to computers to garbage consumers. On many planets can be found plants and animals created specifically for certain environments and for certain functions. Cloning of Sentients has become (relatively) simple, and artificially constructed and bred people are even possible.

The GM should keep in mind that, even in the far future the social ramifications of some of these things would be significant: racial resentment of Alterant Replicants; mistrust of Clones (perhaps because of 'tampering' by the Genetic engineers), etc.

12.1
MICRO-ORGANISMS

The possibilities for engineering custom-made micro-organisms are virtually limitless; they are the origin of many drugs used for healing in *Space Master*, as well as poisons. The GM must make judgements here, although the engineering of micro-organisms is usually less complex than such undertakings as an Alterant Replicant. *Moderate* is applicable for most simple tasks. Genetic Tech skills are used for construction in this area.

12.2
ALTERANT REPLICATION

Alterant Replication is a process whereby a living fetus is altered by artificial means at the genetic level to produce an different (usually improved in some way) being or creature. The *Research/Construction Chart* (pg.61) is used, and — in general — the greater the abilities of the new Replicant, the more difficult the operation.

Conceptually similar to the simpler genetic alterations, Replication involves implanting new genetic material into a fetus ("blank" fetuses are produced in large numbers using a modified cloning process) and growing the prepared fetus at an accelerated rate in a special tank.

Very expensive, sophisticated machinery is necessary to perform the operation of altering the chromosomal structure to the new form, involving extensive programming and delicate operations. Once the fetus has been altered, it is placed in a growth tank to develop to the desired maturity: 100 days to full growth (20 year-old equivalent for full maturity; with five days in the tank equalling 1 year if the Replicant is to be brought out prematurely and perhaps raised as a normal hominoid).

When creating a Replicant, first the appropriate research is required to determine exactly how the genes are to be altered. Genetics is the Scientific skill used. If the desired Replicant type has already been created by someone else (this can be determined by a percentage roll, likelihood determined by the GM) the Research is *Easy*. If it is a new type, research is *Very Complex*. The GM is urged to place restrictions on how powerful or sophisticated the designed Replicant can be.

It is suggested that no special stat bonus exceed +30 (in addition to an intrinsic stat bonus) and that the average of all bonuses never exceed 15. These restrictions should be even lower for Eugenics Products (+20 maximum special stat bonuses, and a maximum total average of 12). Review the *Race Statistic Chart* (**Player Book**, pg 31) for trends. For Replicants, Empathy and Intuition starts at -20 for purposes of modification, and for Eugenic products, these stats start at -10. For Construction, Genetics Technics is used, and Replicant Construction is always *Very Complex* unless otherwise noted.

An additional difficulty factor should be assigned, depending on how many special abilities the Replicant will have, and how good its stats will be. For instance, in the *Race Statistics Chart* when averaging all the stat bonuses, the Type I (warrior) has a +10 average bonus. Thus, the creator of this Replicant might be given a 100 (10 x 10.0) modifier to his detriment (-100) when rolling to construct the Replicant. (If using data from a type already created, the difficulty modifier is halved — assuming construction data records are accessible). That is just the Stat modifier section. Also to be considered is the Resistance Roll modification section. As can be seen, all Replicants are at Base -50 vs. Channeling and Essence. They are intrinsically at this level because those Realms are virtually unknown in *Space Master*, and those who do know of them don't bother with them. Any improvement of those conditions must start from the -50 level. Against the other areas, Replicants start at +0, as with Stat modifiers.

In the area of healing and injury, Replicants' soul departure delay is two rounds; this is generally considered irrevocable. Stat deterioration is +5, but can be reduced at a cost of 5 modifier penalty per 1 point of deterioration decrease. Recovery factor is base 1.0, but can be improved (or reduced) at a modifier of ± 5 per .5x of recovery rate (can't be reduced below .1x).

Each 'Starting Language' costs in the form of a 10 modifier, and it is implanted and permanently known.

Hit dice start at D8, with a +5 cost per extra "side" of die roll. The flat bonus per level costs +10 per +1 hit/lvl.

Max hits start at 100, and can be raised or lowered at a rate of five hits/ +1 modifier. The GM can also stipulate that the desired gene material for superior stats, bonuses, etc. must be bought specifically and installed at a base cost x the bonus as a multiplier (see costs below).

Lifespan is generally set at approximately 20 years (after removal from the growth tank) and can be increased at the following rate: # of years equivalent to modifier on a one-to-one correspondence (i.e., twenty extra years of life equals a 20 modifier). The lifespan can also be decreased, but at no bonus. Replicants don't age until their programmed expiration, when they age very rapidly (one year/hour) until death at a 100 year-old equivalent.

Example:The first creator of the Type I (Warrior) Replicant's modifiers: 100 from total average Stat bonus enhancement, 40 for average RR enhancement, 5 due to reduced Stat deterioration, 5 from improved healing rate, 10 from two extra "die-sides" and 20 for two extra automatic hits/lvl. Total modifier: 170 to the creator's detriment. See the cost chart for associated expenses.

GENETIC MATERIALS COSTS CHART

Replication Materials	Cost
Genetic Combination Eqpmt	2 mil
Memory Transfer Eqpmt	150,000
Growth Tank w/monitors	300,000
Growth Fluids (1 use)	500
'Blank' fetus*	5,000
Additional Genetic Material (each stat):*	
+5	500
+10	1,000
+15	2,000
+20	4,000
+25	8,000
+30	16,000
Background	1,000-10,000

* Price highly variable; often available only on the Black Market (3x Normal Cost) w/lower quality and reliability).
Genetic material cost is given for gene material which will provide a stat bonus for one specific stat, which replaces material in a 'blank' fetus.

General physiological/appearance factors (sex, eye and hair color, skin tones, height and other body proportions, etc.) are set by the creator at no additional cost — within reason and subject to other factors: Replicants with superior strength are probably taller and definitely bulkier than average; those with great agility less so, etc.

Psychological background (in general) is pre-programmed as desired, including general attitudes and inclinations.

Some Replicants do not deal well with the fact of their origins. The GM may wish to institute a rule in which a Replicant must make a roll with SD as a modifier vs 'disenchantment'. If they fail (roll under 100) — and depending on how badly — they will become depressed and unhappy and perhaps even commit suicide. Below is a small table which can be used to determine depression severity.

Roll	Result
01-05	Criminally Suicidal (violent; secondarily Homicidal)
06-25	Suicidal.
26-50	Inactive/Semi-Comatose.
51-75	Surly and prone to RRs vs. respect for authority.
76-90	Deeply Depressed (-25 for all actions).
91-100	Depressed, at -5 for all activity.

Some can be helped with treatment (attempting to roll over 100 with SD mod, one per month while in "intensive treatment", all at an additional - 50, modified by the therapist's Psychology bonus. An addition subtraction of -10 is added for each month of a roll under 100) if they succeed, they are cured.

When the Replicant is removed from the growth tank, his stats are rolled in the same manner as a Player Character, including Temps and Potentials, etc. Profession, as well as Adolescent and Apprenticeship skill selection are also pre-programmed. It is naturally assumed that the stats will be assigned to further enhance the programmed strengths of the Replicant. After "birth" from the tank, skill point selection is theoretically the decision of the Replicant, though naturally it will obey the wishes of its master if imprinted (see below) or whatever authority figure is available if it is suitably passive in the area.

Imprinting (the very strong bonding of the Replicant to — or against — a certain individual) is more involved. Imprinting and must be done within one day of the Replicant's emergence. The method is this: a subconscious 'trigger' is pre-implanted, with the desired inclination (devotion, love, selfless protectiveness, open dislike, cunning, murderous hatred, etc.) formed into a phrase in one of the Starting Languages. When the phrase is spoken, the Replicant is exposed to the "imprintee" (or an image of same — a full color holograph is best) and thus Imprinted. Imprinting to more than one person is rarely effective and often results in damage and confusion to the Replicant.

12.3 ▆▆▆▆▆▆▆▆▆▆
CLONING

Cloning is much more straightforward that Alterant Replication, since genetic 'tinkering' is not involved. A living flesh sample is taken from the donor, and grown in a fetus propagation tank (different from and more complex than a regular growth tank). Successful completion of this phase alone is a *Very Complex* operation, and takes the time indicated on the chart. Then the fetus is prepared and placed in the normal growth tank for the term, again a (unmodified, except for the creator Genetic Tech bonus) *Very Complex* task. After both operations are completely successful, the living Clone emerges. He or she has the exact Potential stats as the Donor (though Temps are at 1st level equivalent) and intrinsic abilities. The new Clone has no skills, however.

This problem can be avoided or corrected in two ways: The Clone can be awakened as an infant (after about 10 days in the growth tank) and trained. This may result in slightly different skill development (the GM should enforce this possibility, since the new Clone is a person, and just as capable of independent thought and free will as the donor).

Alternatively, the Clone can receive memories from the clone sample donor. This is invariably traumatic, and can possibly kill or mentally damage the Clone. The proper "Memory Transfer" equipment is required, and a roll on the *Hard* column of the *Research/Construction Chart* is needed. If 100% success is not achieved immediately, the Clone must roll over 100, with Memory as a modifier. If he fails, there is a 20% chance of death (irreversible in this case). If the Clone survives, his Potential Memory and Reasoning is reduced by the number equal to the amount less than 100 rolled to awaken the memories, and its actual skill knowledge is reduced by the same amount. Subsequent attempts to restore memories after the Clone has failed once will definitely kill it. If the Clone resists, the Creator may roll again, attempting to complete the memory restoration.

Assuming the restoration is successful, the Clone will have all memories and skills of the original, up to the point the sample was taken. However, the Clone is now a separate entity, and its environment immediately begins to take effect. There will be inevitable attitude divergences as the Clone has new experiences and makes its own choices.

Example: Trevoc is trying to transfer the memories of someone into a clone of that person. He rolls a 77 (plus his 60 bonus = 137) On the chart, 137 indexes to 70% success. So, the Clone must make a Roll. Its Temp Memory is 80, so a 20% chance of failure. Trevoc rolls 16. Ooops, not high enough. Trevoc rolls the chance of death: 47. Well, it doesn't die, but its Memory and Reasoning are reduced by 30 (100 - 70 = 30). His 87 Pot. Memory is now 57, and his 76 potential Reasoning is now 46. Not good. Also, 30% of the Clone's background and skill knowledge is lost, the specifics to be decided by the GM, probably by assigning numbers to the total number of Trevoc's skills and rolling, removing those skills until about 30% are gone.

It is also possible to grow a Clone fetus, then proceed with Alterant Replication procedures, thus improving on an already existing set of Stats and personality traits. The result is a combination: whatever is not altered in the Replication process carries through from the original. This procedure is more delicate, however, and the RRs necessary when Memory Restoration is attempted on a normal Clone must be followed at every step of this Clone Alteration. Any failed rolls by the fetus (using Adolescent level Temp Constitution as a modifier during Alteration) results in death. Memory Restoration to an Alterant Clone is done in the same way as normal Clones, except that failure of a roll by the Clone invariably results in death.

CONSTRUCTION / RESEARCH CHART

	Routine	Easy	Moderate	Hard	Complex	Very Complex	Absurd
-151	Light malfunction to the equipment.	Moderate malfunction to the equipment.	Moderate malfunction to the equipment.	Moderate malfunction to the equipment.	Severe malfunction to the equipment.	Severe malfunction to the equipment. 10 days wasted.	Physically impossible
(-150) — (-101)	Routine malfunction to equipment.	Routine malfunction to equipment.	Routine malfunction to equipment.	Routine malfunction to equipment.	50 hrs. wasted; 50% of materials (clone. replicant, machine parts, etc.) destroyed.	No progress; 50 days wasted and 100% of materials destroyed due to error.	Project botched after one year. All materials lost.
(-100) — (-51)	5% 5 minutes.	5% 40 mins.	Upgrade to HARD. Waste 1 hour.	5% 100 hours.	10 hours lost; 20% of materials destroyed due to error.	Problem 30 days into task. 50% chance project destroyed (If research: wrong data). 50% no damage, no progress.	5% 6 yrs. Slight progress, but equipment acts up: roll Very Severe malfunction.
(-50) — (-26)	10% 2 minutes (12 rounds).	10% 40 mins.	5% 4 hours.	5% 80 hours.	5% 350 hrs. If construction, 10% of material destroyed.	10% 100 days. If construction, 20% of material destroyed and must be replaced.	5% 5 yrs. If construction, 50% of materials damaged.
(-25) — 0	20% 1 minute (6 rounds).	10% 30 mins.	10% 2 hour.	10% 60 hours.	10% 350 hours.	20% 90 days. If construction, 10% of material destroyed and must be replaced.	5% 4 yrs. If construction, 20% of materials damaged.
01 — 20	40% 6 rounds.	30% 30 mins.	20% 1 hour.	20% 50 hours.	15% 350 hours.	10% 85 days.	5% 3 yrs. If construction, 10% of materials damaged.
21 — 40	60% 6 rounds.	50% 30 mins.	30% 50 mins.	25% 40 hours.	15% 300 hours.	15% 83 days.	5% 2 yrs.
41 — 55	80% 6 rounds.	70% 20 mins.	40% 50 mins.	30% 40 hours.	20% 300 hours.	20% 80 days.	5% 1.5 yrs.
56 — 65	90% 6 rounds.	95% 20 mins.	50% 40 mins.	35% 30 hours.	25% 300 hours.	30% 80 days.	5% 1 year.
66 — 75	95% 6 rounds.	95% 10 mins.	60% 40 mins.	40% 30 hours.	25% 250 hours.	30% 78 days.	6% 1 year.
76 — 85	99% 6 rounds.	99% 10 mins.	70% 35 mins.	45% 30 hours.	25% 250 hours.	35% 75 days.	7% 1 year.
86 — 95	100% 6 rounds.	99% 5 mins.	70% 30 mins.	50% 30 hours.	30% 250 hours.	35% 72 days.	8% 1 year.
96 — 105	100% 6 rounds.	99% 2 mins.	95% 20 mins.	50% 30 hours.	40% 250 hours.	35% 70 days.	9% 1 year.
106 — 115	100% 5 rounds.	99% 1 min.	98% 20 mins.	55% 25 hours.	40% 200 hours.	40% 69 days.	10% 1 year.
116 — 125	100% 4 rounds.	99% 1 min.	99% 20 mins.	60% 25 hours.	40% 200 hours.	40% 64 days.	10% 300 days.
126 — 135	100% 4 rounds.	99% 5 rounds.	100% 20 mins.	65% 25 hours.	45% 200 hours.	45% 60 days.	10% 250 days.
136 — 145	100% 3 rounds.	99% 5 rounds.	100% 20 mins.	70% 25 hours.	50% 200 hours.	50% 57 days.	10% 200 days.
146 — 155	100% 3 rounds.	99% 5 rounds.	100% 15 mins.	80% 25 hours.	50% 125 hours.	55% 53 days.	10% 150 days.
156 — 165	100% 2 rounds.	99% 5 rounds.	100% 10 mins.	95% 25 hours.	50% 110 hours.	50% 51 days.	10% 120 days.
166+	100% 1 round.	100% 4 rounds.	100% 10 mins.	100% 20 hours	60% 100 hours.	60% 50 days.	10% 100 days.

Note: all percentages refer to the fraction of research / construction on the project that has been completed by the given roll. Times (unless otherwise noted) indicate the amount of time required to complete the given percentage of the project.

	ROUTINE (1-5)	LIGHT (6)	MODERATE (7)	SEVERE (8)	VERY SEVERE (9)	EXT. SEVERE (10)
-151	Sad job. Damage/Mal function becomes Very Severe after 1 round.	Dam/Mal becomes very severe after 1 round.	You deliver 10 pts. of damage to the system. Roll again.	You deliver 30 pts. of damage to the system. Repair on extremely severe column.	You deliver 150 Hits to the system. System is a write off.	System is destroyed (Explosively if possible). 100% crew casualty rate.
(-150) — (-101)	Dam/Mal becomes severe after 4 rounds.	Dam/Mal becomes severe after 5 rounds.	Dam/Mal becomes extremely severe after 1 minute.	Dam/Mal becomes very severe. After one hour waste 10% CIP.	System is a write off after 2 hours of tinkering.	1 — 100% of repair crew becomes casualties. System destroyed.
(-100) — (-51)	Dam/Mal becomes moderate after 4 rounds.	Dam/Mal becomes moderate after 6 rounds.	Dam/Mal becomes very severe after 2 minutes.	Dam/Mal becomes very severe after 6 rounds.	Dam/Mal upgraded to extremely severe after 1 hour.	2 members of repair crew takes appropriate "D" critical strike.
(-50) — (-26)	Dam/Mal becomes light after 3 rounds.	20 minutes with 5% CIP. otherwise 30 minutes.	Dam/Mal becomes severe after 1 minute.	3 hours to repair with 10% CIP.	72 hours to repair with 50% CIP.	1 member of repair crew takes appropriate "C" critical strike.
(-25) — 0	You fumble with device for 5 minutes until it is working again.	10 Minutes to repair unit. Unit operates at -25% with a routine malfunction.	40 minutes to repair with 10% CIP. You overload circuits causing a random malfunction.	2 hours to repair with 10% CIP.	48 hours to repair with 50% CIP.	1 — 100 Hits to system. Try again.
01 — 20	3 minutes to repair.	8 minutes to repair.	30 minutes to repair damage with 10% CIP. Malfunction repaired — no cost.	90 minutes to repair damage with 10% CIP. 60 minutes to repair malfunction with 10%.	36 hours to repair unit to 50% effectiveness, 48 hours to fully repair. 50% CIP.	Repair may not be attempted until 2 "severe" procedures are completed.
21 — 40	2 minutes to repair.	5 minutes to repair. "Routine" malfunction will occur next time system is used.	20 minutes to repair with 10% CIP.	1 hour to repair with 10% CIP.	24 hours to repair with 25% CIP.	200 hours to repair with 50% CIP.
41 — 55	1 minute to repair.	5 minutes to repair.	15 minutes to repair with 5% CIP. 25 min. otherwise.	1 hour to repair damage with 10% CIP. Malf. repaired without cost.	24 hours to repair with 25% CIP.	120 hours to repair with 50% CIP.
56 — 65	5 rounds to repair.	5 minutes to repair.	13 minutes to repair with 5% CIP. 25 min. otherwise.	55 min. to repair damage with 10% CIP. Malf. repaired without cost.	24 hours to repair damage with 25% CIP. Malf. repaired without cost.	110 hours to repair to 50% effectiveness. 120 hours to repair fully. 50% CIP.
66 — 75	5 rounds to repair.	5 minutes to repair.	12 minutes to repair. Dam/Mal becomes "light" after 1 round.	50 min. to repair damage with 10% CIP. Malf. repaired without cost.	18 hours to repair damage with 25% CIP. Malf. repaired without cost.	110 hours to repair with 50% CIP.
76 — 85	4 rounds to repair.	4 minutes to repair.	10 minutes to repair.	45 minutes to repair damage with 10% CIP. Malfunction repaired by two light procedures.	15 hours to repair with 10% CIP.	100 hours to repair with 50% CIP.
86 — 95	4 rounds to repair.	4 minutes to repair.	9 minutes to repair.	40 minutes to repair with 5% CIP.	15 hours to repair with 10% CIP.	90 hours to repair damage with 50% CIP. Malfunction repaired without cost.
96 — 105	3 rounds to repair.	3 minutes to repair.	8 minutes to repair.	40 minutes to repair.	13 hours to repair damage with 10% CIP. Malf. repaired without cost.	Repair reduced to 2 "moderate" procedures.
106 — 115	3 rounds to repair.	2 minutes to repair.	7 minutes to repair damage. 6 minutes to repair malfunction.	30 minutes to repair with 5% CIP. 40 minutes to repair otherwise.	10 hours to repair unit to 50% capacity. 11 hours to repair fully. 10% CIP.	80 hours to repair with 50% CIP.
116 — 125	2 rounds to repair.	2 minutes to repair.	You isolate 3 "routine" procedures to repair unit. Start next round.	30 minutes to repair.	8 hours to repair. 10% CIP.	70 hours to repair damage with 50% CIP. Malfunction repaired without cost.
126 — 135	2 rounds to repair.	6 rounds to repair.	5 minutes to repair.	25 minutes to repair.	5 hours to repair. 10% CIP.	70 hours to repair damage or 60 hours to repair malfunction. Both have 25% CIP.
136 — 145	You may use equipment next round.	4 rounds to repair.	Unit at -25% in 3 minutes. Unit repaired in 5 minutes.	20 minutes to repair.	5 hours to repair. 10% CIP. Malfunction is downgraded to severe.	60 hours to repair to 50% effectiveness. 70 hours to repair fully. 25% CIP.
146 — 155	Unit ready next round.	3 rounds to repair.	Unit at -50% in 6 rounds. Unit repaired in 5 minutes.	20 minutes to repair damage. Malf. repair is 3 routine procedures.	4 hours to repair. 10% CIP.	50 hours to repair with 25% CIP.
156 — 165	Unit ready. You have 1/2 of the round left.	2 rounds to repair.	3 minutes to repair.	Downgrade repair to moderate after 5 minutes.	3 hours to repair. 10% CIP.	Procedure reduced to 2 "severe" repair procedures.
166+	Quick adjustment. You have the full round to act.	1 round to repair.	2 minutes to repair.	10 minutes to repair.	Reassesment of systems shows 2 "light" repairs are required.	40 hours to repair with 25% CIP.

Note: Concussion hits repaired on a vehicle in a 25 hour period = a Mechanical Tech repair roll divided by 10.
Note: If only one person is working on a repair, double the times listed. Double the necessary time if no repair scanner or diagnostic computer is used during the repair.
CIP refers to Cost-in-Parts. This is the indicated percentage of the parent unit cost which must be invested to bring about the desired repair.

MALFUNCTION AND DAMAGE CHART

1st Roll	AREA	2nd Roll	SYSTEM
1-2	MECHANICAL (5%)	1	Environment: Lose atmosphere in 1-10 hrs
		2	Environment: Lose heat/cool in 1-10 hours
		3-5	Bulkhead/Airlock/Hangar Frozen/malfunctions
		6	Landing Gear Inoperative
		7-8	Internal Lighting Systems out.(Emergency on)
		9	Running/Landing Lights out.
		10	Other System:
3-5	ELECTRONIC (15%)	1	Helm Control (Main/Auxiliary)
		2	Navigation Control (Main/Auxiliary)
		3	Other Console
		4	Other Console
		5	Communications
		6	Electronic Warfare
		7-8	Sensors
		9	Medical
		10	Other System:
6-7	COMPUTER (10%)	1	Deflector Shield Control
		2-3	Sensor Analysis (now at 1-100)
		4	Computer aided Astrogation
		5-6	Memory Banks (Courseplots/archives)
		7	Autopilot
		8	Sentient Functions/Diagnostics
		9	Main Processing Core (All above out)
		10	Other System:
8-9	POWER SYSTEMS (60%)	1	Sublight Drives
		2	Translight Drives
		3	Main Reactor/ Aux Reactor
		4	RIF Generator
		5-6	Deflector Shields
		7	Internal Gravitics
		8	External Gravitics
		9	Control Surfaces
		10	Other System:
10	WEAPONS (10%)	1-2	Central Control.
		3	Central HUD
		4	Tracking Control (Computer)
		5	Other System:
		6	Weapon System:
		7	Weapon System:
		8	Weapon System:
		9	Weapon System:
		10	Weapon System:

ROLL SEPARATELY FOR SEVERITY:

1-5 — **Routine** (system operative but 50% chance Mod. Malf. each time stressed or hour of use)
6 — **Light** (System at 75% of normal capability)
7 — **Moderate** (System at 50% of normal capability — or if a multiple system, half have failed).
8 — **Severe** (System Inoperative until repaired or upgraded).
9 — **Very Severe** (System Inoperative until repaired or upgraded).
10 — **Extremely Severe** (noperative until repaired/upgraded. May be irreparable w/o spacedock).

WEAPON MALFUNCTION CHART

Roll	Weapon Type			
	HAND-HELD OR PORTABLE ENERGY	HAND-HELD OR PORTABLE PROJECTILE	GRENADE, ROCKET, OR EXPLOSIVES	FORCEKNIFE OR POWERSWORD
(-34)-0	Weapon cooling; Forfeit 1d5 Fire Phases.	Safety catch on; Percep or WpnT. to notice what's wrong.	Minor guidance or structural flaw causes a -20 modifier.	Temporary power drain; Blade "blinks out" this round.
01-30	Wire breaks inside weapon; Final shot is at -10	Dud round/minor ammo jam; Better sit this one out.	Weak blast; any Critical effects are reduced by 1.	Minor power drain; Blade dims a little attacks at -20
31-50	Short circuit fries internal wiring and drains En Cell.	Barrel slightly off; All shots are at -15	Launcher problem or misdirected blast; attack is at -20.	Focal problem; Blade blurs; Range is x2 but attacks at -40
51-65	Weapon works, but fires a little off target (-25).	Weapon Jammed; Clearing it is a Routine WpnT maneuver.	Warhead/timer flaw; Explosion occurs 1d20 seconds late.	Capacitor flaw; Blade is very dim and attacks at -30.
66-75	Fire control stuck (50% "ON") If ON, take one attack at +50.	Weapon jammed and damaged; Failure chance is doubled.	Arming mechanism or fire control stuck in "safe" position.	Power surge causes a +10 before shorting weapon out.
76-90	Surge Damages lens or focal capacitor; last shot is at +15.	Obstructions in barrel cause all shots to go off at -50.	Charge seems to be a dud; but it will explode in 1d10 rounds	Major power drain; Blade barely visible; Attacks at -50.
91-100	Crackling sound emits from weapon; Failure chance is x3.	If Autoloader, gun overheats for 1 min/Mk. if not, reroll.	Launcher/arming mechanism fails; Charge never detonates.	Badly focused blade damages weapon; Failure chance is x3.
101-120	Power surge jolts user (PB attack at +20, no QU DB).	Extractor breaks; 10%/rd gun jams (50% if fired twice).	If set charge, detonator fails. Missile blows up 1d20m from user.	Major surge; Attack at +30 this round, then shorts out.
121-150	Flash towards user's face (PB attack at +40, no QU DB)	Pin malfunction; Shots fail to fire 50% of the time.	Explodes in launcher or near user (PB attack at +50).	As above plus user takes a "C" Elec Crit.
151-170	Weapon explodes (PB attack at +100, no QU DB, max as Mk. 5).	Blowback to user's face; Blinded 1d10 rds (10% perm).	Explodes before set/thrown (PB attack at +100, no QU DB).	As above but attack is at +50 and Crit is an "E".

13.0

MALFUNCTIONS AND REPAIR

This section deals with the breakdown of equipment, vehicles, weapons, and any other mechanical or electronic contrivance, known herein as a 'construct'. This section also deals with the rules fro repairing such malfunctions.

13.1
WHEN MALFUNCTIONS OCCUR

Malfunctions occur in one of two ways:

13.11 A POOR MANEUVER/ USE ROLL

Malfunctions most frequently occur because of user abuse, mishandling, or other unwarranted cruelty, as indicated on a use table or chart. These tables include: the *Vehicular and Astrogation Maneuver Chart* (**Player Book**, pg 84-85) or any Weapon Attack Table.

13.12 DURING NORMAL USE

This situation arises normally only in the case of vehicles, since weapons have a chance of malfunctioning every time they are fired anyway. The GM should enforce the possibility of any vehicle suffering a random malfunction at any given time.

13.2
VEHICLE MALFUNCTIONS AND DAMAGE

GMs should periodically roll to determine if a vehicle used by PCs has suffered a malfunction. This is a two-step process:

13.21 DID A MALFUNCTION OCCUR?

First we must find out if the vehicle suffered a breakdown. Some frequency guidelines are given here:

Interstellar Travel

1% chance of malfunction for every 10 light-years traversed (note that this should never go above 5%, as shunts over 50 light-years are 'blind' and very dangerous).

Interplanetary Travel

1% for each: planetary orbit traversed (including destination and departure points), landing/takeoff, day in flight.

Planetary Air travel

1% for each: 1000 (or fraction) kilometers travelled, landing/takeoff.

Planetary Ground Travel

1% for each: activation of vehicle, 100 (or fraction) kilometers travelled.

In each case, calculate the chance of a malfunction and roll. If no malfunction is indicated, the trip is mechanically unevent-

ful. Should a malfunction be indicated, roll D100 to determine the percentage of the way through the trip the problem arises. This noted, the GM should roll again, to see if another breakdown has occurred. If yes, he should determine the percent of the way through the trip. As long as the GM gets malfunction results, he should keep rolling. This continues until the GM fails to roll a malfunction. If there are a lot of them, he should organize them in order of occurrence then assign the nature of the failure (13.22).

13.22 NATURE OF MALFUNCTION

When a vehicle (be it scooter or starship) is damaged or is determined to have a malfunction, the *Malfunction and Damage Determination Chart* (page 63) is consulted. On it are listed five categories, representing the five basic systems found in virtually any vehicle. The GM makes a 1D10 roll and references the system. Should the vehicle in question not possess one of these systems ('weapons' for instance) a roll indicating that system is ignored, and the GM rolls again until an appropriate one is obtained. He then makes a second 1D10 roll to discover the exact nature of the problem for each malfunction (some extrapolation may be necessary), notes it, and proceeds to roleplay the breakdowns (e.g., console indicators light up; ship lurches and drops out of hyper, etc)

13.3
WEAPON MALFUNCTIONS

For handheld weapons, this is dealt with handily by the weapon attack table itself. A 'Failure' result on the table has a chance of either being a fumble, a charge depletion (for energy weapons) or a malfunction. Should this result of an exceptionally bad attack roll in the *Space Master* combat system be encountered, roll 1D10 to determine the Severity of the Malfunction incurred:

ROLL	SEVERITY	MOD
1-5	Routine	-35
6	Light	-20
7	Moderate	±0
8	Severe	+30
9	Very Severe	+50
10	Extremely Severe	+70

The Severity Modifier found above is applied to a roll of 1D100, and the total is referenced against the *Weapon Malfunction Chart* (pg 63). Unless otherwise stated, the Malfunction thus determined will remain in effect until it is repaired.

13.4
REPAIRS

Repairs are handled using the *Malfunction/Repair Chart* (pg 62). A designated repairman rolls on the chart, adding his appropriate Tech Skill. (The GM may wish to impose modifiers using the *Static Action Chart* in the **Player Book**, pg 78). Cross-indexing the severity of the malfunction against the total roll, the time to repair is determined. If more than one person attempts the repair, all bonuses are totalled and *one* roll made (assuming this is practical; obviously five people can't be repairing one multiscanner at once!) It must be stressed that only one roll at a time is allowable for each repair. If someone else wants to repair the device other than the initial Tech, the same net roll is used, with the new Tech Skill modifier.

*Example: Trevoc, having discvered that the divalium crystal covnverter on the hyperdrive has suffered a **Severe** malfunction, goes back with his'hypnospanner to make repairs. He has a +70 in Power System Technics, and rolls (open-ended) The result is a (oops!) -189! The modified roll is a -119. Not good. Trevoc asks the GM if his shipmate Boff Binkly can try the repair, with his +15 Power System Tech bonus. The answer is no; Trevoc made his repair attempt and he's stuck with it.*

Note that there are sometimes two different indications, one for *Malfunction* and one for *Damage*. Damage only occurs as a result of unusual stress (combat or unusual maneuvers) and the Malfunction result is used unless otherwise indicated.

In addition to the repair time indicated, the chart sometimes has a notation "—% CIP" ('Cost In Parts'). This means that a given percent of the system's original value in parts is necessary to make the repair. In most cases the GM will have to estimate costs (easy for a small device or weapon), but for vehicle systems, the Malfunction and Damage Chart provides a guide. The "%" listed under *area* column indicates the percent of the total vehicle cost is in the given system, and the "%" in the *system* column indicates the percentage of that portion.

NAME	TYPE	RATE	F	RANGE (METERS)				RANGE MODIFIERS				TABLE USED	Ammunition Notes			
				PB	SR	MR	LR	PB	SR	MR	LR		Shots	Bursts	Load	Notes
CONVENTIONAL PISTOLS:																
5mm Lt Pistol	1H Proj	2/rnd	2	1	10	20	50	+15	0	-30	-90	Sml Proj Mk.1	10		Mag	
10mm Med Pistol	1H Proj	2/rnd -	2	2	15	30	80	+15	0	-30	-90	Sml Proj Mk.2	10		Mag	
12mm Hvy Pistol	1H Proj	2/rnd	2	2	20	40	100	+15	0	-30	-90	Sml Proj Mk.3	10		Mag	
CONVENTIONAL MACHINE PISTOLS:																
5mm Lt MP	1H Proj	2 bursts	3	2	5	20	50	+15	0	-30	-90	Sml Proj Mk.1		6	Mag	
		2/rnd	2	2	5	20	50	+15	0	-30	-90	Sml Proj Mk.1	30		Mag	
10mm Med MP	1H Proj	2 bursts	3	2	10	30	80	+15	0	-30	-90	Sml Proj Mk.2		12	Mag	
		2/rnd	2	2	10	30	80	+15	0	-30	-90	Sml Proj Mk.2	60		Mag	
CONVENTIONAL RIFLES:																
5mm Lt Rifle	2H Proj	2/rnd	2	2	30	90	150	+15	0	-30	-90	Sml Proj Mk.1	15		Mag	
10mm Med Rifle	2H Proj	2/rnd	2	3	50	150	500	+15	0	-30	-90	Sml Proj Mk.2	15		Mag	
12mm Hvy Rifle	2H Proj	2/rnd	2	5	100	200	700	+15	0	-30	-90	Sml Proj Mk.3	15		Mag	
CONVENTIONAL ASSAULT RIFLES:																
5mm Lt AR	2H Proj	2/rnd	2	2	25	50	100	+15	0	-30	-90	Sml Proj Mk.1	30		Mag	
		2 bursts	3	2	20	40	80	+15	0	-30	-90	Sml Proj Mk.1		6	Mag	
10mm Med AR	2H Proj	2/rnd	2	3	40	120	400	+15	0	-30	-90	Sml Proj Mk.2	60		Mag	
		2 bursts	3	3	30	100	300	+15	0	-30	-90	Sml Proj Mk.2		12	Mag	
CONVENTIONAL MACHINE GUNS:																
10mm Lt MG	Sup Proj	2 bursts	3	3	50	150	500	+15	0	-30	-90	Sml Proj Mk.3		8	Mag	
														20	Belt	
10mm Med MG	Sup Proj	2 bursts	3	5	50	200	800	+15	0	-30	-90	Sml Proj Mk.3		8	Mag	
														20	Belt	
12mm Hvy MG	Sup Proj	2 bursts	3	10	100	300	1000	+15	0	-30	-90	Sml Proj Mk.4		10	Belt	
														20	Belt	
CONVENTIONAL SHOTGUNS:																
15mm Shotgun	2H Proj	2/rnd	2	3	20	40	60	+15	0	-30	-90	Shotgun	2		Brch	a
													5		Mag	a
15mm Sawed-off	2H Proj	2/rnd	2	2	10	20	30	+15	0	-30	-90	Shotgun	2		Brch	a
													5		Mag	a
15mm Autoshot	2H Proj	2 bursts	3	3	15	30	50	+15	0	-30	-90	Shotgun		3	Mag	
		2/rnd	2	3	20	40	60	+15	0	-30	-90	Shotgun	15		Mag	
20mm Shotgun	2H Proj	2/rnd	2	3	25	50	80	+30	0	-30	-90	Shotgun	2		Brch	a
													5		Mag	a
20mm Sawed-off	2H Proj	2/rnd	2	2	15	25	50	+30	0	-30	-90	Shotgun	2		Brch	a
													5		Mag	a
20mm Autoshot	2H Proj	2 bursts	3	3	20	40	70	+30	0	-30	-90	Shotgun		3	Mag	
		2/rnd	2	3	25	50	80	+30	0	-30	-90	Shotgun	15		Mag	
NEEDLEGUNS:																
Needle Pistol	1H Proj	2 bursts	4	3	10	20	30	+15	0	-30	-90	Sml Proj Mk.1		2	Mag	
Needle Carbine	2H Proj	2 bursts	4	3	15	25	35	+15	0	-30	-90	Sml Proj Mk.2		4	Mag	
Needle Rifle	2H Proj	2 bursts	4	3	20	30	40	+15	0	-30	-90	Sml Proj Mk.3		6	Mag	
TANGLEGUNS:																
Tangle Pistol	1H Proj	2/rnd	2	2	4	6	10	+15	0	-30	-90	Entangle Mk.3	2		Mag	
Tangle Carbine	2H Proj	2/rnd	2	2	5	15	30	+15	0	-30	-90	Entangle Mk.4	4		Mag	
Tangle Rifle	2H Proj	2/rnd	2	2	10	30	60	+15	0	-30	-90	Entangle Mk.5	6		Mag	
TASERGUNS:																
Taser Pistol	1H Proj	1/rnd	5	2	3	4	5	+15	0	0	0	Sml Proj Mk.1	1		Brch	b
Taser Carbine	2H Proj	2/rnd	5	2	5	10	30	+15	0	-30	-90	Sml Proj Mk.2	5		Mag	b
Taser Rifle	2H Proj	2/rnd	5	2	10	20	100	+15	0	-30	-90	Sml Proj Mk.3	5		Mag	b
ROCKETGUNS:																
Rocket Pistol	1H Proj	2/rnd	4	0	100	300	900	0	0	-30	-90	Sml Proj Mk.3	5		Mag	
Rocket Carbine	2H Proj	2/rnd	4	0	100	300	900	0	0	-30	-90	Sml Proj Mk.3	10		Mag	
		2 bursts	4	0	75	150	450	0	0	-30	-90	Sml Proj Mk.3		2	Mag	
Rocket Rifle	2H Proj	2/rnd	4	0	100	300	900	0	0	-30	-90	Sml Proj Mk.3	15		Mag	
		2 bursts	4	0	75	150	600	0	0	-30	-90	Sml Proj Mk.3		3	Mag	
MAGNETIC LINEAR ACCELERATORS:																
MLA Pistol	1H Proj	2/rnd	5	5	100	500	1000	+15	0	-30	-90	Sml Proj Mk.4	4		Mag	c
MLA Rifle	2H Proj	2/rnd	5	5	200	600	2000	+15	0	-30	-90	Sml Proj Mk.5	6		Mag	d
GRENADE LAUNCHERS:																
Grenade Rifle	Launcher	2/rnd	2	10	30	60	100	+100	+50	0	-50	Launcher Error	5		Mag	e
ROCKET PROPELLED GRENADE LAUNCHERS:																
RPG Launcher	Launcher	1/rnd	2	10	100	200	600	+100	+50	+20	0	Launcher Error	1		Brch	f
PORTABLE MISSILE LAUNCHERS:																
PML	Launcher	1/rnd	2	(See ammo notes)				+100	+50	+20	0	Launcher Error	1		Brch	f
PML Quad	Launcher	2/rnd	2	(See ammo notes)				+100	+50	+20	0	Launcher Error	4		Brch	f
PML Autofeed	Launcher	2/rnd	2	(See ammo notes)				+100	+50	+20	0	Launcher Error	6		Mag	f

Ammunition Notes Key:
Mag = Magazine
Belt= Belt of shells
Brch= Breech load

Special Notes:
a = Use Sml Proj attack table when using slug ammunition.
b = Any critical achieved automatically results in an "E" Stun critical instead.
c = Linex system powered by a Utility Cartridge.
d = Linex system powered by a Utility Pack.
e = Will fire only Mk.1 or Mk.2 grenades.
f = Will fire Mk.1 through Mk.5 warheads.

MASTER WEAPONS CHART 2: ENERGY WEAPONS

NAME	TYPE	RATE	F	RANGE (METERS)				RANGE MODIFIERS				TABLE USED	NOTES
				PB	SR	MR	LR	PB	SR	MR	LR		
LASERS:													
Mini Laser	1H Energy	1/rnd	7	1	5	10	15	+15	0	-30	-90	Laser Mk.1	1 Utility or Weapon Cell.
Laser Pistol	1H Energy	2/rnd	7	3	20	50	200	+15	0	-30	-90	Laser Mk.2	1 Weapon Cell.
Assault Laser	2H Energy	2/rnd	7	3	25	75	300	+15	0	-30	-90	Laser Mk.3	1 Weapon Cartridge.
Laser Rifle	2H Energy	2/rnd	7	3	30	100	400	+15	0	-30	-90	Laser Mk.4	1 Weapon Cartridge.
Heavy Laser	Sup Energy	2/rnd	7	5	100	500	2000	+15	0	-30	-90	Laser Mk.5	1 Weapon Pack.
BLASTERS:													
Mini Blaster	1H Energy	1/rnd	5	1	5	10	15	+15	0	-30	-90	Blaster Mk.1	1 Utility or Weapon Cell.
Blast Pistol	1H Energy	2/rnd	5	3	20	40	120	+15	0	-30	-90	Blaster Mk.2	1 Weapon Cell.
Assault Blast	2H Energy	2/rnd	5	3	25	70	150	+15	0	-30	-90	Blaster Mk.3	1 Weapon Cartridge.
Blast Rifle	2H Energy	2/rnd	5	3	30	90	250	+15	0	-30	-90	Blaster Mk.4	1 Weapon Cartridge.
Heavy Blaster	Sup Energy	2/rnd	5	5	80	400	1000	+15	0	-30	-90	Blaster Mk.5	1 Weapon Pack.
FLAMERS:													
Mini Flamer	1H Energy	1/rnd	10	1	2	3	5	+15	0	-30	-90	Flamer Mk.1	1 Flamer Cell.
Flame Pistol	1H Energy	2/rnd	10	2	5	10	15	+15	0	-30	-90	Flamer Mk.2	1 Flamer Cell.
Assault Flamer	2H Energy	2/rnd	10	3	10	20	30	+15	0	-30	-90	Flamer Mk.3	1 Flamer Cartridge.
Flame Rifle	2H Energy	2/rnd	10	4	20	40	60	+15	0	-30	-90	Flamer Mk.4	1 Flamer Cartridge.
Heavy Flamer	Sup Energy	2/rnd	10	5	40	80	120	+15	0	-30	-90	Flamer Mk.5	1 Flamer Pack.
STUNNERS:													
Mini Stunner	1H Energy	1/rnd	5	1	2	3	10	+15	0	-30	-90	Stunner Mk.1	1 Utility or Weapon Cell.
Stun Pistol	1H Energy	2/rnd	5	3	5	10	50	+15	0	-30	-90	Stunner Mk.2	1 Weapon Cell.
Assault Stun	2H Energy	2/rnd	5	3	10	20	100	+15	0	-30	-90	Stunner Mk.3	1 Weapon Cartridge.
Stun Rifle	2H Energy	2/rnd	5	3	15	30	200	+15	0	-30	-90	Stunner Mk.4	1 Weapon Cartridge.
Heavy Stunner	Sup Energy	2/rnd	5	5	20	60	300	+15	0	-30	-90	Stunner Mk.5	1 Weapon Pack.
		1/rnd	5	5	10	20	100	+15	0	-30	-90	Stunner Mk.3	Affects all in 30 deg. arc.
DISRUPTORS:													
Mini Disruptor	1H Energy	1/rnd	5	1	2	3	10	+15	0	-30	-90	Disruptor Mk.1	1 Utility or Weapon Cell.
Disrupt Pistol	1H Energy	2/rnd	5	3	5	10	50	+15	0	-30	-90	Disruptor Mk.2	1 Weapon Cell.
Assault Disrupt	2H Energy	2/rnd	5	3	10	20	100	+15	0	-30	-90	Disruptor Mk.3	1 Weapon Cartridge.
Disrupt Rifle	2H Energy	2/rnd	5	3	15	30	200	+15	0	-30	-90	Disruptor Mk.4	1 Weapon Cartridge.
Heavy Disruptor	Sup Energy	2/rnd	5	5	20	60	300	+15	0	-30	-90	Disruptor Mk.5	1 Weapon Pack.
PLASMATIC REPEATORS:													
PR Rifle	2H Energy	2 burst	9	3	20	40	100	+15	0	-30	-90	Blaster Mk.5	1 Weapon Microfusion Reactor.
Heavy PR	Sup Energy	2 burst	9	3	30	80	250	+15	0	-30	-90	Blaster Mk.5	1 Weapon Microfusion Reactor.

MASTER WEAPONS CHART 3: MELEE WEAPONS

Name	Type	F	Melee Mk.#	Melee Crit	Missile Mk.#	Missile Crit	Range/OB Mod			Notes
Dagger/Knife	1H Edged	1	1	Slash	1	Puncture	3/-10	8/-20	17/-30	
Main Gauche	1H Edged	2	1	Slash	1	Puncture	3/-15			May parry other melee weapons at +15 to DB.
Rapier	1H Edged	4	2	Puncture	—	—				Mk.1 vs AT's 9-20.
Short Sword	1H Edged	2	2	Slash	1	Slash	3/-30			
Hand Axe	1H Edged	4	2	Slash	1	Slash	3/-15	8/30	17/-45	Mk.3 vs AT's 9-12 & 17-20 when used in melee.
Scimitar	1H Edged	4	3	Slash	—	—				
Broadsword	1H Edged	3	3	Slash	—	—				
Falchion	1H Edged	5	3	Slash	—	—				Mk.4 vs AT's 9-12 & 17-20.
Force Knife	1H Edged	6	3	Slash	—	—				Advanced energy weapon.
Club	1H Crush	4	1	Krush	1	Krush	3/-40			
Whip	1H Crush	6	1	Entangle	—	—				Mk.2 vs AT's 1-4. Melee range is 3 meters.
Mace	1H Crush	2	2	Krush	1	Krush	3/-35			
Warhammer	1H Crush	4	2	Krush	1	Krush	3/-20	8/-40	17/-60	Mk.3 vs AT's 9-12 & 17-20 when used in melee.
Morning Star	1H Crush	8	3	Krush	—	—				
Quarterstaff	2 Handed	3	2	Krush	—	—				Mk.3 vs AT's 1-4.
War Mattock	2 Handed	6	4	Krush	—	—				Mk.3 vs AT's 5-8 & 13-16.
Flail	2 Handed	8	4	Krush	—	—				
Battle Axe	2 Handed	5	4	Slash	—	—				
2-Handed Sword	2 Handed	5	4	Slash	—	—				
Power Sword	2 Handed	9	5	Slash	—	—				Advanced energy weapon.
Bola	2 Handed	7	1	Krush	2	Krush	17/0	30/-20	50/-40	
Javelin	Pole Arm	4	2	Puncture	2	Puncture	3/0	17/-20	30/-40	
Spear	Pole Arm	5	2	Puncture	2	Puncture	3/-10	8/-20	17/-30	
Pole Arm	Pole Arm	7	3	Puncture	—	—				Mk.4 vs AT's 9-12 and 17-20.
Mounted Lance	Pole Arm	7	4	Puncture	—	—				If dismounted, use as spear.

Note : Each attack with a melee weapon has an OB modifier associated with it: Mk.1=-50, Mk.2=-40, Mk.3=-30, Mk.4=-15, Mk.5=0

MASTER WEAPONS CHART 4: ARCHAIC MISSILE WEAPONS

Name	Type	F	Missile Mk.#	Critical			Range/OB mod		
Sling	Thrown	6	2	Krush	3/+25	20/0	40/-40	60/-65	
Short Bow	Bow	4	2	Puncture	3/+10	30/0	60/-40	80/-70	
Light Crossbow	Bow	5	3	Puncture	3/+15	30/0	70/-35	100/-50	130/-75
Composite Bow	Bow	4	3	Puncture	3/+15	30/0	70/-35	100/-60	
Long Bow	Bow	5	4	Puncture	3/+20	30/0	70/-30	100/-40	140/-50
Heavy Crossbow	Bow	5	4	Puncture	6/+30	30/0	70/-25	100/-40	130/-55

Note: All missile attacks are resolved on the Small Projectile attack table.

SIMILAR WEAPONS CHART

Projectile Pistols:
Lt Pistol
Med Pistol
Hvy Pistol
Lt Machine Pistol (semi-auto mode)
Med Machine Pistol (semi-auto mode)
Tangle Pistol
Rocket Pistol
MLA Pistol

Conventional Machine Pistols:
Lt Machine Pistol (automatic mode)
Med Machine Pistol (automatic mode)
(Note: automatic/semi-automatic modes are
  similar skills for MP's)

Projectile Rifles:
Lt Rifle
Med Rifle
Hvy Rifle
Lt Assault Rifle (semi-automatic mode)
Med Assault Rifle (semi-automatic mode)
15mm Shotgun
20mm Shotgun
Tangle Carbine
Tangel Rifle
Taser Carbine
Taser Rifle
Rocket Carbine (semi-automatic mode)
Rocket Rifle (semi-automatic mode)
MLA Rifle

Conventional Assault Rifles:
Lt Assault Rifle (automatic mode)
Med Assault Rifle (automatic mode)
Lt Machine Gun (used unmounted)
(Note: automatic/semi-automatic modes are
  similar skills for AR's)

Conventional Machine Guns:
Lt Machine Gun
Med Machine Gun
Hvy Machine Gun

Conventional Shotguns:
15mm Shotgun
15mm Sawed-off Shotgun
20mm Shotgun
20mm Sawed-off Shotgun

Conventional Autoshotguns:
15mm Autoshotgun
20mm Autoshotgun

Needleguns:
Needle Pistol
Needle Carbine
Needle Rifle

Tangleguns:
Tangle Pistol
Tangle Carbine
Tangle Rifle

Taserguns:
Taser Pistol
Taser Carbine
Taser Rifle

Heavy Rocketguns:
Rocket Carbine (automatic mode)
Rocket Rifle (automatic mode)
(Note: Automatic/semi-automatic modes are
  similar skills for RG's)

Magnetic Linear Accelerators:
MLA Pistol
MLA Rifle

Portable Missile Launchers:
PML
PML Quad
PML Autofeed

Energy Mini Weapons:
Mini Laser
Mini Blaster
Mini Flamer
Mini Stunner
Mini Disruptor
Mini Struptorgun

Energy Pistols:
Laser Pistol
Blast Pistol
Flame Pistol
Stun Pistol
Disruptor Pistol
Struptorgun Pistol

Energy Rifles:
Assault Laser
Laser Rifle
Assault Blaster
Blast Rifle
Assault Flamer
Flame Rifle
Assault Stunner
Stun Rifle
Assault Disruptor
Disruptor Rifle
Assault Struptorgun
Struptorgun Rifle

Heavy Energy Weapons:
Heavy Laser
Heavy Blaster
Heavy Flamer
Heavy Stunner
Heavy Disruptor
Heavy Struptorgun
Heavy Plasma Repeator

Standard Lasers:
Laser Pistol
Assault Laser
Laser Rifle

Standard Blasters:
Blast Pistol
Assault Blaster
Blast Rifle

Standard Flamers:
Flame Pistol
Assault Flamer
Flame Rifle

Standard Stunners:
Stun Pistol
Assault Stunner
Stun Rifle

Standard Disruptors:
Disruptor Pistol
Assault Disruptor
Disruptor Rifle

Standard Struptorguns:
Struptorgun Pistol
Assault Struptorgun
Struptorgun Rifle

Plasmatic Repeators:
Plasma Repeator Rifle
Heavy Plasma Repeator

Recoil Support Weapons:
Lt Machine Gun
Med Machine Gun
Hvy Machine Gun
Heavy Blaster
Heavy Plasma Repeator

15.1 SMALL PROJECTILE ATTACK TABLE

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01-0X	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-0X
0X-39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0X-39
40-42	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40-42
43-45	0	0	0	2	2	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	43-45
46-48	0	0	1	2	2	2	2	0	0	0	0	0	3	2	0	0	0	0	0	0	46-48
49-51	0	1	2	2	2	2	2	2	0	0	0	2	3	3	2	0	0	0	2	0	49-51
52-54	1	1	2	2	2	2	2	2	0	0	1	2	4	3	3	2	0	0	3	2	52-54
55-57	1	1	2	2	2	2	2	2	0	1	2	2	4	4	3	2	0	1	4	3	55-57
58-60	1	2	2	3	2	2	2	3	1	1	2	3	4	4	4	3	1	1	5A	4	58-60
61-63	1	2	3	3	2	2	3	3	1	2	3	3	5	5	4	4	1	2	5A	5	61-63
64-66	1	2	3	3	2	3	3	3	2	2	3	3	5	5	5	5	2	2	6A	6A	64-66
67-69	1	3	4	3	3	3	3	4	2	3	4	3	5	6	5	5A	2	2	6A	6A	67-69
70-72	2	3	4	4	3	3	4	4	2	3	4	4A	6	6	6	6A	2	3	6B	6A	70-72
73-75	2	4	4	4A	3	4	4	5A	3	4	4	4A	6	6	6A	6A	2	3	6B	7A	73-75
76-78	2	4	4	5A	4	4	5	5A	3	4	4A	5A	6	7	6A	7A	3	4A	7B	7B	76-78
79-81	2	4	5A	5A	4	5	5A	6A	3	4	5A	5A	6	7	7A	7A	3	5A	7B	7B	79-81
82-84	2	4	5A	5B	5	5	6A	6B	4	4	5A	6B	7	7A	7A	7B	4A	6A	8C	8B	82-84
85-87	3	5	5A	6B	5	6	6A	7B	4	5A	6B	6B	7	7A	7B	7B	5A	6B	9C	8C	85-87
88-90	3	5A	6A	6B	5	6	7A	7B	4	6A	6B	7B	7	8A	8B	8B	6B	7B	10C	8C	88-90
—						Maximum Result for MARK 1 Weapon															—
91-93	3	6A	6A	7B	6	7A	7A	8B	5	6A	7B	8B	8B	8B	8B	9B	7B	8B	12C	9C	91-93
94-96	4	6A	7A	7B	6	7A	8A	8B	5	6A	7B	8B	8B	9B	9B	10B	8B	9C	13C	11C	94-96
97-99	4	7A	7A	8B	7A	8A	8A	9B	6	7A	8B	9B	9B	9B	10B	11B	9C	10C	15D	13D	97-99
100-102	4	7A	8A	8B	7A	8A	9A	10B	6	7A	8B	9B	9B	10B	11B	12B	10C	12C	17D	15D	100-102
103-105	5	8A	8A	9B	8A	9A	9A	11B	7A	8A	9B	10B	10A	11B	12B	13C	11C	14C	19D	17D	103-105
—						Maximum Result for MARK 2 Weapon															—
106-108	5	8A	9A	9B	8A	9A	10A	12B	7A	8A	9B	10B	11B	12B	13C	14C	12C	16D	21D	19E	106-108
109-111	6	9A	9A	10B	9A	10A	11A	13B	8A	9A	10B	11B	12B	13C	15C	16D	14D	18D	22E	21E	109-111
112-114	6	9A	10A	11B	9A	10A	12B	14B	8A	9A	10B	11C	13C	14C	17D	18D	16D	20D	23E	23E	112-114
115-117	7	10A	10A	12B	10A	11A	13B	16C	9A	10B	11B	12C	14C	16C	19D	20D	18D	22D	24E	25E	115-117
118-120	7A	10A	11A	13B	10A	12A	14B	18C	10A	11B	12B	13C	15D	18D	21D	22E	20D	24D	25E	27E	118-120
—					Maximum Result for MARK 3 Weapon (Mark 1 vs. RM AT's 5-20)																—
121-123	8A	11A	11B	14B	11A	13B	15B	20C	11B	12B	13C	14C	16D	20D	23E	24E	22D	26E	27E	29E	121-123
124-126	8A	11A	12B	15C	11A	14B	16C	22C	12B	13C	15C	16D	18D	22E	25E	26E	24E	28E	29E	31E	124-126
127-129	9A	12A	12B	16C	12B	15B	17C	24C	13C	14C	17D	18D	20E	24E	27E	28E	26E	30E	31E	33F	127-129
130-132	9A	12B	13B	17C	13B	16C	19C	26C	14C	15D	19D	20D	22E	26E	29E	30E	28E	32E	33F	35F	130-132
133-135	10A	13B	14B	18C	14B	18C	21C	28D	15C	16D	21D	22E	24E	28E	31E	32F	30E	34F	35F	37G	133-135
—					Maximum Result for MARK 4 Weapon (Mark 2 vs. RM AT's 5-20)																—
136-138	11B	13B	16C	20D	16C	20C	23D	30D	16D	17D	23E	24E	26E	30E	33F	34F	32F	36F	37G	39G	136-138
139-141	12B	14C	18C	22D	18C	22D	25D	32E	17D	19E	25E	26E	28E	32F	35F	36G	34F	38G	39G	41H	139-141
142-144	13B	15C	20D	24D	20D	24D	27E	34E	18E	21E	27E	28F	30F	34F	37G	38G	36G	40G	41H	43H	142-144
145-147	14C	17D	22D	26E	22D	26E	29E	36E	19E	23E	29F	30F	32F	36G	39G	40G	38G	42H	43H	45H	145-147
148-150	15C	19D	24D	28E	24E	28E	31E	38E	20E	25F	31F	32F	34G	38G	41G	42G	40H	44H	45H	47H	148-150
—					Maximum Result for MARK 5 Weapon (Mark 3 vs. RM AT's 5-20)																—
151-153	17D	21D	26E	30E	26E	30E	33E	39G	22F	27F	33F	34G	35G	39G	42G	43G	41H	45H	46H	48H	151-153
154-156	19D	23E	28E	32E	28E	32E	35G	40G	24F	29F	35G	36G	36G	40G	43G	44H	42H	46H	47H	49H	154-156
157-159	21D	25E	30E	34F	30E	34G	37G	41G	26F	31G	37G	38G	37G	41G	44H	45H	43H	47H	48H	50H	157-159
160-162	23E	27E	32F	36F	32G	36G	39G	42G	28G	33G	39G	40H	38G	42H	45H	46H	44H	48H	49H	51H	160-162
163-165	25E	29F	34F	38G	34G	38G	40G	43H	30G	35G	41H	42H	39H	43H	46H	47H	45H	49H	50H	52H	163-165
—					Maximum Result for MARK 4 Weapon vs. RM AT's 5-20																—
166-168	27E	31F	36G	40G	36G	39G	41H	44H	32G	37H	42H	43H	40H	44H	47H	48H	46H	50H	51H	53H	166-168
169-171	29F	33G	38G	41G	38G	40H	42H	45H	34H	39H	43H	44H	41H	45H	48H	49H	47H	51H	52H	54H	189-171
172-174	31F	35G	39G	42H	39H	41H	43H	46H	36H	40H	44H	45H	42H	46H	49H	50H	48H	52H	53H	55H	172-174
175-177	33G	37G	40H	43H	40H	42H	44H	47H	38H	41H	45H	46H	43H	47H	50H	51H	49H	53H	54H	56H	175-177
178-180	35G	39H	41H	44H	41H	43H	45H	48H	40H	42H	46H	47H	44H	48H	51H	52H	50H	54H	55H	57H	178-180
—					Maximum Result for MARK 5 Weapon vs. RM AT's 5-20																—
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	

Note: All Criticals are *Puncture*.

Note: For Autofire/Burst fire against 1 target all Puncture crits become Shrapnel crits, and concussion hits are increased by 50% (round up).

01-0X = Failure (Consult *Master Weapons Chart*, pp65-67, for actual failure range). If Failure is rolled, roll 1D10: 01-05: weapon malfunction, roll on *Weapon Malfunction Chart* (pg 63); 6-10: weapon fumble, roll on *Weapon Fumble Table* (pp 95-96)

F = 'E' Puncture Critical + 'A' Impact Critical   G = 'E' Puncture Critical + 'B' Impact Critical   H = 'E' Puncture Critical + 'C' Impact Critical

15.2 SHOTGUN ATTACK TABLE

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01-0X	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-0X
0X-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0X-30
31-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	31-33
34-36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	1	34-36
37-39	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	2	2	37-39
40-42	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	1	2	3	40-42
43-45	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	2	0	2	3	3	43-45
46-48	0	0	0	1	0	0	0	2	0	0	0	1	0	0	1	3	1	2	3	4	46-48
49-51	0	0	0	2	0	0	1	3	0	0	0	2	0	0	1	3	1	2	4	4	49-51
52-54	0	0	1	2	0	0	1	4	0	0	1	2	0	0	2	4	2	3	4a	5	52-54
55-57	0	0	1	2	0	0	2	4	0	0	1	2	0	0	3	4	2	3	5a	5a	55-57
58-60	0	0	2	3	0	0	3	5	0	0	2	3	0	0	3	5	2	4	5a	6a	58-60
61-63	0	0	2	3	0	0	4	5	0	0	2	3	0	1	4	5	3	4	6a	6a	61-63
64-66	0	0	2	3a	0	1	4	6a	0	0	2	3a	0	2	4	6a	3	5	6a	7a	64-66
67-69	0	1	3	4a	0	2	5	6a	0	1	3	4a	0	3	5	6a	4	5a	7a	7a	67-69
70-72	0	2	3	4a	0	3	5	7a	0	2	3	4a	0	3	5	7a	4	6a	7a	8a	70-72
73-75	0	2	3a	5a	0	3	6a	7a	0	2	3a	5a	1	4	6a	7a	5	6a	8b	9a	73-75
76-78	0	2	4a	5a	1	4	6a	8a	0	2	4a	5a	2	4	6a	8a	5	7a	9b	10b	76-78
79-81	0	3	4a	6b	2	4	7a	8b	0	3	4a	6b	3	5	7a	9b	6a	7a	10b	11b	79-81
82-84	0	3a	5a	6b	3	5a	7a	9b	0	3a	5a	6b	4	6a	8a	10b	6a	8b	11b	12b	82-84
85-87	0	4a	5b	7b	4	6a	8b	10b	0	4a	5b	7b	5	7a	9b	11b	7a	9b	12b	13b	85-87
88-90	0	4a	6b	8b	5	7a	9b	11b	0	4a	6b	8b	6	8a	10b	12b	8a	10b	13b	14b	88-90
Maximum Result for Long Range																					
91-93	1	5a	6b	9b	6	8a	10b	12b	1	5a	6b	9b	7	9a	11b	13b	10a	12b	15b	16b	91-93
94-96	1	5a	7b	10b	7	9a	11b	13b	1	5a	7b	10b	8	10a	12b	14b	12b	14b	17b	18b	94-96
97-99	2	6b	7b	11b	8	10b	12b	14b	2	6b	7b	11b	9	11b	13b	15b	14b	16b	19b	21b	97-99
100-102	2	6b	8b	12b	9	11b	13b	15b	2	6b	8b	12b	10	12b	14b	16b	16b	18b	21b	24b	100-102
103-105	3	7b	8b	13b	10	12b	14b	16b	3	7b	8b	13b	11	13b	16b	18b	18b	20b	23b	27b	103-105
Maximum Result for Medium Range (Long Range vs. RM AT's 5-20)																					
106-108	3	7b	9b	14b	11	13b	16b	18b	3	7b	9b	14b	12	14b	18b	20b	20b	23A	25A	30A	106-108
109-111	4	8b	10b	15b	12	14b	18b	20b	4	8b	10b	15b	13	15b	20b	22b	22b	26A	27A	33B	109-111
112-114	4	8b	11b	16b	13	15b	20b	22b	4	8b	11b	16b	14	16b	22b	24b	24A	29A	30B	36B	112-114
115-117	5	9b	12b	17A	14	16b	22b	24A	5	9b	12b	17A	15	17b	24b	26A	27A	32B	33B	39B	115-117
118-120	5	9b	13A	18A	15	17b	24A	26A	5	9b	13A	18A	16	18b	26A	28A	30A	35B	36B	42B	118-120
Maximum Result for Short Range (Medium Range vs. RM AT's 5-20)																					
121-123	6a	10b	15A	20A	16a	19b	26A	28A	6a	10b	16A	21A	17a	20b	28A	30A	32B	37B	39B	45C	121-123
124-126	7a	11b	17A	22A	17b	21b	28A	30A	7a	12b	19A	24A	18b	22A	30A	32B	34B	39B	42C	48C	124-126
127-129	8a	12b	19A	24A	18b	23A	30A	32B	8b	14b	22A	27A	19b	24A	32B	34B	36B	41C	45C	50D	127-129
130-132	9b	13b	21A	26A	19b	25A	32B	34B	9b	16A	25A	30A	20A	26A	34B	36B	38C	43C	48D	53D	130-132
133-135	10A	14A	23A	28B	20A	27A	34B	36B	10A	18A	28B	33B	21A	28A	36B	38B	40D	45D	51D	56D	133-135
Maximum Result for Point Blank Range (Short Range vs. RM AT's 5-20)																					
136-138	11A	16A	25A	30B	21A	29A	36B	38B	12A	21A	31B	36B	23A	31B	38B	41C	42D	47D	53D	58D	136-138
139-141	12A	18A	27A	32B	22A	31B	38B	42C	14A	24A	34B	39B	25B	34B	42B	44C	44D	49D	55D	60E	139-141
142-144	13A	20A	29B	34B	23B	33B	40C	44C	16A	28B	37B	42C	27B	37B	44C	47D	46D	51D	57E	62E	142-144
145-147	14A	22B	31B	36B	24B	35C	43C	47D	18B	31B	40C	45C	30C	40C	47D	50D	48D	53E	59E	64E	145-147
148-150	15A	24B	33B	38B	25C	37C	46D	50D	20B	34C	43C	48C	33D	43D	50D	53D	50E	55E	61E	66E	148-150
Maximum Result for Point Blank Range with Special Ammo * (Point Blank Range vs. RM AT's 5-20)																					
151-153	18A	27B	36B	41C	28D	39D	48D	52D	23C	37C	45C	50D	36D	45D	52D	55D	NA	NA	NA	NA	151-153
154-156	21B	30B	39C	44C	31D	42D	50D	54D	26C	40C	47D	52D	39D	47D	54D	57E	NA	NA	NA	NA	154-156
157-159	24B	33C	42C	47D	34D	45D	52D	56E	29C	43D	49D	54D	42D	49D	56E	59E	NA	NA	NA	NA	157-159
160-162	27B	36C	45D	50D	37D	48D	54E	58E	32D	46D	51D	56E	45D	51E	58E	61E	NA	NA	NA	NA	160-162
163-165	30C	39D	48D	53E	40D	51E	56E	60E	35D	49D	53E	58E	48E	53E	60E	63E	NA	NA	NA	NA	163-165
Maximum Result for Point Blank Range with Special Ammo * vs. RM AT's 5-20																					
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	

01-0X = Failure (Consult *Master Weapons Chart*, pp65-67, for actual failure range). If Failure is rolled, roll 1D10: 01-05: weapon malfunction, roll on *Weapon Malfunction Chart* (pg 63); 6-10: weapon fumble, roll on *Weapon Fumble Table* (pp 95-96).

NA = not applicable
a = 'A' Puncture or Slash Critical Strike (type depends on ammo used).
b = 'B' Puncture or Slash Critical Strike (type depends on ammo used).
A, B, C, D, E = Shrapnel Critical Strikes.

* — Special Ammo with these Maximum Result levels include: Super-teflon coated shot versus ATs 5-8 and Irulon coated shot versus ATs 9-20. The GM may also wish to include other special ammo (e.g., "high-powered" shell, armored piercing shot, etc.).

15.3 GRENADE / EXPLOSIVE WARHEAD ATTACK TABLE

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01-02	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-02
03-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	03-30
31-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	31-33
34-36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	34-36
37-39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	37-39
40-42	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	1	1	2	40-42
43-45	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	1	1	2	43-45
46-48	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	2	0	1	2	2A	46-48
49-51	0	0	0	1	0	0	1	1	0	0	1	1	0	0	1	2	1	1	2	3A	49-51
52-54	0	0	0	1	0	0	1	1	0	0	1	1	0	0	1	2	1	2	2	3A	52-54
55-57	0	0	1	2	0	0	1	2	0	0	1	2	0	0	1	3A	1	2	3	3A	55-57
58-60	0	0	1	2	0	0	1	2	0	0	1	2	0	0	2	3A	1	2	3A	4A	58-60
61-63	0	0	1	2	0	0	1	2	0	0	1	2	0	0	2	3A	1	2A	3A	4A	61-63
64-66	0	0	1	2	0	0	2	3	0	0	1	3	0	1	2	4A	1	3A	4A	4A	64-66
67-69	0	0	1	2	0	1	2	3	0	0	2	3	0	1	3	4A	2	3A	4A	5A	67-69
70-72	0	1	1	3	0	1	2	3	0	1	2	3A	0	1	3	5A	2A	3A	4A	5A	70-72
73-75	0	1	1	3A	1	1	2	4	0	1	2	4A	1	2	4	5A	2A	4A	5A	5A	73-75
76-78	0	1	2	3A	1	1	3	4	0	1	3	4A	1	2	4	5A	2A	4A	5A	6A	76-78
79-81	0	1	2	3A	1	1	3	4A	0	1	3	5A	1	2	5	5A	2A	4A	5A	6A	79-81
82-84	0	1	2	3A	1	2	3	4A	1	1	4	5A	1	3	5A	6A	3A	5A	6A	6A	82-84
85-87	0	1	2	3A	1	2	3	4A	1	1	4A	5A	2	3	6A	6A	3A	5A	6A	7A	85-87
88-90	0	1	3A	3A	1	2	4	4A	1	2	4A	6A	2	3A	6A	6A	3A	5B	6B	7B	88-90
Maximum Results For 5th Blast Radius																					
91-93	1	1	3A	3A	2	2	4	4A	1	2	5A	6A	3A	4A	6A	7A	4B	6B	7B	7B	91-93
94-96	1	2	3A	4A	2	2	4A	5A	1	2	5A	6B	3A	4A	7A	7B	4B	6B	7B	8B	94-96
97-99	1	2	3A	4A	2	3	4A	5A	1	2A	5A	7B	3A	4A	7B	7B	4B	7B	7B	8B	97-99
100-102	1	2	3A	4B	2	3	4A	5B	2	3A	6B	7B	3A	4A	7B	8B	5B	7B	8B	8B	100-102
103-105	1	2	4A	4B	3	3A	5A	5B	2A	3A	6B	7B	4B	5B	8B	8B	5B	8C	8C	9C	103-105
Maximum Results For 4th Blast Radius																					
106-108	1	3	4B	5B	3	3A	5A	6B	2A	3A	6B	8B	4B	5B	8B	9B	6C	8C	9C	9C	106-108
109-111	2	3	4B	5B	3	3A	5B	5B	2A	3A	7B	8B	4B	5B	9B	9C	6C	9C	9C	10C	109-111
112-114	2	3	4B	5B	3A	4A	5B	6B	2A	4B	7B	9C	5B	6B	9C	10C	7C	9C	10C	10C	112-114
115-117	2	3A	5B	6B	3A	4A	6B	6C	3A	4B	8C	9C	5B	6B	10C	10C	7C	10C	10C	11C	115-117
118-120	2	4A	5B	6B	3A	4B	6B	6C	3A	4B	8C	10C	5C	7C	10C	11C	8C	10D	11D	11D	118-120
Maximum Results For 3rd Blast Radius																					
121-123	2	4A	6B	6C	3A	5B	6B	6C	3B	4B	4C	10C	6C	7C	11C	11C	8D	11D	11D	12D	121-123
124-126	3	4A	6B	6C	3A	5B	6C	7C	3B	5B	9C	11D	6C	8C	11C	12D	9D	11D	12D	12D	124-126
127-129	3A	4A	6C	7C	4A	5B	7C	8D	4B	5C	10C	11D	6C	8C	12D	12D	9D	12D	12D	13D	127-129
130-132	4A	5A	7C	7C	4B	6C	7C	9D	4C	6C	10D	12D	7C	9D	12D	13D	10D	12D	13D	14D	130-132
133-135	5A	5B	7C	8D	5B	6C	8C	10D	5C	7C	11D	12D	8D	9D	13D	14D	11D	13E	13E	15E	133-135
Maximum Results For 2nd Blast Radius																					
136-138	6B	6B	7C	9D	6C	7C	9C	11D	6C	8C	11D	13D	9D	10D	13D	15D	12E	14E	14E	16E	136-138
139-141	7B	7C	8D	10D	7C	8D	10D	12D	7C	9D	12D	14D	10D	11D	14D	16E	13E	15E	14E	17E	139-141
142-144	8C	8C	9D	11D	8D	9D	11D	13E	8D	10D	12D	15E	11D	12D	14E	17E	14E	16E	15E	18E	142-144
145-147	9D	9D	10D	12E	9D	10E	12E	14E	9D	11E	13E	16E	12E	13E	15E	18E	15E	17E	15E	19E	145-147
148-150	10E	10E	11E	13E	10E	11E	13E	15E	10E	12E	14E	17E	13E	14E	16E	18E	16E	18E	16E	20E	148-150
Maximum Results For Ground Zero																					
151-153	10E	11E	12E	13E	11E	11E	13E	15E	11E	12E	14E	17E	13E	14E	16E	18E	16E	18E	16E	20E	151-153
154-156	11E	12E	13E	13E	12E	12E	13E	15E	12E	13E	14E	12E	13E	14E	16E	18E	16E	18E	16E	20E	154-156
157-159	12E	13E	14E	14E	13E	13E	14E	15E	13E	14E	15E	17E	14E	15E	16E	18E	16E	18E	16E	20E	157-159
160-162	13E	14E	15E	15E	14E	14E	15E	16E	14E	15E	16E	17E	15E	16E	17E	18E	16E	18E	16E	20E	160-162
163-165	14E	15E	16E	16E	15E	15E	16E	17E	15E	16E	17E	18E	16E	17E	18E	19E	16E	18E	16E	20E	163-165
Maximum Results For Ground Zero vs. RM AT's																					
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	

Note: Hits shown on chart are multiplied x the Mk number of the grenade. Critical type is determined by the type of Grenade (see pg 12).

01-02 = Failure. If Failure is rolled, roll 1D10:
01-05: Grenade malfunction, roll on *Weapon Malfunction Chart* (pg 63); 6-10: fumble, rol on *Weapon Fumble Table* (pp 95-96).

MODIFIERS:
+ 5: per Mk# of explosive
+40: ground zero
+30: 2nd blast radii
+20: 3rd blast radii
+10: 4th blast radii
+35: if "touching" target when it explodes
-x: Defender's cover bonus
-y: Defender's armor quality bonus
-z: Defender's applicable miscellaneous bonuses
- Shield Projectile DB vs Shrapnel & General Purpose Grenades
- Shield Energy DB vs Concussion & Plasma Grenades

15.4 LASER ATTACK TABLE

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01-0X	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-0X
0X-45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0X-45
46-48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	46-48
49-51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	49-51
52-54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	52-54
55-57	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	1	3A	2	55-57
58-60	0	0	1	2	0	0	1	2	0	0	1	2	0	0	1	2	0	1	3A	3	58-60
61-63	0	0	2	2	0	0	2	2	0	0	2	2	0	0	2	2	1	1	3A	3A	61-63
64-66	0	0	2	3A	0	0	2	3A	0	0	2	3A	0	0	2	3A	1	2	4A	3A	64-66
67-69	0	0	3A	3A	0	0	3A	3A	0	0	3A	3A	0	1	3A	3A	1	2	4A	3A	67-69
70-72	0	0	3A	3A	0	1	3A	3A	0	0	3A	3A	0	2	3A	3A	2	3	4B	4A	70-72
73-75	0	0	3A	4A	0	2	3A	4A	0	1	3A	4A	0	3A	3A	4A	2	3A	5B	4B	73-75
76-78	0	0	4A	4A	0	3A	4A	4A	0	2	4A	4A	2	3A	4A	4B	2	4A	5B	5B	76-78
79-81	0	1	4A	4A	2	3A	4A	5A	0	3A	4A	4A	3A	4A	4B	5B	3	4A	6B	5B	79-81
82-84	0	2	4A	5A	3A	4A	4A	5B	0	3A	4A	5A	3A	4A	5B	5B	3A	5A	6B	6C	82-84
85-87	0	3A	5A	5B	3A	4A	5B	5B	2	4A	5A	5B	4A	5B	5B	6C	4A	5B	6C	6C	85-87
88-90	0	3A	5B	5B	4A	5A	5B	6B	3A	4A	5B	5B	4B	5B	6C	6C	5A	6B	7C	7C	88-90
— Maximum Result for MARK 1 Weapon —																					
91-93	0	3A	5B	5B	4A	5B	6B	6B	3A	4A	5B	6B	5B	5C	6C	7C	5B	6C	7C	7C	91-93
94-96	0	4A	5B	6B	4A	5B	6B	7C	3A	4A	6B	6B	5B	6C	7C	7D	6B	7C	7C	8D	94-96
97-99	3A	4A	6B	6B	5B	6B	7C	7C	4A	5A	6B	6B	5C	6C	7D	8D	6C	7C	8D	8D	97-99
100-102	3A	4A	6B	6B	5B	6B	7C	8C	4A	5B	6B	7B	6C	7C	8D	8D	7C	8C	8D	9D	100-102
103-105	3A	5A	6B	7B	5B	6B	8C	8C	4A	5B	7B	7B	6C	7C	8D	9D	7C	8D	9D	10D	103-105
— Maximum Result for MARK 2 Weapon (Mark 1 vs. RM AT's 5-20) —																					
106-108	4A	5B	7B	7C	6B	7C	8C	9C	5A	5B	7B	8C	7C	8D	9D	10D	8D	9D	10D	11E	106-108
109-111	4A	5B	7B	8C	6C	7C	9C	10D	5B	6B	8C	9C	7D	8D	10D	11E	8D	9D	11D	12E	109-111
112-114	4A	6B	7C	8C	7C	8C	10D	11D	5B	6B	9C	10C	8D	9D	11E	12E	9D	10D	12E	13E	112-114
115-117	5A	6B	8C	9C	7C	8D	11D	12E	6B	7C	10C	11C	8D	10E	12E	13E	9D	11E	13E	14F	115-117
118-120	5A	6B	8C	9C	8D	9D	12E	13E	6B	7C	11C	12D	9E	11E	13E	14F	10E	12E	14F	15F	118-120
— Maximum Result for MARK 3 Weapon (Mark 2 vs. RM AT's 5-20) —																					
121-123	5A	7B	9C	11D	8D	10E	13E	14E	7B	8C	12C	13D	10E	12E	14F	15F	11E	13E	15F	16F	121-123
124-126	6A	7C	10C	12D	9D	11E	14E	15E	7C	9C	13D	14D	11E	13F	15F	16F	12E	14F	16F	17F	124-126
127-129	6B	8C	11D	13D	10E	12E	15E	16F	8C	10C	14D	15E	12F	14F	16F	17G	13F	15F	17F	18G	127-129
130-132	7B	8C	12D	14D	11E	13E	16F	17F	9C	11D	15E	16E	13F	15G	17G	18G	14F	16F	18G	19G	130-132
133-135	7B	9C	13D	15E	12E	14F	17F	18G	10C	12D	16E	17F	14G	16G	18G	19G	15F	17F	19G	20G	133-135
— Maximum Result for MARK 4 Weapon (Mark 3 vs. RM AT's 5-20) —																					
136-138	8C	10C	14E	16E	13F	15F	18G	19G	11D	13E	17F	18F	15G	17G	19G	20H	16F	18G	20G	21H	136-138
139-141	8C	11D	15E	17F	14F	16G	19G	20H	12D	14E	18F	19G	16G	18G	20H	21H	17G	19G	21H	22H	139-141
142-144	9C	12D	16E	18F	15G	17G	20H	21H	13E	15F	19G	20G	17G	19H	21H	22H	18G	20H	22H	23H	142-144
145-147	9D	13E	17F	19F	16G	18H	21H	22H	14E	16F	20G	21H	18H	20H	22H	23H	19H	21H	23H	24H	145-147
148-150	10D	14E	18F	20G	17H	19H	22H	23H	15F	17G	21H	22H	19H	21H	23H	24H	20H	22H	24H	25H	148-150
— Maximum Result for MARK 5 Weapon (Mark 4 vs. RM AT's 5-20) —																					
151-153	11E	15F	19G	21G	18H	20H	23H	24H	16F	18G	22H	23H	20H	22H	24H	25H	21H	23H	25H	26H	151-153
154-156	12E	16F	20G	22H	19H	21H	24H	25H	17G	19H	23H	24H	21H	23H	25H	26H	22H	24H	26H	27H	154-156
157-159	13F	17G	21H	23H	20H	22H	25H	26H	18G	20H	24H	25H	22H	24H	26H	27H	23H	25H	27H	28H	157-159
160-162	14F	18G	22H	24H	21H	23H	26H	27H	19H	21H	25H	26H	23H	25H	27H	28H	24H	26H	28H	29H	160-162
163-165	15G	19H	23H	25H	22H	24H	27H	28H	20H	22H	26H	27H	24H	26H	28H	29H	25H	27H	29H	30H	163-165
— Maximum Result for MARK 5 Weapon vs. RM AT's 5-20 —																					
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	

Note: All Criticals are *Heat*.

01-0X = Failure (Consult *Master Weapons Chart*, pp 65-67 for actual failure range). If Failure is rolled, roll 1D10: 01-06: charge depleted; 07-09: weapon malfunction, roll on *Weapon Malfunction Chart* (pg 63); 10: weapon fumble, roll on *Weapon Fumble Table* (pp 95-96).

F = 'E' Heat Critical + 'A' Puncture Critical
G = 'E' Heat Critical + 'B' Puncture Critical
H = 'E' Heat Critical + 'C' Puncture Critical

15.5 BLASTER ATTACK TABLE

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01-0X	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-0X
0X-60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0X-60
61-63	0	0	0	0	1	2	3	3	0	0	0	0	2	3	4	4	1	2	3	4	61-63
64-66	0	0	0	0	1	2	3	3	0	0	0	0	2	3	4	4	2	3	4	5	64-66
67-69	0	0	0	0	2A	3A	3A	4A	0	0	0	1	3A	4A	5A	5A	3A	4A	5A	6A	67-69
70-72	0	0	0	1	2A	3A	4A	4A	0	0	1	2	3A	4A	5A	6A	4A	5A	6A	7A	70-72
73-75	0	0	1	2	3A	4A	4A	5A	0	1	2	3	4A	5A	6A	7A	5A	6A	7A	8A	73-75
76-78	0	1	2	3	3B	4B	5B	6B	1	2	3	4A	4B	5B	6B	8B	6B	7B	8B	9B	76-78
79-81	1	2	3	4	4A	5A	5A	7A	2	3	4A	5A	5A	6A	7A	9A	7A	8A	9A	10A	79-81
82-84	2	3	4	5A	4B	5B	6B	8B	3	4	5A	6A	6B	7B	8B	10B	8B	9B	10B	11B	82-84
85-87	3	4	5	6A	5A	6A	7A	9A	4	5A	6A	7B	7A	8A	9A	11A	9A	10A	11A	12A	85-87
88-90	4	5	6A	7A	6C	7C	8C	10C	5	6A	7B	8B	8C	9C	10C	12C	10C	11C	13C	14C	88-90
								Maximum Result for MARK 1 Weapon													
91-93	5	6	7A	8B	7C	8C	9C	11C	6	7A	8B	9B	9C	11C	12C	14C	12C	13C	15C	16C	91-93
94-96	6	7	8A	9A	8A	10A	11A	13A	7A	8A	9A	10A	11A	13A	14A	16A	14A	15A	17A	18A	94-96
97-99	7	8A	9A	10B	9D	12D	13D	15D	8A	9A	10B	11C	13D	15D	16D	18D	16D	17D	19D	20D	97-99
100-102	8A	9A	10A	11A	11B	14B	15B	17B	9A	10A	11A	13B	15B	17B	18B	20B	18B	19B	21B	22B	100-102
103-105	9A	10A	11B	12B	13D	16D	17D	19D	10A	11B	12B	15C	17D	19D	20D	22D	20D	21D	23D	24D	103-105
						Maximum Result for MARK 2 Weapon (Mark 1 vs. RM AT's 9-12 & 17-20)															
106-108	10A	11A	12A	13C	15C	18E	19C	21E	11A	12B	14A	17D	19C	21E	22C	24E	22C	23E	25C	26E	106-108
109-111	11A	12A	13B	14A	17E	20C	21E	23C	12A	14A	16C	19C	21E	23C	24E	26C	24E	25C	27E	28C	109-111
112-114	12A	13B	14C	16C	19E	22E	23E	25E	13B	16C	18C	21D	23E	25E	26E	28E	26E	27E	29E	30E	112-114
115-117	13A	14A	15B	18B	21D	24D	25D	27D	14A	18B	20B	23B	25D	27D	28D	30D	28D	29D	31D	33D	115-117
118-120	14B	15B	16C	20C	23F	26F	27F	29F	15B	20C	22D	25E	27F	29F	30F	34F	30F	31F	33F	36F	118-120
					Maximum Result for MARK 3 Weapon (Mark 2 vs. RM AT's 9-12 & 17-20)																
121-123	15A	16C	17A	22D	25A	28F	29A	32F	17B	22D	24A	27E	29A	32F	32A	36F	32A	33F	36A	39F	121-123
124-126	16B	17A	19C	24A	27F	30A	31F	35A	19C	24A	26D	29A	31F	34A	35F	39A	34F	35A	39F	42A	124-126
127-129	17B	18C	21D	26D	29F	32F	33F	38F	21C	26D	28E	31F	33F	36F	38F	42F	36F	38F	42F	45F	127-129
130-132	18A	19B	23B	28B	31B	34B	35B	41B	23A	28B	30B	33B	35B	38B	41B	45B	38B	41B	45B	48B	130-132
133-135	19C	20D	25D	30E	33G	36G	38G	44G	25D	30E	32E	35F	37G	40G	44G	48G	40G	44G	48G	51G	133-135
					Maximum Result for MARK 4 Weapon (Mark 3 vs. RM AT's 9-12 & 17-20)																
136-138	20C	22D	27E	32E	35G	38G	41G	47G	27D	32E	34F	38F	39G	42G	47G	51G	42G	47G	51G	54G	136-138
139-141	21B	24C	29C	34C	37C	40C	44C	50C	29B	34C	36C	41C	41C	44C	50C	54C	44C	50C	54C	57C	139-141
142-144	22D	26E	31E	36F	39H	42H	47H	53H	31E	36F	39F	44G	43H	47H	53H	57H	47H	53H	57H	60H	142-144
145-147	23C	28D	33D	38D	41D	45D	50D	56D	33C	38D	42D	47D	45D	50D	56D	60D	50D	56D	60D	63D	145-147
148-150	24E	30E	35F	40F	43H	48H	53H	59H	35F	40F	45G	50G	48H	53H	59H	63H	53H	59H	63H	66H	148-150
					Maximum Result for MARK 5 Weapon (Mark 4 vs. RM AT's 9-12 & 17-20)																
151-153	27E	33F	38G	43G	46H	51H	55H	61H	38F	43G	48G	52H	51H	56H	61H	64H	56H	61H	65H	67H	151-153
154-156	30D	36D	41D	46D	49D	54D	57D	62D	41D	46D	51D	54D	54D	59D	62D	65D	59D	63D	67D	68D	154-156
157-159	33F	39G	44G	49H	52H	56H	59H	63H	44G	49G	53H	56H	57H	61H	63H	65H	62H	65H	68H	69H	157-159
160-162	36E	42E	47E	52E	55E	58E	61E	64E	47E	52E	55E	58E	60E	63E	64E	66E	65E	67E	69E	70E	160-162
163-165	39G	45H	50H	55H	58H	60H	63H	65H	50H	55H	57H	60H	63H	64H	65H	66H	68H	69H	70H	71H	163-165
					Maximum Result for MARK 5 Weapon vs. RM AT's 9-12 & 17-20																
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	

Note: All Criticals are *Heat*.

01-0X = Failure (Consult *Master Weapons Chart*, pp 65-67 for actual failure range). If Failure is rolled, roll 1D10: 01-06: charge depleted; 07-09: weapon malfunction, roll on *Weapon Malfunction Chart* (pg 63); 10: weapon fumble, roll on *Weapon Fumble Table* (pp 95-96).

F = 'E' Heat Critical + 'A' Radiation Critical
G = 'E' Heat Critical + 'B' Radiation Critical
H = 'E' Heat Critical + 'C' Radiation Critical

15.6 FLAMER ATTACK TABLE

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01-0X	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-0X
0X-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0X-30
31-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31-33
34-36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34-36
37-39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	37-39
40-42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	40-42
43-45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	43-45
46-48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	46-48
49-51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4A	2	49-51
52-54	0	0	0	1	0	0	0	1	0	0	0	1	0	0	1	1	1	2	5A	3	52-54
55-57	0	0	0	2	0	0	0	2	0	0	0	2	0	0	1	2	2	3	5A	4A	55-57
58-60	0	0	1	3A	0	0	1	3A	0	0	1	3A	0	1	2	3A	3	4A	6A	5A	58-60
61-63	0	0	2	4A	0	0	2	4A	0	0	2	4A	0	1	2	4A	4A	4A	6A	5A	61-63
64-66	0	1	2A	4A	0	1	3A	4A	0	1	2A	4A	0	2	3A	4A	4A	5A	7A	6A	64-66
67-69	0	2	2A	5A	0	2	3A	5A	0	2	3A	5A	1	2	3A	5A	5A	5A	7A	6A	67-69
70-72	0	2A	3A	5A	1	2A	4A	5A	0	2A	3A	5A	1	3A	4A	5A	5A	6A	8A	7A	70-72
73-75	0	2A	3A	6A	1	3A	4A	6A	1	2A	4A	6A	2	3A	4A	6A	6A	6A	8A	7A	73-75
76-78	1	2A	4A	6A	2	3A	5A	6A	1	3A	4A	6A	2	4A	5A	6A	6A	7A	9B	8A	76-78
79-81	1	3A	4A	7A	2	4A	5A	7A	2	3A	5A	7A	3	4A	5A	7A	7A	7A	9B	8A	79-81
82-84	2	3A	5A	7A	3	4A	6A	7A	2	4A	5A	7A	3	5A	6A	7A	7A	8A	10B	9B	82-84
85-87	2	4A	5A	8B	3	5A	6A	8A	3	4A	6A	8A	4	5A	6A	8A	8A	8B	10B	9B	85-87
88-90	3A	4A	6B	8B	4A	5A	7A	8A	3A	5A	6A	8A	4A	6A	7A	8A	8B	9B	11B	10B	88-90
Maximum Result for MARK 1 Weapon																					
91-93	3A	5A	6A	9B	4A	6A	8A	9B	4A	5A	7A	9B	5A	7A	8A	9B	9B	10B	13C	11B	91-93
94-96	4A	5A	7A	10B	5A	7A	9A	10B	4A	6A	8A	10B	6A	8A	9A	10B	10B	11B	15C	12C	94-96
97-99	4A	6A	7B	11B	5A	8A	10B	11B	5A	6A	9B	11B	7A	9A	10B	11B	11B	12C	17C	13C	97-99
100-102	5A	6A	8B	12B	6A	9A	11B	12B	5A	7A	10B	12B	8A	10A	11B	12B	12C	14C	19C	15C	100-102
103-105	5A	7B	8B	13B	6A	10B	12B	13B	6A	8B	11B	13B	9A	11B	12B	13B	14C	16C	21C	17C	103-105
Maximum Result for MARK 2 Weapon (Mark 1 vs. RM AT's 5-20)																					
106-108	6A	7B	9B	14C	7A	11B	13B	14C	6A	9B	12B	14C	10A	12B	13B	14C	16C	18C	23D	19C	106-108
109-111	6A	8B	10B	15C	7A	12B	14B	15C	7A	10B	13B	15C	11A	13B	14B	15C	18C	20C	25D	21D	109-111
112-114	7A	8B	11C	16C	8A	13B	15C	16C	7A	11B	14C	16C	12A	14B	15C	17C	20C	22D	27D	23D	112-114
115-117	7A	9B	12C	17C	9A	14B	16C	17C	8A	12B	15C	17C	13A	15B	16C	19C	22D	24D	29D	25D	115-117
118-120	8B	9C	13C	18C	10B	15C	17C	18C	8B	13C	16C	18C	14B	16C	17C	21C	24D	26D	31D	27D	118-120
Maximum Result for MARK 3 Weapon (Mark 2 vs. RM AT's 5-20)																					
121-123	8B	10C	14C	19D	11B	16C	18C	19D	9B	14C	17C	19D	15B	17C	18C	23D	26D	28D	33E	29E	121-123
124-126	9B	10C	15C	20D	12B	17C	19C	21D	10B	15C	18C	20D	16B	18C	19C	25D	28D	30D	35E	31E	124-126
127-129	9B	11C	16D	21D	13B	18C	20D	23D	11B	16C	19D	21D	17B	19C	21D	27D	30D	32E	37E	33E	127-129
130-132	10B	12C	17D	22D	14B	19C	21D	25D	12B	17C	20D	22D	18B	21C	23D	29D	32E	34E	39E	35E	130-132
133-135	10C	13D	18D	23D	15C	20D	22D	27D	13C	18D	21D	23D	19C	22D	25D	31D	34E	36E	41E	37E	133-135
Maximum Result for MARK 4 Weapon (Mark 3 vs. RM AT's 5-20)																					
136-138	11C	14D	19D	24E	16C	21D	23D	29E	14C	19D	22D	25E	20C	23D	27D	33E	36E	38E	43E	39E	136-138
139-141	12C	15D	20D	25E	17C	22D	25D	31E	15C	20D	23D	27E	21C	24D	29D	35E	38E	40E	45E	41E	139-141
142-144	13C	16D	21E	26E	18C	23D	27E	33E	16C	21D	24E	29E	22C	25D	31E	37E	40E	42E	47E	43E	142-144
145-147	14C	17D	22E	27E	19C	24D	29E	35E	17C	22D	25E	31E	23C	27D	33E	39E	42E	44E	49E	45E	145-147
148-150	15D	18E	23E	28E	20D	25E	31E	37E	18D	23E	27E	33E	24D	29E	35E	41E	44E	46E	51E	47E	148-150
Maximum Result for MARK 5 Weapon (Mark 4 vs. RM AT's 5-20)																					
151-153	17D	20E	25E	30E	22D	27E	33E	39E	20D	25E	29E	35E	26D	31E	37E	43E	46E	48E	53E	49E	151-153
154-156	19D	22E	27E	32E	24D	29E	35E	41E	22D	27E	31E	37E	28D	33E	39E	45E	48E	50E	55E	51E	154-156
157-159	21D	24E	29E	34E	26D	31E	37E	43E	24D	29E	33E	39E	30D	35E	41E	47E	50E	52E	57E	53E	157-159
160-162	23D	26E	31E	36E	28D	33E	39E	45E	26D	31E	35E	41E	32D	37E	43E	49E	52E	54E	59E	55E	160-162
163-165	25E	28E	33E	38E	30E	35E	41E	47E	28E	33E	37E	43E	34E	39E	45E	51E	54E	56E	61E	57E	163-165
Maximum Result for MARK 5 Weapon vs. RM AT's 5-20																					
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	

01-0X = Failure (Consult *Master Weapons Chart*, pp 65-67 for actual failure range). If Failure is rolled, roll 1D10: 01-07: charge depleted; 07-09: weapon malfunction, roll on *Weapon Malfunction Chart* (pg 63); 10: weapon fumble, roll on *Weapon Fumble Table* (pp 95-96).

A = 'A' Heat critical.
B= 'B' Heat critical the first round struck **and** an 'A' the following round.   D= 'D' Heat critical the first round struck **and** a 'B' the following round.
C= 'C' Heat critical the first round struck **and** an 'A' the following round.   E= 'E' Heat critical the first round struck **and** a 'C' the following round.

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01-0X	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-0X
0X-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0X-30
31-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	31-33
34-36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	34-36
37-39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	37-39
40-42	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	1	2	3	40-42
43-45	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	1	2	3	43-45
46-48	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	1	3	4	46-48
49-51	0	0	0	2	0	0	0	2	0	0	0	2	0	0	0	2	0	2	3A	4	49-51
52-54	0	0	0	2	0	0	1	2	0	0	0	2	0	0	1	2	1	2	4A	5	52-54
55-57	0	0	0	3	0	0	1	3	0	0	1	3	0	0	1	3	1	2	4A	5A	55-57
58-60	0	0	1	3	0	0	2	3	0	0	1	3	0	1	2	3	1	3	5A	6A	58-60
61-63	0	0	1	4	0	1	2	4	0	0	2	4	0	1	2	4A	2	3	5A	6A	61-63
64-66	0	0	2	4	0	1	3	4	0	1	2	4	0	2	3	4A	2	3	6A	7A	64-66
67-69	0	1	2	5	0	2	3	5A	0	1	3	5	1	2	3	5A	2	4A	6A	7A	67-69
70-72	0	1	3	5	1	2	4	5A	0	2	3	5	1	3	4A	5A	3	4A	7A	8A	70-72
73-75	0	2	3	6	1	3	4	6A	1	2	4	6A	2	3	4A	6A	3	4A	7A	8A	73-75
76-78	1	2	4	6	2	3	5A	6A	1	3	4	6A	2	4	5A	6A	3	5A	8A	9B	76-78
79-81	1	3	4	7A	2	4	5A	7A	2	3	5	7A	3	4	5A	7A	4A	5A	8A	9B	79-81
82-84	2	3	5	7A	3	4	6A	7A	2	4	5A	7A	3	5	6A	7B	4A	5A	9B	10B	82-84
85-87	2	4	5A	8A	3	5	6A	8A	3	4	6A	8A	4	5	6A	8B	4A	6A	9B	10B	85-87
88-90	3	4	6A	8A	4	5	7A	8B	3	5	6A	8A	4	6	7A	8B	5A	6A	11B	10B	88-90
							Maximum Result for MARK 1 Weapon														
91-93	3	5	6A	9A	4	6	8A	9B	4	5	7A	9A	5	7A	8B	9B	6A	7A	11B	13C	91-93
94-96	4	5	7A	10A	5	7A	9A	10B	4	6	8A	10A	6	8A	9B	10C	7A	8A	12C	15C	94-96
97-99	4	6	7A	11A	5	8A	10B	11B	5	6	9A	11B	7	9A	10B	11C	8A	9B	13C	17D	97-99
100-102	5	6	8A	12A	6	9A	11B	12C	5	7A	10B	12B	8	10B	11C	12C	9A	10B	15D	19D	100-102
103-105	5	7	8A	13B	6A	10B	12B	13C	6	8A	11B	13B	9A	11B	12C	13D	10B	11B	17D	21D	103-105
						Maximum Result for MARK 2 Weapon (Mark 1 vs. RM AT's 5-20)															
106-108	6	7	9A	14B	7A	11B	13C	14C	6	9A	12B	14B	10A	12B	13C	14D	11B	13B	19D	23D	106-108
109-111	6	8	10A	15B	7A	12B	14C	15D	7A	10A	13B	15C	11A	13B	14C	15D	12B	15B	21D	25D	109-111
112-114	7	8A	11A	16B	8A	13B	15C	16D	7A	11B	14B	16C	12A	14B	15D	17D	13B	17C	23D	27E	112-114
115-117	7	9A	12B	17C	9A	14B	16D	17D	8A	12B	15C	17C	13A	15C	16D	19D	15B	19C	25E	29E	115-117
118-120	8	9A	13B	18C	10A	15C	17D	18D	8A	13B	16C	18C	14B	16C	17D	21D	17C	21C	27E	31E	118-120
						Maximum Result for MARK 3 Weapon (Mark 2 vs. RM AT's 5-20)															
121-123	8	10A	14B	19C	11A	16C	18D	19D	9A	14B	17C	19D	15B	17C	18D	23E	19C	23C	29E	33E	121-123
124-126	9A	10B	15B	20C	12B	17C	19D	21E	10B	15C	18C	20D	16B	18D	19D	25E	21C	25C	31E	35E	124-126
127-129	9A	11B	16B	21D	13B	18D	20D	23E	11B	16C	19D	21D	17C	19D	21E	27E	23C	27D	33E	37E	127-129
130-132	10A	12B	17C	22D	14C	19D	21E	25E	12B	17C	20D	22D	18C	21D	23E	29E	25C	29D	35E	39E	130-132
133-135	10A	13B	18C	23D	15C	20D	22E	27E	13B	18C	21D	23E	19C	22D	25E	31E	27D	31D	37E	41E	133-135
						Maximum Result for MARK 4 Weapon (Mark 3 vs. RM AT's 5-20)															
136-138	11A	14B	19C	24D	16C	21D	23E	29E	14B	19C	22D	25E	20C	23D	27E	33E	29D	33D	39E	43E	136-138
139-141	12B	15C	20C	25E	17C	22D	25E	31E	15C	20D	23E	27E	21C	24E	29E	35E	31D	35E	41E	45E	139-141
142-144	13B	16C	21D	26E	18D	23E	27E	33E	16C	21D	24E	29E	22D	25E	31E	37E	33D	37E	43E	47E	142-144
145-147	14B	17C	22D	27E	19D	24E	29E	35E	17C	22D	25E	31E	23D	27E	33E	39E	35E	39E	45E	49E	145-147
148-150	15B	18C	23D	28E	20D	25E	31E	37E	18C	23D	27E	33E	24D	29E	35E	41E	37E	41E	47E	51E	148-150
						Maximum Result for MARK 5 Weapon (Mark 4 vs. RM AT's 5-20)															
151-153	17C	20D	25D	30E	22D	27E	33E	39E	20D	25E	29E	35E	26D	31E	37E	43E	38E	42E	48E	52E	151-153
154-156	19C	22D	27E	32E	24D	29E	35E	41E	22D	27E	31E	37E	28E	33E	39E	45E	39E	43E	49E	53E	154-156
157-159	21D	24D	29E	34E	26E	31E	37E	43E	24D	29E	33E	39E	30E	35E	41E	47E	40E	44E	50E	54E	157-159
160-162	23D	26E	31E	36E	28E	33E	39E	45E	26E	31E	35E	41E	32E	37E	43E	49E	41E	45E	51E	55E	160-162
163-165	25E	28E	33E	38E	30E	35E	41E	47E	28E	33E	37E	43E	34E	39E	45E	51E	42E	46E	52E	56E	163-165
						Maximum Result for MARK 5 Weapon vs. RM AT's 5-20															
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	

Note: All Criticals are *Stun* for Stunners **and** *Internal Disruption* for Disruptor
01-0X = Failure (Consult *Master Weapons Chart*, pp 65-67 for actual failure range). If Failure is rolled, roll 1D10: 01-06: charge depleted; 07-09: weapon malfunction, roll on *Weapon Malfunction Chart* (pg 63); 10: weapon fumble, roll on *Weapon Fumble Table* (pp 95-96).

16.1 MELEE WEAPON ATTACK TABLE (against SM ATs)

01-0X	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	01-0X
01-0X	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-0X
0X-18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0X-18
19-21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	19-21
22-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	22-24
25-27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3A	2	25-27
28-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	4A	2	28-30
31-33	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	0	0	4A	3A	31-33
34-36	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	2A	0	0	5A	4A	34-36
37-39	0	0	0	0	0	0	0	1	0	0	0	2	0	1	2	3A	0	0	5A	4A	37-39
40-42	0	0	0	1	0	0	0	1	0	0	1	2	0	1	3	3A	0	1	6A	5A	40-42
43-45	0	0	0	1	0	0	0	2	0	0	2	3A	0	2	3A	4A	0	2	6B	5A	43-45
46-48	0	0	0	2	0	0	1	2	0	1	2	3A	1	2	4A	4A	0	3A	7B	6B	46-48
49-51	0	0	1	2	0	0	1	3	0	1	3	4A	1	3	4A	5A	1	3A	7B	6B	49-51
52-54	0	0	1	3	0	1	2	3	0	2	3A	4A	2	3A	5A	5A	2	4A	8B	7B	52-54
55-57	0	1	2	3	0	1	2	4	1	2	4A	5A	2	4A	5A	6A	3A	4B	8C	7B	55-57
58-60	0	1	2	4	1	2	3	4A	1	3	4A	5A	3	4A	6A	6B	3A	5B	9C	8C	58-60
61-63	1	2	3	4	1	3	4	5A	2	3	5A	6A	3A	5A	6A	7B	4A	5B	9C	8C	61-63
64-66	1	2	3	5	2	3	4	5A	2	4A	5A	6A	4A	5A	7A	7B	4B	6C	10C	9C	64-66
67-69	2	3	4	5	2	3	4A	6A	3	4A	6A	7A	4A	6A	7B	8B	5B	6C	10D	9C	67-69
70-72	2	3	4	6A	3	4	5A	6A	3A	5A	6A	8A	5A	6A	8B	9C	5B	7C	11D	10D	70-72
73-75	3	4	5	6A	3	4	5A	7B	4A	5A	7A	9B	5A	7B	8B	10C	6C	8C	11D	10D	73-75
76-78	3	4	5	7A	4	5A	6A	8B	4A	6A	7A	10B	6A	7B	9B	11C	6C	9D	12D	11D	76-78
79-81	4	5	6A	7B	4	5A	6B	9B	5A	6A	8B	11B	6A	8B	10C	12C	7C	10D	13E	12D	79-81
82-84	4	5A	6A	8B	5A	6A	7B	10C	6A	7A	9B	12B	7B	8B	11C	14D	8D	11D	14E	13E	82-84
85-87	5A	6A	7B	9B	6A	7B	8B	11C	7A	8A	10B	13B	8B	9C	12C	15D	9D	12E	15E	15E	85-87
88-90	6A	7B	8B	10C	7A	8B	9C	12C	8A	9B	11B	14C	9B	10C	13C	16D	10E	13E	16E	17E	88-90

—— Maximum Result for MARK 1 Weapon, -50 OB Mod. (Dagger/Knife) ——

01-0X	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	01-0X
91-93	7A	8A	10A	12B	8A	9B	11C	14C	9A	10B	13B	16C	10B	12C	14D	18E	11E	14E	17E	19E	91-93
94-96	8A	9A	12B	14B	9A	10B	13C	16C	10A	12B	15B	18C	12C	14C	16D	20E	12E	15E	18E	21F	94-96
97-99	9A	10B	14B	16B	10B	12B	15C	18C	12B	14B	17C	20C	14C	16C	18E	22F	14E	17E	20F	23F	97-99
100-102	10B	12B	16B	18B	12B	14C	17C	20C	14B	16B	19C	22C	16C	18D	20E	24F	16E	19E	22F	25F	100-102
103-105	11B	14B	18B	20C	14B	16C	19C	22D	16B	18C	21C	24C	18C	20D	22F	26G	18E	21E	24F	27F	103-105

—— Maximum Result for MARK 2 Weapon, -40 OB Mod. (Short Sword) ——

01-0X	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	01-0X
106-108	12B	16B	20B	22C	16C	18C	21C	24D	18B	20C	23C	26D	20D	22D	24F	28G	20E	23E	26F	29G	106-108
109-111	13B	18B	22C	24C	18C	20C	23D	26D	20C	22C	25D	28D	22D	24E	26G	30G	22E	25E	28G	31G	109-111
112-114	14B	19C	24C	26C	20C	22D	25D	28D	22C	24C	27D	30D	24D	26E	28G	32H	24E	27F	30G	33G	112-114
115-117	15C	20C	26C	28D	22C	24D	27D	30E	24C	26D	29D	32E	26E	28E	30G	34H	26E	29F	32G	35H	115-117
118-120	16C	21C	28D	30D	23D	26D	29E	32E	26C	28D	31E	34E	28E	30E	32G	36H	28E	31F	34H	37H	118-120

—— Maximum Result for MARK 3 Weapon, -30 OB Mod. (Force Knife / Broadsword) ——

01-0X	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	01-0X
121-123	17D	22D	29D	31D	24D	28E	31E	34E	27D	30D	33E	36E	30E	32E	34G	38H	30E	33F	36H	39H	121-123
124-126	18D	23D	30E	32E	25E	30E	33E	36F	28D	32D	35E	38E	32E	34E	36H	40H	32E	35F	38H	41H	124-126
127-129	19D	24D	31E	33E	26E	31E	35F	38F	29D	34E	37E	40F	33F	36F	38H	42H	34E	37F	41H	44H	127-129
130-132	20D	25E	32E	34E	27E	32F	37F	40F	30E	35E	38F	42F	34F	38F	40H	44H	36E	39F	44H	47I	130-132
133-135	21D	26E	33E	35F	28F	33F	38F	42F	31E	36E	41F	44F	35F	40G	42H	46H	38F	41F	47I	50I	133-135

—— Maximum Result for MARK 4 Weapon, -15 OB Mod. (2 Handed Sword) ——

01-0X	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	01-0X
136-138	22E	27E	34E	36F	29F	34F	39F	43G	32E	37E	43F	46F	36F	42G	44I	48I	40F	44F	51I	54I	136-138
139-141	23E	28E	35F	37F	30F	35F	40F	44G	33F	38E	45F	48F	37F	44G	47I	51I	42F	47F	55I	58I	139-141
142-144	24E	29F	36F	38F	31F	36F	41G	45G	34F	39F	46F	50F	38G	46G	50I	54I	44F	50G	59I	62I	142-144
145-147	25E	30F	37F	39F	32F	37G	42G	46G	35F	40F	47F	52G	39G	48G	53I	57J	47F	53G	63I	66J	145-147
148-150	26E	31F	38G	40G	33G	38G	43G	47G	36F	41F	48G	54G	40G	50H	56J	60J	50G	56G	67J	70J	148-150

—— Maximum Result for MARK 5 Weapon (Power Sword) ——

| | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | |

01-0X = Failure/Fumble (Consult *Master Weapons Chart*, pp 65-67 for actual failure/fumble range).
For Power Swords and Force Kinives — If Failure is rolled, roll 1D10: 01-05: charge depleted; 06-08: weapon malfunction, roll on *Weapon Malfunction Chart* (pg 63); 9-10: weapon fumble, roll on *Weapon Fumble Table* (pp 95-96).
For Other Melee Weapons — Weapon fumble, roll on *Weapon Fumble Table* (pp 95-96).

Note: Against *Rolemaster* ATs use the normal *Arms Law* Tables.

Note: Critical type is determined by the type of Weapon (see pg 66).

F = 'E' Slash and 'A' Heat for Power Swords and Force Knives; 'E' critical for other weapons.
G = 'E' Slash and 'B' Heat for Power Swords and Force Knives; 'E' critical for other weapons.
H = 'E' Slash and 'C' Heat for Power Swords and Force Knives; 'E' critical for other weapons.
I = 'E' Slash and 'D' Heat for Power Swords and Force Knives; 'E' critical for other weapons.
J = 'E' Slash and 'E' Heat for Power Swords and Force Knives; 'E' critical for other weapons.

16.2 MARTIAL ARTS ATTACK TABLE: STRIKING

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01-02	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-02
03-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	03-30
31-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31-33
34-36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34-36
37-39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37-39
40-42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	40-42
43-45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	43-45
46-48	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	1	0	1	2	2	46-48
49-51	0	0	0	0	0	1	1	1	0	0	0	1	0	1	1A	2	1	1	2	3	49-51
52-54	0	0	0	1	0	1	1	2	0	0	1	1	1	1	2A	2	1	2	3	3	52-54
55-57	0	0	1	1	1	1	2	2	0	0	1	2	1	2	2A	3	2	2	4	4A	55-57
58-60	0	0	1	2	1	2	2	3	0	0	2	2	2	2	3A	4A	2	3	4A	5A	58-60
61-63	0	0	1	2	1	2	3	4	0	1	2	3	2	3	4A	4A	3	4	5A	5A	61-63
64-66	0	0	2	3	2	3	3	4	0	1	3	3	3	3A	4A	5A	3	4A	6A	6A	64-66
67-69	0	1	2	3	2	3	4	5	0	1	3	4	3A	4A	5A	6A	4	5A	6A	7A	67-69
70-72	0	1	3	4	3	4	5	5A	1	2	4	4	4A	4A	5A	6A	5A	5A	7A	7A	70-72
73-75	0	1	3	4	3	4	5	6A	1	2	4	5A	4A	5A	6A	7A	5A	6A	8A	8A	73-75
76-78	0	2	4	5	4	5	6A	7A	1	3	5	5A	5A	5A	7A	8A	6A	7A	8A	9A	76-78
79-81	1	2	4	5	4	5A	6A	7A	2	3	5A	6A	5A	6A	7B	8A	6A	7A	9A	9A	79-81
82-84	1	3	5	6A	5A	6A	7A	8A	2	4	6A	7A	6A	7A	8B	9A	7A	8A	9A	10A	82-84
85-87	1	3	5	6A	5A	6A	7A	9A	3	4	6A	7A	6A	7A	9B	10A	7A	9A	10A	11A	85-87
88-90	2	4	5A	7A	6A	7A	8A	9A	3	5A	7A	8A	7A	8A	9B	10A	8A	9A	11A	11A	88-90
91-93	2	4	6A	7A	6A	7A	9A	10A	4	5A	7A	8A	7B	8B	10B	11B	9A	10B	11B	12B	91-93
94-96	2	5A	6A	8A	7A	8A	9A	10A	4	6A	8A	9A	8B	9B	10B	12B	9A	10B	12B	13B	94-96
97-99	3	5A	7A	8A	7A	8A	10A	11A	5A	6A	8A	9A	8B	9B	11C	12B	10A	11B	13B	13B	97-99
100-102	3	5A	7A	9A	8A	9A	10A	12A	5A	7A	9A	10A	9B	10B	12C	13B	10A	12B	13B	14B	100-102
103-105	4A	6A	8A	10B	8B	9B	11B	12B	6A	7A	9B	10B	9B	10B	12C	14B	11B	12B	14B	15B	103-105
							Maximum Results For Rank 1 Attacks														
106-108	4A	6A	8A	10B	9B	10B	11B	13B	6A	8A	10B	11B	10C	11C	13C	14C	11B	13C	15C	15C	106-108
109-111	4A	7A	9A	11B	9B	10B	12B	13B	7A	8A	10B	11B	10C	11C	13C	15C	12B	13C	15C	16C	109-111
112-114	5A	7A	9A	11B	10B	11B	13B	14B	7A	9A	11B	12B	11C	12C	14C	16C	13B	14C	16C	17C	112-114
115-117	5A	8B	10B	12C	10C	11C	13C	15C	7B	9B	11C	13C	11C	13C	15C	16C	13C	15C	16C	17C	115-117
118-120	6A	8B	10B	12C	11C	12C	14C	15C	8B	10B	12C	13C	12C	13C	15C	17C	14C	15C	17C	18C	118-120
							Maximum Results For Rank 2 Attacks														
121-123	6A	9B	10B	13C	11C	12C	14C	16C	8B	10B	12C	14C	12D	14D	16D	18C	14C	16D	18D	19D	121-123
124-126	6A	9C	11C	13C	12C	13C	15C	17C	9C	11C	13C	14C	13D	14D	17D	18D	15C	17D	18D	19D	124-126
127-129	7B	9C	11C	14D	12D	13D	15D	17D	9C	11C	13D	15D	13D	15D	17D	19D	15D	17D	19D	20D	127-129
130-132	7B	10C	12C	14D	13D	14D	16D	18D	10C	12C	14D	15D	14D	15D	18D	20D	16D	18D	20D	21D	130-132
133-135	8C	10D	12D	15D	13D	14D	17D	18D	10D	12D	14D	16D	14D	16D	18E	20D	17D	18D	20D	21D	133-135
							Maximum Results For Rank 3 Attacks														
136-138	8C	11D	13D	15D	14D	15D	17D	19D	11D	13D	15D	16D	15E	16E	19E	21E	17D	19E	21E	22E	136-138
139-141	8D	11D	13D	16E	14E	15E	18E	20E	11D	13D	15E	17E	15E	17E	20E	22E	18E	20E	22E	23E	139-141
142-144	9D	12E	14E	16E	15E	16E	18E	20E	12E	14E	16E	17E	16E	17E	20E	22E	18E	20E	22E	23E	142-144
145-147	9E	12E	14E	17E	15E	16E	19E	21E	12E	14E	16E	18E	16E	18E	21E	23E	19E	21E	23E	24E	145-147
148-150	10E	13E	15E	18E	16E	17E	20E	22E	13E	15E	17E	19E	17E	19E	22E	24E	20E	22E	24E	25E	148-150
							Maximum Results For Rank 4 Attacks														
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	

Note: All critical results are rolled on the *Martial Arts Striking Critical Table*.
Note: Bare hands attacks by non-martial artists are Rank 1 attacks.
01-02 = Failure. Attack lost, no effect.

16.3 MARTIAL ARTS ATTACK TABLE: SWEEPS & THROWS

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01-02	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-02
03-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	03-30
31-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31-33
34-36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34-36
37-39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37-39
40-42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40-42
43-45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43-45
46-48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46-48
49-51	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49-51
52-54	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52-54
55-57	1A	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55-57
58-60	1A	1A	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58-60
61-63	1A	1A	1A	1	1A	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	61-63
64-66	1A	1A	1A	1A	1A	1A	1	0	1	1	0	0	1	0	0	0	0	0	0	0	64-66
67-69	1A	1A	1A	1A	1A	1A	1	1	1A	1	0	0	1A	1	0	0	0	0	0	0	67-69
70-72	1A	1A	1A	2A	2A	1A	1A	1	1A	1A	1	0	1A	1	0	0	0	0	0	0	70-72
73-75	1A	2A	2A	2A	2A	2A	1A	1A	1A	1A	1	1	2A	1A	1	0	0	0	0	0	73-75
76-78	1A	2A	2A	2A	2A	2A	2A	2A	1A	1A	1A	1	2A	2A	1	1	0	0	0	0	76-78
79-81	1A	2A	2A	2A	2A	2A	2A	2A	1A	2A	2A	1A	2A	2A	1A	1	0	0	0	0	79-81
82-84	2A	2A	2A	3A	3A	2A	2A	2A	1A	2A	2A	2A	3A	2A	2A	1A	0	0	0	0	82-84
85-87	2A	2A	3A	3A	3A	3A	3A	3A	2A	2A	2A	2A	3A	3A	2A	2A	0	0	0	0	85-87
88-90	2A	2A	3A	3A	3A	3A	3A	3A	2A	2A	3A	3A	3A	3A	3A	2A	1	0	1	0	88-90
91-93	2B	3B	3B	3B	3B	3B	3A	3A	2B	2A	3A	3A	4B	3A	3A	3A	1	1	1A	0	91-93
94-96	2B	3B	3B	4B	3B	3B	3A	4A	2B	3A	3A	3A	4B	4A	3A	3A	1A	1	2A	1	94-96
97-99	2B	3B	4B	4B	4B	4B	4A	4A	2B	3A	4A	4A	4B	4A	4A	4A	2A	1A	2A	1	97-99
100-102	2B	3B	4B	4B	4B	4B	4A	4A	2B	3A	4A	4A	5B	4A	4A	4A	2A	2A	3A	2A	100-102
103-105	2B	3B	4B	5B	4B	4B	4B	5B	2B	3B	4B	5B	5B	5B	5B	5B	3A	2A	3A	2A	103-105
═══ Maximum Results For Rank 1 Attacks ═══																					
106-108	2C	3C	4C	5C	4C	4C	5B	5B	3C	4B	5B	5B	5C	5B	5B	5B	3A	3A	4A	3A	106-108
109-111	2C	3C	4C	5C	5C	4C	5B	5B	3C	4B	5B	5B	5C	5B	5B	6B	3A	3A	4A	4A	109-111
112-114	2C	4C	5C	5C	5C	5C	5B	6B	3C	4B	5B	6B	6C	6B	6B	6B	4A	4A	5A	4A	112-114
115-117	3C	4C	5C	6C	5C	5C	5C	6C	3C	4C	6C	6C	6C	6C	6C	6C	4B	4B	5B	5B	115-117
118-120	3C	4C	5C	6C	5C	5C	6C	6C	3C	4C	6C	7C	6C	6C	7C	7C	5B	5B	6B	5B	118-120
═══ Maximum Results For Rank 2 Attacks ═══																					
121-123	3D	4D	5D	6D	5D	5D	6C	7C	3D	5C	6C	7C	7D	7C	7C	7C	5B	5B	7B	6B	121-123
124-126	3D	4D	6D	6D	6D	6D	6C	7C	3D	5C	7C	7C	7D	7C	7C	8C	5C	6C	7C	7C	124-126
127-129	3D	4D	6D	7D	6D	6D	7D	7D	4D	5D	7D	8D	7D	7D	8D	8D	6C	6C	8C	7C	127-129
130-132	3D	5D	6D	7D	6D	6D	7D	8D	4D	5D	7D	8D	8D	8D	8D	9D	6C	7C	8C	8C	130-132
133-135	3D	5D	6D	7D	6D	6D	7D	8D	4D	5D	8D	9D	8D	8D	9D	9D	7D	7D	9D	8D	133-135
═══ Maximum Results For Rank 3 Attacks ═══																					
136-138	3E	5E	7E	7E	7E	7E	7D	8D	4E	6D	8D	9D	8E	8D	9D	10D	7D	8D	9D	9D	136-138
139-141	3E	5E	7E	8E	7E	7E	8E	9E	4E	6E	8E	9E	9E	9E	9E	10E	7D	8D	10D	10D	139-141
142-144	3E	5E	7E	8E	7E	7E	8E	9E	4E	6E	9E	10E	9E	9E	10E	11E	8E	9E	10E	10E	142-144
145-147	3E	5E	7E	8E	7E	7E	8E	9E	4E	6E	9E	10E	9E	9E	10E	11E	8E	9E	11E	11E	145-147
148-150	4E	6E	8E	9E	8E	8E	9E	10E	5E	7E	10E	11E	10E	10E	11E	12E	9E	10E	12E	12E	148-150
═══ Maximum Results For Rank 4 Attacks ═══																					
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	

Note: All critical results are rolled on the *Martial Arts Sweeps and Throws Critical Table*.

Note: Bare hands attacks by non-martial artists are Rank 1 attacks.

Note: Humanoid type creatures attempting to subdue (without major injury) other humanoid types may use this table or the *Envelop/Entangle Attck Table* (both with a maximum result of 105).

01-02 = Failure. Attack lost, no effect.

16.4 ENTANGLE / ENVELOP ATTACK TABLE

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01-0X	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-0X
0X-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0X-30
31-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31-33
34-36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34-36
37-39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37-39
40-42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40-42
43-45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43-45
46-48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46-48
49-51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49-51
52-54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52-54
55-57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55-57
58-60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58-60
61-63	1A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61-63
64-66	1A	1	0	0	1A	1	0	0	1A	1	0	0	1	1	0	0	0	0	0	0	64-66
67-69	1A	1A	1	1	1A	1A	0	0	1A	1	0	0	1	1	0	0	0	0	0	0	67-69
70-72	1A	1A	1	1	1A	1A	1	1	1A	1A	1	1	2A	1A	1	0	0	0	0	0	70-72
73-75	1A	1A	1A	1	2A	1A	1	1	1A	1A	1	1	2A	2A	1	0	0	0	1	0	73-75
76-78	1A	1A	2A	2A	2A	2A	1A	1	1A	1A	1	1	2A	2A	1	1	0	0	1	0	76-78
79-81	1A	2A	2A	2A	2A	2A	2A	2A	1A	2A	1A	2	2A	2A	1	1	0	0	1	0	79-81
82-84	1A	2A	2A	3A	2A	2A	2A	2A	2A	2A	2A	2A	3A	3A	2	1	0	0	2A	1	82-84
85-87	1A	2A	3A	3A	3A	3A	2A	3A	2A	2A	2A	3A	3A	3A	2A	2	0	0	2A	1	85-87
88-90	1A	2A	3A	3A	3A	3A	3A	3A	2A	2A	3A	3A	3A	3A	3A	2	1A	1	3A	2	88-90
Maximum Results For MARK 1 Weapon																					
91-93	2B	2A	3A	4A	3A	3A	3A	4A	2A	3A	3A	4A	4A	4A	3A	3	1A	1	3A	2	91-93
94-96	2B	3A	4A	4A	4A	4A	4A	4A	2A	3A	4A	4A	4A	4A	4A	4	1A	2A	4A	3	94-96
97-99	2B	3A	4A	5A	4A	4A	4A	5A	2A	3A	4A	5A	4A	5A	4A	4A	2A	2A	5A	4	97-99
100-102	2B	3A	4A	5A	4A	4A	4A	5A	3A	3A	4A	5A	5A	5A	5A	5A	2A	3A	5A	4	100-102
103-105	2B	3B	5B	5B	4B	5B	5B	6B	3B	4B	5B	6A	5B	5B	5A	5A	3A	4A	6A	5A	103-105
Maximum Results For MARK 2 Weapon and Small Attacks																					
106-108	2C	4C	5B	6B	5B	5B	5B	6B	3B	4B	5B	6A	6B	6B	6A	6A	3A	4A	6A	6A	106-108
109-111	2C	4B	5B	6B	5B	5B	6B	7B	3B	4B	6B	7A	6B	6B	6A	7A	4A	5A	7A	6A	109-111
112-114	2C	4B	6B	7B	5B	6B	6B	7B	3B	4B	6B	7A	6B	7B	7A	7A	4A	5A	8A	7A	112-114
115-117	2C	4C	6C	7C	5C	6C	6C	7C	4C	5C	7C	8B	7C	7C	7B	8B	5B	6A	8B	8A	115-117
118-120	2C	4C	6C	7C	6C	6C	7C	8C	4C	5C	7C	8B	7C	7C	8B	8B	5B	7B	9B	8A	118-120
Maximum Results For MARK 3 Weapon and Medium Attacks																					
121-123	3D	5C	7C	8C	6C	7C	7C	8C	4C	5C	8C	9B	7C	8C	8B	9B	6B	7B	9B	9A	121-123
124-126	3D	5C	7C	8C	6C	7C	7C	9C	4C	5C	8C	9C	8C	8C	9C	10C	6C	8C	10C	9A	124-126
127-129	3D	5D	7D	9D	7D	7D	8D	9D	4D	6D	8D	10C	8D	9D	9C	10C	7C	8C	10C	10B	127-129
130-132	3D	5D	8D	9D	7D	8D	8D	10D	4D	6D	9D	10C	8D	9D	10C	11C	7C	9C	11C	11B	130-132
133-135	3D	5D	8D	9D	7D	8D	9D	10D	5D	6D	9D	11D	9D	9D	10D	11D	8D	10D	12D	11C	133-135
Maximum Results For MARK 4 Weapon and Large Attacks																					
136-138	3E	6D	8D	10D	7D	8D	9D	11D	5D	67D	10D	11D	9D	10D	11D	11D	8D	10D	12D	12C	136-138
139-141	3E	6E	9E	10E	8E	9E	9E	11E	5E	7E	10E	12E	9E	10E	11D	13D	9D	11D	13D	13D	139-141
142-144	3E	6E	9E	11E	8E	9E	10E	12E	5E	7E	11E	12E	10E	11E	12E	13E	9E	11E	13E	13D	142-144
145-147	3E	6E	9E	11E	8E	9E	10E	12E	5E	7E	11E	13E	10E	11E	12E	14E	10E	12E	14E	14E	145-147
148-150	4E	7E	10E	12F	9E	10E	11E	13F	6E	8E	12E	14F	11E	12E	13E	14F	11E	13E	15F	15F	148-150
Maximum Results For MARK 5 Weapon and Huge Attacks																					
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	

Note: All Criticals are *Grappling*
Note: An F-severity critical result indicates an E critical roll and a C critical roll
01-0X = Failure (Consult *Master Weapons Chart*, pp65-67, for actual failure range). If Failure is rolled, roll 1D10: 01-05: weapon malfunction, roll on *Weapon Malfunction Chart* (pg 63); 6-10: weapon fumble, roll on *Weapon Fumble Table* (pp 95-96).

16.5 FALL / CRUSH ATTACK TABLE

	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
01-02	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	01-02
03-30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	03-30
31-33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	31-33
34-36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2A	34-36
37-39	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	2A	0	1	3A	3A	37-39
40-42	0	0	0	0	0	0	1	2	0	0	0	1	0	1	2A	3A	1	2	4A	4A	40-42
43-45	0	0	0	1	0	1	2	3	0	0	1	2	1	2A	3A	4A	2	3A	5A	6A	43-45
46-48	0	0	1	1	1	1	3	4	0	0	1	3	1A	3A	4A	5A	3	4A	7A	7A	46-48
49-51	0	0	1	2	1	2	4	5A	0	0	2	4	2A	4A	5A	7A	4A	5A	8A	8A	49-51
52-54	0	0	2	3	2	3	5	6A	0	1	3	5A	3A	5A	6A	8A	5A	6A	9A	9A	52-54
55-57	0	0	3	4	3	4	6A	7A	0	1	4	6A	4A	6A	7A	9A	6A	8A	10A	11A	55-57
58-60	0	1	4	5	4	5A	7A	9A	0	2	5A	7A	5A	7A	8A	10A	7A	9A	11A	12A	58-60
61-63	0	1	5	6A	5A	6A	8A	10A	1	3	6A	8A	6A	8A	10A	11A	8A	10A	13A	13A	61-63
64-66	0	2	6	7A	6A	7A	9A	11A	1	4	7A	9A	7A	9A	11A	13A	9A	11A	14A	14A	64-66
67-69	0	3	6A	8A	7A	8A	10A	12A	2	5A	8A	10A	8A	10A	12A	14A	10A	12A	15A	16A	67-69
70-72	1	4	7A	9A	8A	9A	11A	13A	3	6A	9A	11A	8A	11A	13A	15A	11A	14A	16A	17A	70-72
73-75	1	5A	8A	10A	8A	10A	12A	14A	4	7A	10A	12A	9A	12A	14A	16A	12A	15A	17A	18A	73-75
76-78	2	5A	9A	11A	9A	11A	13A	16A	5A	8A	11A	13A	10A	13A	15A	17B	14A	16A	19B	19B	76-78
79-81	3	6A	10A	12A	10A	12A	14A	17A	6A	9A	12A	14A	11A	14A	16B	19B	15A	17A	20B	21B	79-81
82-84	3A	7A	11A	13A	11A	13A	15A	18B	7A	10A	13A	15B	12A	15B	18B	20B	16B	18B	21B	22B	82-84
85-87	4A	8A	12A	14A	12A	14A	16A	19B	8A	11A	14A	16B	13A	16B	19B	21B	17B	20B	22B	23C	85-87
88-90	5A	9A	12A	15A	13A	15A	17A	20B	9A	12A	15A	17B	14B	17B	20B	22C	18B	21B	23C	24C	88-90
91-93	6A	9A	13A	16A	14A	16A	18B	21B	9A	13A	16B	18C	15B	18B	21C	24C	19B	22B	25C	26C	91-93
94-96	6A	10A	14A	17B	15A	17B	20B	23C	10A	14A	17B	20C	16B	19B	22C	25C	20B	23C	26C	27C	94-96
97-99	7A	11A	15A	18B	16B	17B	21B	24C	11A	15A	17B	21C	16B	20C	23C	26C	21C	24C	27C	28C	97-99
100-102	8A	12A	16B	19B	16B	18B	22B	25C	12A	16A	18B	22C	17B	21C	24C	27C	22C	25C	28C	29C	100-102
103-105	9A	13A	17B	20B	17B	19B	23B	26C	13A	16B	19C	23C	18C	22C	25C	28C	23C	27C	29C	31C	103-105
Maximum Results For Falls of 1'-10' and Small Attacks																					
106-108	9A	13B	18B	21C	18B	20B	24C	27C	14A	17B	20C	24D	18C	23C	27D	30D	24C	28D	31D	32D	106-108
109-111	10A	14B	18B	22C	19B	21B	25C	28D	15A	18B	21C	25D	20C	24C	28D	31D	25C	29D	32D	33D	109-111
112-114	11A	15B	19B	23C	20B	22C	26C	30D	16B	19B	22C	26D	21C	25C	29D	32D	27D	30D	33D	34D	112-114
115-117	11B	16B	20C	24C	21C	23C	27C	31D	17B	20B	23D	27D	22C	26C	30D	33D	28D	31D	34D	36D	115-117
118-120	12B	17B	21C	25D	22C	24C	28C	32D	18B	21B	24D	28D	23D	27D	31D	34D	29D	33D	35D	37D	118-120
Maximum Results For Falls of 11'-50' and Medium Attacks																					
121-123	13B	17C	22C	26D	23C	25C	29C	33D	18B	22C	25D	29D	24D	28D	32D	36D	30D	34D	37D	38E	121-123
124-126	14B	18C	23C	27D	23C	26C	30C	34D	19B	23C	26D	30D	24D	29D	33D	37E	31D	35D	38E	39E	124-126
127-129	14B	19C	24C	28D	24C	27C	31C	35D	20C	24C	27D	31E	25D	30D	35E	38E	32D	36E	39E	41E	127-129
130-132	15C	20C	24C	29D	25C	28D	32D	37E	21C	25C	28D	32E	26D	31D	36E	39E	33E	37E	40E	42E	130-132
133-135	16C	21C	25D	30E	26D	29D	33D	38E	22C	26C	29E	33E	27E	32E	37E	40E	34E	39E	41E	43E	133-135
Maximum Results For Falls of 51'-100' and Large Attacks																					
136-138	17C	21D	26D	31E	27D	30D	34D	39E	23C	27D	30E	34E	28E	33E	38E	42E	35E	40E	43E	44E	136-138
139-141	17D	22D	27D	32E	28D	31D	35D	40E	24D	28D	31E	35E	29E	34E	39E	43E	36E	41E	44E	46E	139-141
142-144	18D	23D	28E	33E	29E	32E	36E	41E	25D	29D	32E	36E	30E	35E	40E	44E	37E	42E	45E	47E	142-144
145-147	19E	24E	29E	34E	30E	33E	37E	42E	26E	30E	33F	37F	31E	36E	41E	45E	38E	43E	46E	48E	145-147
148-150	20F	25F	30F	35F	31F	34F	39F	44F	27F	31F	34F	39F	32F	38F	43F	47F	40F	45F	48F	50F	148-150
Maximum Results For Falls of Over 100' and Huge Attacks																					
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	

Note: All criticals are *Crush*.

Note: For falls, add 10 to the roll for each 3 meters fallen (other factors may modify this).

Note: An F-severity critical result indicates an E critical roll and a C critical roll.

17.1 PUNCTURE CRITICAL STRIKE TABLE

	A	B	C	D	E
01-05	Zip	Glancing blow. No extra damage. +0.	+1 hit	+2 hits	+3 hits
06-10	+1 hit	+2 hits	+3 hits	+4 hits	Unbalance foe with a nice grazing strike. You gain initiative +5 hits.
11-15	You receive initiative for next round. +1 hit	Glancing low to foe's side. +3 hits. You receive initiative next round.	Blow to foe's side. +5 hits. You receive initiative next round.	+2 hits Foe must parry for next round.	+3 hits Foe must parry for next round.
16-20	Foe must parry next round. +1 hit.	Blow to side. +2 hits. Foe must parry next round at -10.	Blow across side. Foe must parry next round at -20. +3 hits.	Minor side wound. Foe fights at -10. You have initiative next rnd.	Stun foe for 1 round. Add +20 to your next attack.
21-35	Foe must parry next round. +2 hits. Add +10 to next attack.	Foe must parry next round at -20. +2 hits.	You wound foe along side of chest. Foe is stunned 1 round and takes 1 hit per round.	You wound foe along side of hip. Foe is stunned 1 round and takes 2 hits per round.	Foe receives minor side wound. +2 hits. Foe is at -10. Foe takes 2 hits per round.
36-45	Minor calf wound. Foe receives 1 hit per round.	Minor calf wound. Foe takes 1 hit per round. +2 hits.	Minor calf wound. Foe takes 2 hits per round.	Minor thigh wound. Foe takes 3 hits per round.	Thigh strike. If foe has leg armor, +3 hits. If foe has no armor, +2 hits and 3 hits per round.
46-50	Strike along foe's back. +2 hits. Foe must now parry next round at -30.	Strike along foe's back. Foe is stunned for 1 round and takes 1 hit per round.	Strike across foe's back stuns foe for 2 rounds. Foe takes 1 hit per round.	Strike to foe's lower back. Foe is stunned and unable to parry next round. +6 hits.	Strike to foe's lower back. Foe takes 3 hits per round. +5 hits. Foe is stunned and unable to parry during next round.
51-55	Strike to foe's chest. Foe must parry next round at -25. Foe takes 2 hits per round.	Minor chest wound. Foe takes 2 hits per round. +3 hits. Foe must parry for next 2 rnds.	Minor chest wound. Foe takes 2 hits per round. +3 hits. Foe is stunned for 2 rounds.	Strike to chest. +5 hits. Foe takes 3 hits per round and fights at -15. Foe must parry next round.	Chest wound. Foe takes 4 hits per round. +5 hits. Foe fights at -10. Foe is stunned and unable to parry next round.
56-60	Minor thigh wound. Foe takes 2 hits per round. +2 hits. Foe is stunned next round.	Minor thigh wound. Foe takes 2 hits per rounds. +3 hits. Foe is stunned and unable to parry next round.	Minor thigh wound. +5 hits. Foe takes 2 hits per round and is at -10. Foe is stunned for 2 rounds.	Strike to thigh. Foe takes 3 hits per round. Foe is stunned and unable to parry for the next round. +3 hits.	Thigh wound. Foe takes 5 hits per round. +6 hits. Foe is stunned and unable to parry next round.
61-65	Minor forearm wound. +2 hits. Foe takes 2 hits per round. Foe is at -10.	Minor forearm wound. Foe is stunned during next round. +2 hits. Foe is at -10 and takes 2 hits per round.	Forearm wound. Foe takes 2 hits per round and is at -10. +3 hits. Foe is stunned for 2 rounds.	Forearm wound. Foe takes 3 hits per round and is at -10. +3 hits. Foe is stunned for 2 rounds.	Forearm wound. Foe takes 3 hits per round and is at -15. +5 hits. Foe is stunned for 2 rounds.
66	Strike through foe's non-weapon shoulder. Arm is useless. +10 to your next attack. Foe is stunned for 3 rnds.	Strike shatters elbow in foe's weapon arm. +3 hits. Arm is useless. Foe is stunned 4 rnds and cannot parry for 2 rnds.	Strike shatters foe's knee. Foe is knocked down, is at -90, and stays down for 3 rounds. Foe is unable to parry 2 rounds.	Strike to side of head. Foe is knocked out for 6 hours. +10 hits. If foe has no helmet, you kill him.	Strike through both of foe's lungs. Foe drops and passes out. Foe dies in 6 rounds. Add +10 to your next attack.
67-70	Strike along foe's neck. +5 hits. Foe is stunned for 3 rounds and cannot parry next round.	Strike to foe's neck area. Foe takes 3 hits per round and is at -5. Foe is stunned for 2 rounds.	Strike along foe's neck. Foe is stunned for 4 rounds and cannot parry for 2 rounds. Add +15 to your next attack.	Strike foe in shoulder. +3 hits. Foe is stunned and unable to parry for 2 rounds. Foe is at -20.	Strike foe's shoulder. Sever muscle and tendons. Arm is useless. Foe takes 3 hits per round. Foe is stunned for 6 rounds.
71-75	Strike lower leg. Tear tendons. Foe is at -25. +3 hits. Foe is stunned and unable to parry next round.	Strike to foe's calf. Slash muscle. Foe is at -40. +3 hits. Foe is stunned and unable to parry for 2 rounds.	Strike to lower leg. Foe is stunned and unable to parry for 2 rounds. +5 hits. Foe is at -50. Slash muscle and tendons.	Strike to lower leg. Foe is at -50. Slash muscle and cartilage. +6 hits. Foe is stunned and unable to parry for 2 rounds.	Strike through lower leg. Foe is stunned and unable to parry for 3 rounds. Sever muscle. Foe is at -75.
76-80	Strike to foe's upper arm. +3 hits. Foe takes 3 hits per round and is at -25. Foe is stunned for 2 rounds.	Strike through muscle in foe's non-weapon arm. Foe is at -30 and takes 3 hits per round. Foe is stunned for 3 rounds.	Strike foe in shield arm. Tear muscle and tendons. Foe takes 3 hits per round, fights at -25. Foe is stunned 6 rounds.	Strike foe in non-weapon arm. Arm is useless. Foe is stunned for 6 rounds. Foe takes 3 hits per round. +12 hits.	Strike foe in weapon arm, bone is broken. Foe is stunned and unable to parry for 3 rounds. +10 hits.
81-85	Side wound. Foe takes 5 hits per round and is stunned for 6 rounds. Add +20 to your next attack.	Side wound. +6 hits. Foe takes 5 hits per round. Foe is at -25. Foe is stunned and unable to parry for 3 rounds.	Side wound. +6 hits. Foe takes 5 hits per round. Foe is at -25. Foe is stunned and unable to parry for 3 rounds.	Major abdomenal wound. Foe takes 6 hits per round. +10 hits. Foe is stunned and unable to parry for 3 rounds. Foe is at -20.	Strike through foe's back severs a vein. Foe is stunned and unable to parry for 12 rounds — then he dies.
86-90	Strike foe in back. Foe is at -20 and takes 3 hits per round. Foe is stunned and unable to parry 2 rounds.	Strike to back of head. If foe has no helmet, he dies. If foe has a helmet, +6 hits and foe is down for 2 rounds.	Strike to back of head. If foe has no helmet, he dies. If foe has a helmet, +6 hits and foe is down for 2 rounds.	Strike through foe's kidneys. Foe drops. +9 hits. Foe dies after 6 rounds of very intense agony. Sad.	Strike through leg severs an artery. Foe drops, lapses into unconsciousness, and dies after 12 rounds.
91-95	Rip off foe's ear. +3 hits. Foe takes 2 hits per round, hears at -50. Foe is stunned and not able to parry for 2 rounds.	Strike through foe's hip. Foe takes 3 hits per round. +5 hits. Foe is stunned next round. Foe is at -25.	Strike through foe's chest, severs a vein. Foe drops immediately and dies in 9 rounds due to shock and blood loss.	Strike through foe's side destroys a variety of organs. Foe fights normally for 6 rounds then dies.	Sever artery in foe's arm. Foe is stunned for 12 rounds and then dies.
96-99	Strike foe's nose. There is a permanent scar. Foe takes 3 hits/rnd. Foe is stunned and unable to parry 3 rnds.	Strike through foe's cheek. Foe drops and dies after 9 rounds of incapacity. Add +20 to your next attack.	Strike through foe's neck breaks backbone and severs spine. Foe is paralyzed from the neck down — permanently.	Nail sucker in lower back. Internal bleeding and shock kill foe in 6 rounds. Foe is down and out.	Shot through heart sends foe reeling back 10 feet to a spot suitable for dying. Weapon is stuck in reeling foe.
100	Strike through neck. Sever vein and artery. Foe cannot breathe. Foe drops and dies of a massive heart failure.	Strike through foe's eye. Foe dies instantly. Add +10 to all friendly attacks within 30 feet next round.	Shot through both ears proves effective. Foe dies instantly. Add +20 to your next 6 round. Pretty shot.	Strike through brain makes life difficult for foe. You have a half round left to act. Add +20 to your next attack.	Strike through foe's eye. Foe dies instantly. Add +25 to your next attack. Carry on.

17.2 SLASH CRITICAL STRIKE TABLE

	A	B	C	D	E
01-05	Zip.	Weak strike yields no extra damage. +0	+1 hit	+2 hits	+3 hits
06-10	+1 hit.	+2 hits	+3 hits	+4 hits	Unbalance foe. +5 hits. You receive initiative next round.
11-15	You receive initiative next round. +1 hit.	Glancing blow to foe's side. +3 hits. You receive initiative next round.	Blow to foe's side yields +6 hits. You receive initiative next round.	+3 hits. Foe must parry for next round of action.	+4 hits. Foe must parry next round of action.
16-20	Foe must parry next round. +1 hit.	Blow to side. +2 hits. Foe must parry next round at -10.	Blow to side. +4 hits. Foe must parry next round -20.	Minor side wound. Foe fights at -10. +2 hits. You receive initiative next round.	Stun foe for 1 round. Foe may not parry. Add +10 to your next swing.
21-35	Foe must parry next round. +2 hits. Add +10 to next swing.	Foe must parry next round at -20. +2 hits.	You break foe's rib. 3 extra hits. Foe is stunned next round.	Strike to side. Foe is stunned for next round and cannot parry. +3 hits.	Foe receives minor side wound, fights at -10 and takes 1 hit per round. +3 hits.
36-45	Minor calf wound. Foe receives 1 hit per round.	Minor calf wound. Foe takes 1 hit per round. +2 hits.	You slash foe's leg. Foe takes 2 hits per round. +2 hits.	You slash foe's upper leg and deliver 3 extra hits. Foe takes 2 hits a round.	Blow to foe's upper leg. If foe has leg armor +5 hits. If foe has no armor, +3 hits and +3 hits per rnd.
46-50	Blow to foe's back. +2 hits. Foe must parry next round at -30.	Blow to foe's back. Foe must parry next round at -30. +4 hits.	Blow to foe's back stun foe 1 round. Foe may not parry. +3 hits and foe takes 1 hit/rnd.	Strike foe's lower back. Foe may not parry and is out next round. +3 hits. Foe takes 2 hits per round.	Strike to foe's lower back. Foe may not parry and is out next round. +4 hits. Foe takes 3 hits per round.
51-55	Blow to foe's chest. Foe must parry next round -25. Wound gives 1 hit per round. +2 hits.	Minor chest wound. Foe takes 1 hit/rnd and must parry next 2 rnds. +3 hits. Foe fights -5.	Minor chest wound. +4 hits. Foe takes 2 hits per round and fights at -10. Foe must parry next rnd.	Medium chest wound. +5 hits. Foe takes 3 hits per round, fights at -15, and must parry next round.	Chest wound. Foe takes 4 hits per round, is at -10, and is stunned 2 rounds. +6 hits.
56-60	Minor thigh wound. Foe takes 2 hits per round and must parry next round. +3 hits.	Minor thigh wound. Foe takes 2 hits per round. +4 hits. Foe must parry next two rounds.	Minor thigh wound. Foe takes 2 hits per round. +5 hits. Foe is stunned next round.	Medium thigh wound. +6 hits. Foe takes 2 hits per round and is stunned 2 rounds.	Thigh wound. Foe is stunned for 2 rounds. +8 hits. Foe takes 5 hits a round.
61-65	Minor forearm wound. +3 hits. Foe takes 2 hits per round and is at -10.	Minor forearm wound. Foe is stunned next rnd, takes 2 hits per rnd, and is at -10. +4 hits.	Medium forearm wound. +4 hits. Foe takes 3 hits per round, is at -10, and is stunned next rnd.	Medium forearm wound. +4 hits. Foe takes 3 hits per round, is at -10, and is stunned next 2 rounds.	Forearm wound. Foe is stunned for 2 rounds. +6 hits. Foe takes 3 hits per round and is at -15.
66	You shatter shoulder in foe's non-weapon arm. Arm is useless. +10 next swing. Foe is stunned 3 rounds. +9 hits. Your initiative.	Shatter elbow in foe's weapon arm. +8 hits. Foe is stunned 4 rounds and cannot parry during first 2 rounds.	You shatter foe's knee. Foe is knocked down. +6 hits. Foe at -90 and is down for 3 rounds. (and cannot parry).	You knock foe out for 6 hours with a strike to side of head. +15 hits. If foe has no helmet, you kill him instantly.	Sever foe's weapon arm. +12 hits. Foe expires in 12 rounds, drops immediately. Add +10 to your next swing.
67-70	Slash foe's neck. +6 hits. Foe is stunned for 3 rounds and cannot parry during next round.	Blow to foe's neck area. Foe takes 3 hits per round and fights at -5. Stun foe 2 rounds. +7 hits.	Slash foe's neck. Foe is stunned 4 rounds and cannot parry during next 2 rounds. +8 hits. +10 next round.	Slash muscle in foe's shoulder area. +5 hits. Foe is stunned 3 rounds, and is at -20. Add +10 to your next swing.	Slash tendons and crush the bone in foe's shield shoulder. Arm useless and foe takes 2 hits per round. Stun foe 4 rounds.
71-75	Slash tendons in foe's lower leg. Foe at -30 and takes 2 hits per round. +4 hits. Stun foe 2 rounds. Poor sucker.	Slash muscle in foe's calf. Foe is stunned for 3 rounds and cannot parry during next round. +6 hits. Foe at -40.	Slash muscle and tendons in foe's lower leg. Foe is stunned for 2 rounds and cannot parry. +7 hits. Foe at -45.	Slash muscle and sever tendons in foe's lower leg. Foe is stunned for 3 rounds and cannot parry for next 2 rounds. Foe is at -50.	Slash foe's lower leg and sever muscle and tendons. Foe at -70. +8 hits. Stun foe 6 rounds.
76-80	Slash foe's upper arm. +5 hits. Foe takes 3 hits per round and is at -25. Foe is stunned and unable to parry 2 rounds.	Slash muscle in foe's non-weapon arm. Foe is at -30 and takes 3 hits per round. Foe is stunned and unable to parry for 2 rounds. +6 hits.	Slash muscle and tendons in foe's non-weapon arm. +9 hits. Foe takes 4 hits per round and arm is useless. Foe is stunned 6 rounds.	Slash muscle and tendons in foe's weapon arm. Arm is useless and foe is stunned 4 rounds. Foe cannot parry next 2 rounds. +10 hits.	Slash tendons and break bone in foe's non-weapon arm. Arm is useless. +12 hits. Foe is stunned and unable to parry for next 3 rounds.
81-85	Slash foe in side. +6 hits and a major wound. Foe takes 6 hits/rnd, stunned 5 rnds. Add +20 to your next swing.	Slash foe in side. +7 hits and a major wound. Foe takes 6 hits per round. Foe is stunned and cannot parry for next 2 rounds.	Strike to foe's side. +8 hits. Foe takes 4 hits per round and is at -20. Foe is stunned and cannot parry for next 2 rounds.	Major abdomenal wound. +10 hits. Foe takes 8 hits per round, is stunned for 4 rnds, and is unable to parry for next 2 rnds. Foe at -10.	Sever opponent's hand. +5 hits. Foe is stunned and unable to parry for next 12 rounds. Foe then dies.
86-90	Slash foe in back. +8 hits. Foe is stunned and cannot parry for 2 rounds. Wound yields 2 hits a round. Foe at -10.	Stricke to back knocks foe down. Foe is stunned and unable to parry for 3 rounds. +10 hits. Foe takes 3 hits a rnd.	Blast to back breaks bone and knocks foe down. +9 hits and foe at -10. Foe is stunned and unable to parry for 4 rounds.	Sever opponent's hand. +6 hits. Foe is stunned for 6 rounds, unable to parry. Foe then drops and dies 6 rounds later.	Sever foe's leg. +15 hits. Foe drops and lapses into unconsciousness. Foe dies in 9 rounds. Add +10 to your next swing.
91-95	Cut off foe's ear. +3 hits. Foe takes 3 hits per round and hears at -50. Foe is stunned 3 rounds and unable to parry next round.	Strike to foe's hip. +7 hits and foe is stunned 3 rounds. Foe cannot parry next round and fights -20. Add +10 to your next swing.	Sever foe's leg. Foe drops immediately and dies in 6 rounds due to shock and blood loss. +20 hits.	Sever foe's weapon arm. Foe is stunned and unable to parry for next 9 rounds. Foe then dies. +15 hits.	Sever foe's spine. +20 hits. Foe collapses in a second, and is paralyzed from the neck down permanently.
96-99	Slash foe's nose. Minor wound. +2 hits and a permanent scar. Foe takes 2 hits a round and is at -30. Foe stunned 6 rounds.	Strike to foe's head and neck breaks skull and causes massive brain damage. Foe drops and dies in 6 rounds. +20 hits.	Sever foe's non-weapon arm. Foe is stunned, unable to parry for next +18 hits.	Slash foe's side. +20 hits. Foe dies in 3 rounds due to massive internal organ damage. Foe is down and unconscious immediately.	Strike to foe's head destroys brain and makes life difficult for the poor fool. Foe expires in a heap — immediately.
100	Neck strike severs carotid artery and jugular vein. Foe's neck is broken. Foe dies in 1 round of intense agony.	Disembowel foe, killing him instantly.	Destroy foe's eyes. +5 hits and foe is stunned and unable to parry for next 30 rounds.	Impale adversary in heart. +12 hits. Foe dies instantly. Heart is destroyed.	Strike to foe's groin area. +10 hits. All vitals are destroyed immediately. Foe is stunned and unable to parry for 12 rounds.

17.3 SHRAPNEL / AUTOMATIC CRITICAL STRIKE TABLE

	A	B	C	D	E
01-05	A grazing shot; no extra hits. Your gun just jammed . . . sorry.	You shoot off a piece of foe's equipment. +0 hits.	Hit foe's weapon, destroying it and breaking one of foe's fingers. +2 hits.	Foe is staggered by your effort. He is stunned next rnd. +6 hits.	Foe urinates in fear. +7 hits.
06-10	Just a nick . . . for +1 hit.	+2 hits.	Foe stunned next rnd. +3 hits.	Foe, impressed with your hail of fire, is stunned for 2 rnds. +7 hits.	You have initiative for the next 3 rnds. +10 hits
11-15	+3 hit.	You have initiative next rnd as foe checks for damage. +4 hits.	Hit foe's side in poorly aimed fire. +9 hits. You have the initiative.	Solid hit to shoulder blade. Foe is stunned for 4 rnds and is unable to parry for 2 rnds. He takes 2 hits/rnd. +9 hits.	Foe fumbles weapon and is unable to parry when he is stunned next rnds. +12 hits.
16-20	Foe may not attack next rnd. +4 hits.	Slash foe's side. He must parry next rnd. +5 hits.	Blows to the sides cause foe to parry for 2 rnds. +9 hits.	Foe takes 3 side strikes. He is stunned for 6 rnds and bleeds, taking 4 hits/rnd. +11 hits. Add 10 to your next action.	Grazing head strikes stun foe for 3 rnds. He takes 2 hits/rnd. +13 hits. Add 25 to next attack.
21-35	You gain initiative next rnd +4 hits.	Foe must parry next rnd at -40 as the metal is too close for comfort. +6 hits.	You shatter one of foe's ribs. Foe is stunned for 2 rnds, takes 2 hits/rnd, and is knocked on his back. +11 hits.	Foe hit in hip and along both sides. He is stunned and unable to parry for 4 rnds, is at -45, and takes 2 hits/rnd. +13 hits.	Several ribs shatter in glancing blows. Foe takes 2 hits/rnd and is stunned for 2 rnds with no parry. +15 hits.
36-45	Blow to foot. Foe receives 1 hit per rnd unless armored. +5 hits.	Strikes to calf and hand give +7 hits. Foe is at -10.	Strike foe's knee and calf. Foe receives 4 hits/rnd and foe is at -40. +12 hits.	Foe doubles over with hits to the shin, thigh, and groin. He receives 5 hits/rnd, is prone for 4 rnds and permanently sterile. +15 hits.	Arm and leg strike. if armored, foe takes +12 hits, If not, he takes +17 hits and is bleeding at 4 hits/rnd, is at -40 and stunned for 10 rnd.
46-50	Glancing shots to back of foe's neck. Foe must parry next rnd at -30. +5 hits.	Strike to the back and upper arm. Foe is stunned and unable to parry for 2 rnds. Foe receives 2 hits/rnd and +8 Hits.	Strike across foe's back and buttocks — ouch. He takes 2 hits/rnd and is stunned for 3 rnds. +13 hits.	Strikes to lower back paralyze foe's legs. He is down (at -80 to all action) and taking 4 hits/rnd.	Multiple back blows send foe flying 10 feet. Unable to parry, foe is stunned for 12 rnds. He takes 6 hits/rnd and is at -70. +19 hits.
51-55	Two strikes to foe's collar area. He is knocked back parrying at -20 next rnd. Foe receives 2 hits/rnd and +6 hits.	Foe hit in side and upper arm. +10 hits. He is stunned for 3 rnds and takes 5 hits/rnd.	Foe staggers and parries for 3 rnds after receiving minor wounds to the chest and groin. Foe receives 3 hits/rnd and +15 hits.	Major wounds to foe's chest. He and is stunned and unable to parry for 3 rnds. He takes 5 hits/rnd. +19 hits.	Foe knocked back with chest strikes. Aorta damage causes 20 hits/rnd. Lung lacerations will suffocate foe in 4 rnds. He is prone, meanwhile. +21 hits.
56-60	Two shots to foe's leg. If armored, +4 hits. If not, +10 hits. Foe is stunned for next 3 rnds.	Two strikes to the thigh and one to the calf sadden foe. Foe receives 4 hits/rnd and +11 hits. Foe is stunned 3 rnds and unable to parry. He is at -50.	Foe stunned for 5 rnds by strikes to the calf and thigh of both legs. He is down and taking 5 hits/rnd and is at -50. +16 hits.	You lacerate foe's thigh and shatter a hip joint. He is in a week long coma taking 5 hits/rnd. +22 hits.	Both thighs and groin very severely slashed. Foe takes 10 hits/rnd, is down and stunned for 20 rnds. +23 hits. Embarrassing.
61-65	Hit along wrist. Foe receives 2 hits/rnd. Foe is stunned next rnd. +10 hits.	Blows along forearm and opposite shoulder. Arms less than useless. Foe receives 4 hits/rnd and 12 hits.	Foe drops possessions after being struck in the arms. Foe takes +17 hits, stunned 5 rnds, -25 on actions, and bleeds. Receives 6 hits/rnd Give up.	Foe loses hand, and arm is severely mangled. He is unable to parry for 5 rnds and is stunned for 20 rnds. Receives 6 hits/rnd. +24 hits.	You deliver ugly wounds to foe's arms and shoulders. Limbs are useless. Foe is at -60, stunned, and unable to parry for 5 rnds. +25 hits.
66	Strikes to shoulder/collar area. Foe is stunned for 5 rnds and arm is useless. Activity at -30 and foe receives 4 hits per rnd. +55 hits.	Elbow shattered with forearm left dangling. Foe receives 6 hits/rnd as foe sees this and passes out.. +20 hits.	You cut foe down at the knees. Foe is immobilized and at -100. Receives 10 hits/rnd and foe is stunned for 12 rnds.	The side of foe's head springs 3 leaks. Too late to call a plumber; he's dead. Very gory.	You expose foe's chest cavity appropriate for pre med anatomy course. He is dead. +15 to your next action.
67-70	Blow along neck, upper chest and arm. Foe knocked down stunned for 4 rnds. Foe receives 4 hits/rnd. +17 hits.	Neck and arm strikes cause 6 hits/rnd and +14 hits. Foe at -20 and stunned for 5 rnds.	Multiple strikes along the upper body Foe is stunned for 8 rnds and cannot parry for 4 rnds. Receives 2 hits/rnd and +20 hits.	Shoulder smashed. Foe spins back 10 feet. He is stunned and unable to parry for 7 rnds. Arm is useless. Receives 6 hits/rnd. +26 hits.	Muscles and tendons in foe's arm and leg are torn beyond recognition. He takes 12 hits/rnd and is down for 20 rnds. +28 hits.
71-75	Tendons in both legs are slashed. Foe is at -50 and is taking 4 hits/rnd. He is out for 2 rnds and stunned for 5 more. Too bad	Foe's leg riddled. He is at -50 with 4 hits/rnd and also stunned for 5 rnds. +17 hits.	Leg muscles and tendons slashed by strikes to calf and thigh. Foe is stunned and unable to parry for 8 rnds, takes 5 hits/rnd, and is at -75. +25 hits.	Hits in the shin, knee, hip, and side, down foe in a convulsive heap. He is down for 24 rnds and at -90. He takes 8 hits/rnd. +27 hits.	Foe loses both legs to your razing assault. He is in shock, taking 14 hits/rnd, and will die anyway in 6 rnds. +30 hits.
76-80	Foe's left side and arm are perforated. Foe is at -40, stunned and unable to parry for 6 rnds. Foe takes 3 hits/rnd and +18 hits.	Foe's left arm takes multiple lacerations. Receives 3 hits/rnd and operates at -40. Foe is stunned next rnd and cannot parry. +18 hits.	Blows to both arms and chest break several indigenous bones. Foe is stunned for 12 rnds, takes 8 hits/rnd, and is unable to parry. +27 hits.	Strike destroys foe's weapon and neatly separates his arm from his bod. Foe is in shock and prone taking 8 hits/rnd. +30 hits.	Bone splintered form one shoulder to the other. Additional thigh wound. Foe is prone taking 14 hits/rnd and equipment is destroyed. +32 hits.
81-85	Foe pummeled in the side and hip. Immobilized until aided. He takes 6 hits/rnd and +20 hits.	Strikes to the side and leg. Foe experiences 9 Hits/rnd for bleeding. Stunned and unable to parry for 5 rnds before passing out from shock. +21 hits.	Several side and back wounds cause foe to parry in a stunned state for the next 13 rnds. Foe takes 9 hits/rnd and +28 hits.	Severe blows to foe's side and abdomen. Foe is stunned and unable to parry for 5 rnds. He is taking 10 hits/rnd and is at -95. +32 hits.	Witless loser charges you as you sever his spine, hand, and lacerate the side of this head. He falls in a heap, quite lifeless.
86-90	Hit foe's back and upper leg. He is bloody and knocked 10 feet away. Foe unable to parry for 5 rnds. 6 hits per rnd, and +18 hits.	Strikes blow away ear and pierce hip.. Foe at -30, cannot parry for 2 rnds, stunned for 6 rnds, and takes 8 hits/rnd. +27 hits.	Foe knocked down. Strikes kill an unarmored foe. Otherwise, he is stunned, unable to parry for 12 rnds, receiving 9 hits/rnd. +30 hits.	Sent spinning, foe is struck in the spine, the kidneys, and he loses a hand. This one is history in one rnd. +33 hits.	Disemboweling stream of metal pummels foe's leg, abdomen, and chest. He lapses into unconsciousness before dying in 4 rnds. +35 hits.
91-95	Foe loses one ear, and nose is lacerated. Hearing at -50. Stunned for 10 rnds if armored or out 3 hours if not. Foe receives 5 hits/rnd and +23 hits.	Impacts to middle and upper back, and back of head. If unarmored, foe dies; otherwise, he is stunned for 10 rnds. Takes 8 hits per rnd and +25 hits.	Foe makes an excellent ventilator with holes in the leg, side, and chest. He expires in 1 rnd. +32 hits.	Several strikes take out the liver spleen, and intestines Poor slob fights for one messy rnd then drops. +34 hits.	Spinal shot induces a bizarre twist. Arteries in chest and arm also severed. Foe is paralyzed and dies in 3 rnds. +40 hits.
96-99	Malicious blow to foe's face. He loses nose cheekbone and a part of his skull. Foe is in coma until revived. Receives 4 hits/rnd and +25 hits.	Foe brutalized in strikes to the side, cheek, neck, and brain. Foe dies in 2 prone rnds. Add 10 to your next attack. +35 hits.	Foe knocked back 15 feet without an arm, and with gashes in the neck. He is paralyzed by a broken spine and dies in 8 rnds. +35 hits.	A classic example of unanesthetized surgery. You remove a plethora of vital organs. A bit sloppy. Foe is out and dies in 3 rnds. +35 hits.	A Steady stream nails the sucker in brain, neck, heart, abdomen, and groin. Your allies within 50 feet add +10 to their next attacks. You are out of ammunition.
100	Hip is destroyed. More importantly, the head is messily separated from the shoulders. Bye.	Poor sucker is without the lower half of his body and has a hole where his eye was to boot. It was quick.	Foe takes strikes to the chest, and face. Lungs fill with blood, making breathing difficult. Poor fool expires in 3 messy rnds.	Foe hit in the heart and brain for a prompt demise. Good shot. Add +20 to your next attack	Foe bursts into a bloody pulp. Yuck.

	A	B	C	D	E
01-05	Nary a whisper. +0 hits.	Great luck escapes you. No additional damage. +0.	+1hit	+2 hits	+3 hits
06-10	+1 hit	+2 hits	+3 hits	+4 hits	Blast stuns foe for 1 round. +3 hits.
11-15	Foe loses initiative for 1 round. +2 hits.	Foe is spun about. +4 hits. Foe loses initiative 1 round.	Foe is unbalanced. +3 hits and foe must parry 1 round.	Foe is unbalanced. +4 hits and foe must parry 1 round.	Blast stuns foe for 1 round. +4 hits.
16-20	Foe is spun about. +3 hits. Foe loses initiative 1 round.	Blast unbalances foe. +2 hits and foe must parry 1 round.	Foe is unbalanced. +4 hits and foe must parry 1 round.	Foe is unbalanced. +6 hits and foe must parry 1 round.	Blast stuns foe for 1 round. +9 hits.
21-35	Foe is unbalanced. +5 hits. Foe loses 2 rounds of initiative.	Blow unbalances foe. +5 hits and foe must parry 1 round.	Foe is unbalanced. +8 hits and foe must parry 1 round.	Foe is unbalanced. +10 hits and foe must parry 1 round.	Foe reels from blast. +15 hits and foe is stunned for 1 round.
36-45	Foe is unbalanced. +8 hits. Foe loses 2 rounds of initiative.	Blow unbalances foe. +9 hits and foe must parry next round.	Foe is unbalanced. +10 hits and foe is stunned for 1 round	Foe is unbalanced and must parry for 2 rounds. +12 hits.	Foe is spun about and reels backwards 10 feet. +20 hits. Foe is stunned 2 rounds.
46-50	Blow unbalances foe. +10 hits. Foe loses 3 rounds of initiative. Getting better.	Blow unbalances foe. +10 hits and foe is stunned next round.	Foe is unbalanced and must parry for 2 rounds. +12 hits. Add +5 to your next action.	Foe is spun about. +20 hits. Foe is stunned 2 rounds.	Foe is staggered. +20 hits and foe is stunned and unable to parry 1 round.
51-55	Foe is unbalanced. +10 hits. Foe is stunned for 1 round. Grazing blast.	Blow unbalances foe. +12 hits and foe is stunned next round.	Foe is knocked back 5 feet and must parry for the next 2 rounds. +15 hits.	Foe is knocked back 5 feet and must parry for the next 2 rounds. Add +5 to your next action.	Foe is staggered. +20 hits. Foe is stunned 2 rounds and unable to parry next round.
56-60	Foe is unbalanced. +10 hits. Foe is stunned next round.	Foe is spun about. +10 hits and foe is stunned for 2 rounds.	Foe is spun about +12 hits and foe is stunned for 2 rounds.	Foe is staggered. +10 hits. Foe is stunned and unable to parry for 1 round.	Foe is knocked down, +20 hits. Foe is out of action for 2 rounds.
61-65	Foe is unbalanced. +12 hits. Foe is stunned during next round.	Foe is staggered. Poor fool is stunned and unable to parry next round. +10 hits.	Foe is stunned and unable to parry next round. +10 hits. Add 5 to your next action.	Foe is staggered. +10 hits. Foe is stunned 2 rounds and unable to parry for next round.	Foe is knocked down. +20 hits. Foe is out of action for 3 rounds.
66	Blast breaks foe's non-weapon shoulder. Arm is useless. +20 hits. Foe must parry for 1 round. +7 hits.	Blow shatters foe's weapon shoulder. +15 hits. Arm is useless. Foe is stunned for 1 round.	Blow breaks both of foe's arms. Foe is knocked down, is at -90, and is stunned for 3 rounds.	Blow to foe's head. If foe has no helmet you kill him. If foe has a helmet he is out for 3 hours.	Blast shatters skull into thousands of lost particles. Foe dies instantly. Direct hit. Fine punch.
67-70	Blow to foe's back. Foe is stunned and unable to parry for 1 round. +7 hits.	Blow to foe's back. Foe is stunned and unable to parry next round. +12 hits.	Blow to foe's back. Foe is stunned for 2 rounds and unable to parry next round.	Foe is knocked down. +15 hits. Foe is out of action for 2 rounds. Add +5 to your next act.	Blast to foe's non-weapon arm. Foe is stunned 1 round. Foe has a shattered shoulder.
71-75	Blow unbalances foe. +10 hits and foe is stunned for 2 rounds. Strong grazing blast.	Blow stuns foe for 2 rounds. +20 hits. Foe is unable to parry next round.	Foe is knocked down. +10 hits. Foe is out of action for 2 rounds. Add 5 to your next act.	Foe now has a broken non-weapon arm. +10 hits. Foe loses use of arm, is stunned 1 round.	Blast to foe's chest breaks ribs and stuns foe for 6 rounds. +20 hits. Foe at -25.
76-80	Blow stuns foe for 2 rounds. +15 hits. Foe is unable to parry for 1 round.	Foe is knocked down. +10 hits. Foe is out of action for 2 rnds. Add +5 to your next act.	Blow breaks foe's collar bone. Foe is at -25. Break is minor. +15 hits. Foe is stunned 1 round.	Blow breaks foe's weapon arm. +10 hits. Arm is useless. Foe is stunned for 1 round.	Blistering blast to foe's shoulder area breaks collar bone and both shoulders. Foe's arms are useless. +25 hits.
81-85	Blow to foe's back +10 hits. Foe has broken ribs and torn cartilage, fights -25.	Blow to foe's back tears cartilage, breaks ribs. +10 hits. Foe is stunned for 2 rounds and fights at -25.	Foe has broken thigh. +15 hits. Foe fights at -40 and is stunned for 3 rounds.	Blow breaks both of foe's arms and knocks foe down. +20 hits. Foe is down for 3 rounds, has 2 useless arms.	Blast to side crushes a variety of organs. Foe dies of internal bleeding after 6 rounds of inactivity. +30 hits.
86-90	Blow knocks foe down. +10 hits. Foe is down for 3 rounds an is unable to parry.	Strike to foe's calf. +20 hits. Foe fights at -50 due to broken bone and torn tendons. Foe is stunned 3 rounds.	Blow breaks foe's hip. +20 hits. Foe fights at -60 and is stunned and unable to parry for 2 rounds.	Strike to foe's abdomen. +20 hits. If area not armored, foe dies in 6 rounds due to organ loss. If armored, foe stunned 12 rounds.	Blast crushes bone in foe's lower body. Foe finds life hard and dies in 3 rounds. +50 hits.
91-95	Blow breaks foe's hip. Foe fights at -50. +20 hits. Foe is stunned and unable to parry for 3 rounds.	Blow to upper head area. If foe has no helmet, he is dead. Otherwise, foe is in a coma for 2 weeks. +25 hits.	Blow shatters foe's knee. Foe is hobbled and is at -75. +20 hits. Foe is stunned and unable to parry for 9 rounds.	Blow shatters foe's jaw. Foe's brain is destroyed. +50 hits. Foe dies after 3 rounds of inactivity.	Blast drives bone through foe's lungs. Foe drops and dies after 6 rounds of intense agony. Sad. +30 hits.
96-99	Blast to foe's head. +20 hits. If foe has no helmet, he is knocked out and in a coma for 1 month. If foe has helmet he is knocked out for 1 day.	Blast to foe's collar area severs windpipe. Foe cannot breath or fight. +25 hits. Foe dies in 12 long rounds.	Blast to foe's chest. Foe dies immediately after sudden brain shock. +50 hits.	Blow to foe's side. +25 hits. Bone is driven into foe's kidneys and foe dies of shock in 1 round.	Blast crushes skull. Foe dies immediately. Add +20 to your next action.
100	Head strike. +25 hits. If foe has helm, it is broken and foe is knocked down an out for 1 day. If no helm, foe dies due to the skull fracture in 3 rounds.	Blow to back of neck paralyzes foe from the shoulders down. +30 hits. Foe is unhappy.	Blast to foe's head crushes skull. Foe dies immediately. Add +10 to your next action.	Chest disruption. Foe's lungs and heart explode. Foe dies instantly. Add +25 to your next action.	Blast annihilates foe's entire skeleton. Foe is reduced to a gelatinous pulp. Try a spatula.

17.5 HEAT CRITICAL STRIKE TABLE

	A	B	C	D	E
01-05	Hot air. +0 hits.	Hot draft. +0 hits.	+1 hit.	+2 hits.	+3 hits.
06-10	+1 hit.	+2 hits.	+3 hits.	+4 hits.	Foe loses initiative for 1 rnd. +4 hits.
11-15	Foe loses initiative for 1 rnd. Hard, hot breeze. +2 hits.	Foe loses 1 rnd of initiative. +2 hits. Strong heat; little effect.	Foe loses 1 rnd of initiative while he recovers his balance. +3 hits.	Foe loses initiative for 1 round. Not quite singeing. +4 hits.	Foe feels heat, loses 1 rnd initiative; if he has no armor, 2 rnds. +5 hits.
16-20	Foe loses initiative for 1 rnd. The nearby fire gives 3 more hits. Good blast, weak fire.	Blast unbalances foe. Foe loses initiative for 2 rounds.	Foe loses initiative for 2 rounds. +5 hits.	Foe is unbalanced and must parry for 1 round. +6 hits.	Hot, unbalancing blast. Foe must parry for 1 round. +7 hits.
21-35	Blast unbalances foe. He loses initiative for 2 rnds. +4 hits.	Foe loses initiative for 2 rnds. Bothersome smoke. +6 hits.	Light burns. Foe must parry for 1 rnd. 1 hit per rnd. +7 hits.	Minor burns. Foe must parry for 2 rnds. 1 hit per rnd. +8 hits.	Minor burns. Foe must parry for 2 rnds. 2 hits per rnd. +9 hits.
36-45	Foe must parry for 1 round. +6 hits.	Light burns. Foe must parry for 1 round. +7 hits. Foe takes 1 hit per round.	Minor burns force foe to parry for 2 rounds. +8 hits and 1 hit per round.	Blast stuns foe for 1 round. +9 hits. Foe takes 2 hits per round due to pain and suffering.	Blast stuns foe for 1 round. +10 hits. Foe take 3 more hits per round. If he is wearing a cloak, it is destroyed.
46-50	Light burns. Foe must parry for 1 round. +7 hits, and foe takes 1 hit per round.	Minor burns. Foe must parry for 2 rounds. +8 hits. Foe takes 1 hit per round.	Fire stuns foe for one round. +9 hits. Foe takes 2 hits per round. Minor burns.	Fire stuns foe for 1 round. +10 hits. 3 hits/rnd. If foe is using a non-metal bow, it is destroyed.	Fire stuns foe for 2 rounds. +12 hits and 3 hits per rnd. If foe is using a wooden weapon, it is destroyed.
51-55	Blast unbalances foe. +8 hits. Foe must parry for two rnds and takes 1 hit per rnd.	Blast stuns foe for 1 round. +8 hits. Foe takes 2 hits per round. Wide shot, strong fire.	Blast stuns foe for 2 rnds. +9 hits. If foe has leg armor, he takes 1 hit per rnd. If not, 3 hits per rnd.	Blast stuns foe 2 rnds. If foe has a helmet, he takes 8 hits and 2 per rnd. If not, 11 hits and 4 per rnd.	Foe reels back 3 feet. Stunned and unable to parry for 1 rnd. Takes 3 hits per rnd from hot blast. +13 hits.
56-60	Foe is stunned for 1 round. +9 hits. Foe loses initiative for 2 rounds and takes 2 hits per round.	Foe is stunned for 2 rounds. If foe is in metal armor and has leg armor, +8 hits. If not, +9 hits and 3 hits per round.	Blast stuns foe for 2 rounds. +10 hits. Foe takes 2 hits per round. All other cloth covering on foe's back is destroyed.	Foe's clothing ignites; stunned and unable to parry for 1 rnd, takes +9 hits/rnd while aflame (2 rnds to extinguish fire). +12 hits.	Fire stuns foe 2 rounds; +15 hits. Foe cannot parry for 1 rnd. He fights at -10 and burns deliver 3 hits per round.
61-65	Foe is stunned for 2 rnds. If he has leg armor, he takes +7 hits and one hit per rnd. If not, he takes +10 hits and 3 per rnd.	Foe is stunned and unable to parry for 1 round. +9 hits, and 2 hits per round. Foe fights at -5 (leg burns).	Foe is stunned and unable to parry for 1 round. +10 hits, foe takes 3 hits per round and fights at -10. Upper leg burns.	Foe is stunned 2 rnds and unable to parry for 1. If foe has leg armor, he takes +10 hits and 4 per rnd. If not, +13 hits and 6 hits per rnd.	Searing blast burns foe's legs. Foe is stunned and unable to parry for 2 rounds. He takes 4 hits per round and fights at -10. +15 hits.
66	Blast causes foe to drop what he is holding. Stunned and unable to parry for 2 rnds and is at -15 (chest burns). +9 hits.	Foe is stunned 2 rounds. If foe wears organic armor, it is now useless. +10 hits. Foe takes 4 hits per rnd from chest blast.	Chest blast knocks foe down. If arm armor, he takes 2 hits/rnd. If not, his weapon arm is useless and he takes 4 hits/rnd. +12 hits.	Neck blast. If foe has neck armor, he takes 3 hits/rnd and fights at -10. If not, foe is unconscious and takes 10 hits per round.	Head strike. If foe has a helmet, he is knocked out and takes 5 hits per rnd. If not, foe is killed instantly, his head fully vaporized. Fine aim.
67-70	Back blast. Foe is stunned for 2 rounds. Foe takes 2 hits per round and fights at -5. +8 hits.	Back blast. Foe is stunned for 2 rounds and unable to parry for 1 rnd. Foe takes 2 hits per rnd and fights at -10. +7 hits.	Back blast. Foe is stunned for 2 rounds and unable to parry for 1 rnd. Foe takes 2 hits per round and fights at -15.	Back blast. Foe is knocked down. +15 hits. Foe is out of action for 1 rnd. Foe takes 3 hits/rnd. Organic material on his back is destroyed.	Blast to foe's non-weapon arm. If foe has arm armor, he takes 4 hits/rnd and fights at -15. If no armor, foe takes 5 hits/rnd and loses use of arm.
71-75	Hot smoke blinds foe. Foe is stunned and unable to parry for 1 round. +12 hits.	Chest blast. Foe is stunned for 2 rounds and unable to parry for 1 rnd. Foe fights at -15. Add +10 to your next swing. +9 hits.	Chest blast. Foe is stunned for 3 rounds. If foe has organic chest armor, it is destroyed. If no chest armor, foe takes 6 hits per round and fights at -25.	Blast to foe's non-weapon arm. Any organic material in or on his arms is destroyed. He is stunned 6 rnds, loses use of arm, and fights at -50.	Chest blast. If foe has chest armor, it is destroyed. Foe takes +12 hits and is stunned 3 rounds. Otherwise, foe is knocked down, takes 6 hits/rnd and fights at -60.
76-80	Blast stuns foe for 2 rnds. Foe cannot parry for 1 round. +10 hits. Side wound. Foe takes 2 hits per round.	Arm strike. Burns stuns foe for 2 rnds. Foe takes 2 hits per rnd. All cloth on foe's weapon arm is burned off and foe drops whatever he is holding.	Blast to foe's non-weapon arm. He is stunned 6 rnds, loses use of arm, and fights at -50. Any organic material in or on his hands is destroyed.	Foes loses weapon hand. Severe burns. Any item in hand possibly damaged. Foe is stunned and unable to parry for 3 rounds, and takes 5 hits per round.	Blast to foe's non-weapon arm. If foe has arm armor, it is destroyed, foe loses his hand, and is stunned for 6 rounds. If not, foe loses arm and is knocked out. +20 hits.
81-85	Back blast. Foe is stunned for 2 rounds and is at -20. Burns deliver 2 hits per round. +8 hits.	Back blast. Foe is knocked down, stunned 1 rnd, and takes 2 hits/rnd. All organic material on foe's back is destroyed.	Leg blast. If foe has leg armor, he takes 2 hits/rnd and is at -20. If not, massive tissue damage; foe's leg is useless, and foe is at -80.	Blast burns both of foe's arms and all of upper chest. Foe loses use of arms and is stunned 9 rounds. +15 hits.	Foe inhales flame and gets parched throat and lungs. Foe expires in 12 painful rounds. +20 hits.
86-90	Blast knocks foe down. Fire destroys any of Foe's organic foot and calf covering. +10 hits.	Leg strike. Any organic leg covering catches fire and delivers 6 hits per rnd until extinguished (takes 1 rnd). Foe is stunned for 3 rnds. +10 hits.	Lower leg burns. Foe loses foot, but wound is cauterized. Foe is stunned and unable to parry for 6 rounds, takes 3 hits per round, and fights at -85. +15 hits.	Abdomen strike. If foe has abdomenal armor, it is destroyed, foe is knocked out, and takes 2 hits/rnd. If not, foe dies in 12 inactive rnds due to organ damage.	Foe's lower body is engulfed in flames. Foe dies in 9 rounds as a result of organ and tissue loss. +20 hits.
91-95	Fire burns foe in hip area. Foe is stunned and unable to parry for 2 rounds. Foe fights at -30. +12 hits.	Head strike. Foe is blinded and fights at -95 for 6 rnds. If foe has no helmet, 8 hits/rnd and loses 50% of head hair. Any organic helmet is destroyed.	Upper leg burns. Foe loses use of leg due to tissue loss, is stunned and unable to parry for 6 rounds, takes 4 hits per round and fights at -90. +18 hits.	Head strike. If foe has a full helmet, his eyes are destroyed and he is in a coma for 2 days. If not, foe dies in 6 rounds due to massive shock and brain damage. +20 hits.	Chest strike. All organic material on foe's body is destroyed. Foe dies of shock and nerve damage in 6 rounds. +25 hits.
96-99	Blast to foe's neck area. If foe has neck armor, he is stunned and unable to parry for 3 rounds. If not, foe is down and taking 8 hits per rnd.	Neck strike destroys foe's throat. +20 hits. Foe takes 12 hits per round and is inactive for 9 rounds. Foe then dies. Add 10 to your next roll.	Chest strike. If foe has chest armor, it is destroyed and foe dies of burns in 9 rnds. If not, his chest cavity is a hollow cinder and he dies instantly.	Foe's side is engulfed in flames. Foe dies in 6 rounds due to multiple compound fractures, tissue and organ loss, and boiling blood. +20 hits.	Foe is instantly dehydrated into dust. Add +10 to your next roll.
100	Searing blast to foe's head. If helm, he is knocked out and takes 7 hits/rnd. If not, he is in a 1 month coma and loses 50% of his Presence. +15 hits.	Blast to foe's neck fuses vertebrae and unites skin with clothing. Very unpleasant. Foe is paralyzed permanently. +25 hits.	Foe's head is but a charred stump. Sadly, foe cannot handle the loss and he dies instantly. Add +10 to your next roll.	Heat vaporizes foe's midsection, destroys foe's clothing, armor, and all items he carries. Foe is cut in half and dies. Add +15 to your next roll.	All that remains of foe are charred bits of teeth and bone. Add +20 to your next roll.

17.6 STUN CRITICAL STRIKE TABLE

	A	B	C	D	E
01-05	You might have a chance again next round.	Foe shrugs off attack.	Foe is lucky, this time.	+2 hits.	Foe stunned 1 round.
06-10	No extra damage.	+1 hit.	Foe stunned for 1 round. Big deal.	Foe stunned for 1 round, and is at -20 for 2 rounds thereafter.	Blow leaves foe stunned and unable to parry for 3 rounds. Add +10 to your next attack.
11-15	Weak strike gives +1 hit.	Foe operates at -10 for 3 rounds.	Stun foe 2 rounds and he is at -20 for 4 rounds.	Attack leaves foe stunned for 3 rounds.	Malignant damage stuns foe for 5 rounds and puts him at -10 for 2 days.
16-20	Foe stunned next round.	Foe is stunned and must parry at -20 next round. +1 hit.	Moderately discouraging attack stuns foe 3 rounds.	Foe is stunned 5 rounds and loses the use of an arm for 24 rounds. +4 hits.	Foe loses the use of his legs for 3 days. He is stunned for 8 rounds. +6 hits.
21-35	Foe somewhat dazed. He is stunned next round and is at -10 for 2 rounds.	Weak impact sees foe stunned for the next 2 rounds, but little else.	Forceful impact stuns foe 4 rounds, during which he must parry at -10.	Blast paralyzes foe from waist down for 7 rounds. If standing, he falls over and takes 5 hits.	Foe stunned and loses control of neck muscles for 12 rounds. Head flops about at random.
36-45	Stun foe for 2 rounds.	Foe stunned for 3 rounds and must parry at -20 next round.	Glancing strike spins foe. He is stunned and unable to parry for 5 rounds.	Foe stunned for 8 long rounds. Add +20 to your next two attacks against this opponent.	Foe staggers off in a random direction for 16 rounds, not at all sure of what's going on.
46-50	Mild blow stuns foe for 2 rounds and all maneuvers are at -10 for 4 rounds.	Unspectacular strike stuns foe for 4 rounds.	Foe stunned 6 rounds. Lingering disorientation puts him at -10 for 1 hour. +3 hits.	Attack leaves foe stunned and unable to parry for 9 rounds. +6 hits.	Blast stuns foe for 20 rounds and he is unable to parry for 10. Add +20 to your next attack against this opponent.
51-55	Foe stunned for 2 rounds and must parry at -20.	Foe knocked to his knees and stunned 5 rounds. He is at -30 to maneuvers next round.	Stunning blast causes minor cellular disruption. Foe stunned and at -30 for 7 rounds.	Foe gasps for air. He is stunned 10 rounds while parrying at -20.	Foe dazed for 24 rounds. He is incapable of taking any action. Poor fool.
56-60	Your attack stuns foe for 3 rounds. Add +10 to your next attack.	Foe stunned 6 rounds. +3 hits.	Foe stunned for 8 rounds and is at -20 for 12 rounds.	Foe left incapacitated by attack. He is out for 11 rounds.	Blast knocks foe down. he is out for 28 rounds.
61-65	Foe stunned for 4 rounds. He may not parry next round.	Stunning blast immobilizes foe's arms for 7 rounds. He is stunned next round.	Blast overloads foe's neurons momentarily. He is stunned, blinded and unable to parry for 9 rounds. +5 hits.	Foe drops to the ground and is left writhing in spasms. He is stunned and unable to parry for 12 rounds. +7 hits.	Foe falls on his face. He is stunned and unable to parry for 32 rounds. +10 hits.
66	Lucky strike shocks foe. He is stunned for 10 rounds and is unable to parry for 5. +7 hits.	Impact throws foe back 3 meters. He is stunned and unable to parry for 15 rounds. +10 hits.	Forceful attack drops foe for 20 rounds. He is inert and quite helpless. +13 hits.	Foe snaps rigid and falls over, breaking an arm in the process. He is out for 24 rounds and at -40 for 2 days thereafter. +18 hits.	Foe falls, sending himself into a coma for 20 days. When he comes to, he will be at -30 for an additional 20 days. +25 hits.
67-70	Foe drops weapon. He is stunned for 5 rounds.	Foe dazed. He drops his hand-held equipment and stares glassy-eyed for 8 rounds. No activity.	Scrambling burst leaves foe drooling. He is stunned and unable to parry for 10 rounds. A pathetic sight.	Foe collapses into a jiggling, mushy heap after scattering his equipment. He is out for 13 rounds.	Foe falls on top of his own equipment, causing random malfunctions. He is out for 36 rounds.
71-75	Foe unbalanced by your attack, stunned for 6 rounds and may not maneuver for 3. +1 hit.	Foe knocked over and stunned for 9 rounds. Numb legs prevent him from standing again for 10 rounds. +5 hits.	Blast knocks foe down. He is stunned and parries at -50 for 11 rounds. Add +15 to your next attack.	Strike spins foe. He is stunned and at -40 to orientation attempts for 14 rounds.	Control of arms and legs is lost temporarily. Foe drops prone for 40 rounds.
76-80	Shocking blast spins foe. He is stunned for 7 rounds and orientation rolls are at -30 for 10 rounds.	Muscle lock. Foe may not move for 10 rounds. Unlucky, isn't he.	Foe swallows own tongue. He is stunned 12 rounds and is at -40 for 15 rounds.	Strike leaves neurons misfiring for quite some time. Foe is stunned 15 rounds and is at -50 for 20 hours. Sad, but true.	Foe is stunned for 45 rounds and is at -50 for 2 days.
81-85	Foe knocked down. He is stunned for 8 rounds and may not parry for 3. +2 hits.	Foe stunned for 11 rounds and may not parry for 3. Add +10 to your next action.	Staggering blast. Foe stunned and unable to parry for 3 rounds, then falls prone for an additional 10 rounds. +6 hits.	Blast leaves one side of foe's body paralyzed for 16 rnds. He is at -70.	Disrupting strike causes foe's heart to sieze up. He drops. Unless tended to, foe will die in 10 rounds.
86-90	Foe stunned and unable to parry for 9 rounds. Add +15 to your next attack.	Foe knocked onto his back and is immobilized for 12 rounds.	Cruel blow stuns foe 14 rounds. He is at -20 for 5 hours.	Foe drops, motionless, for 17 rounds, though he retains all of his senses. +9 hits.	Foe sent into coma for 30 days, and incapable of subconscious activity. +20 hits.
91-95	Blast disorients foe. He is stunned for 10 rounds and at -25 for one hour.	Impact frazzles foe's brain. He is stunned for 15 rounds and is at -20 for one day.	Confusing blast leaves foe cross-eyed. He is stunned 18 rounds and perceives at -50 for 1 day.	Foe wishes he were somewhere else. He is stunned and unable to parry for 18 brutal rounds.	Motor control sporadic. Foe is stunned and unable to parry for an incredible 25 hours. Very sad.
96-99	Stunning blast knocks foe back 3 meters. He falls and is out for 15 rounds. +4 hits.	Foe rocked by strike. He falls prone for 20 rounds, and takes 1 hit per round.	Foe knocked prone for 24 rounds and then slips into a 10 day coma.	Foe is left a babbling idiot for 3 days after the attack. He is quite incapable of defending himself.	Blow sends foe reeling. He colapses 6 meters away, not to regain consciousness for 30 days.
100	Impact sends foe into spasms. He is stunned for 20 rounds and is at -40 for 3 hours. Foe has whiplash.	Foe knocked out for 24 rounds and is at -50 for 6 hours after he comes around.	Brutal attack leaves foe stunned and unable to parry for 30 rounds. He is then at -40 for 25 hours. +8 hits.	Direct hit leaves foe totally spazed-out. He is stunned and unable to parry for 50 rounds. +15 hits.	Sadly, foe dies next round due to massive nerve failure.

	A	B	C	D	E
01-05	A near miss. No extra damage.	Glancing blow. +0 hits.	+1 hit.	+3 hits.	+4 hits.
06-10	+1 hit.	+3 hits.	+4 hits. Add +10 to your next attack.	You may attack before this opponent in the next Fire Phase. +5 hits.	+6 hits. Foe loses his next attack opportunity.
11-15	You may resolve your fire before this opponent's next round. +2 hits.	Soft strike to foe's side. You may fire before this opponent for the next three rnds. +4 hits.	Minor disruption of foe's side. +7 hits. Foe takes 2 hits per round.	+6 hits. Foe is stunned for 2 rounds.	+8 hits. Foe is stunned for 2 rounds.
16-20	Foe is stunned next round, and must parry for the next two rounds. +3 hits.	Blow to foe's side delivers +5 hits. Foe must parry next round at -30.	Blow stuns foe for 3 rounds. +8 hits.	Minor side wound causes foe to take 3 hits per round. He is stunned next round.	Minor disruption gives foe 1 hit per round. He must parry for 3 rounds.
21-35	Foe must parry next three rounds. +4 hits. Add +5 to your next attack.	Foe stunned for the next three rounds. +5 hits, and foe takes 1 hit per round.	Disrupting strike hits foe along side of chest. Foe stunned and unable to parry for 2 rounds. Foe takes 3 hits per round. +9 hits.	Blast to foe's upper leg. +7 hits. He is stunned and unable to parry for 3 rounds.	Attack disrupts foe's side. +9 hits. Foe takes 3 hits per round and is stunned for 4 rounds.
36-45	Burst muscle in foe's lower leg. Foe stunned for one round and receives 1 hit per round. Move at -50.	Disrupt foe's lower leg. Foe moves at -50 and takes 4 hits per round. +6 hits.	Major wound to lower leg. Foe takes 5 hits per round and is knocked to one knee. He is stunned for 4 rounds.	Wound foe's groin. Shocked, he is stunned for 7 rounds and unable to parry for 4 rounds. +8 hits. Add +10 to your next attack.	Blow to leg shatters several bones and shreds muscle. Foe at -70 and takes 4 hits per round. Add +10 to your next attack.
46-50	Minor flesh wound along foe's back. +5 hits. Foe stunned for two rounds.	Disrupting blast along foe's lower back. He is stunned and may not parry for 4 rounds. +7 hits, takes 1 hit per round.	Blast across foe's back tears skin. Foe takes 3 hits per round and is stunned for 5 rounds.	Disruption of foe's lower back paralyzes him from the waist down. He is down and out for 20 rounds. +10 hits.	Minor disruption to foe's lower back. Foe is stunned and unable to parry for 5 rounds. He takes 4 hits per round. +10 hits.
51-55	Minor disrupting strike to foe's chest. Foe is stunned and unable to parry for three rnds and receives 3 hits per round.	Blow to foe's chest drops him to the ground. Foe takes 4 hits per round and is stunned for 5 rounds. +8 hits.	Disruption in upper chest drops foe for 3 rounds. Foe takes 3 hits per round. +10 hits.	Blast in chest collapses foe's lungs and breaks ribs. Foe operates at -50 for 4 rounds then slips into a coma. He dies 6 rnds thereafter. +12 hits.	Foe's chest ruptured. He takes 6 hits per round. In 3 rounds he drops, and after 3 more, he dies.
56-60	Minor thigh disruption. Foe knocked down and stunned for 2 rounds. +5 hits. Foe takes 3 hits per round.	Energy dissipation shreds foe's thigh muscle. Foe takes 4 hits per round. +9 hits. Foe moves at -50.	Pulverizing blast to foe's upper thigh. +11 hits. Foe falls and is stunned for 5 rounds. He takes 5 hits/rnd and moves at -75.	Blast in upper leg. Foe falls and takes 6 hits per round. He is at -90. Add +10 to your next action.	Major groin injury. Vitals destroyed. Foe stunned for 14 rounds and takes 2 hits per round.
61-65	Blast along forearm. +5 hits. Foe takes 3 hits per round and is at -25.	Blast to foe's forearm. Hand useless. +9 hits. Foe takes 5 hits per round.	Strike rips into foe's forearm. Arm useless. Foe takes 4 hits per rnd and operates at -40. +12 hits.	Forearm destroyed. Foe takes 7 hits per round and is stunned for 5 rounds. He is at -40.	Disrupting strike severs arm above the elbow. Foe takes 5 hits/rnd and is stunned for 8 rnds. He is at -50.
66	Non-weapon shoulder bursts from inside. Arm useless; will fall off if foe takes more than 25% activity; stunned no parry for 6 rnds, +10 hits, 5 hits/rnd.	Elbow in foe's weapon arm disrupted. Joint is destroyed and arm useless. +10 hits. Foe stunned and unable to parry for 10 rounds.	Foe's knee destroyed. He loses lower leg, and takes 5 hits per round. Foe drops and is out for 10 rounds. Afterwards he is at -70. +25 hits.	Blast to the face destroys foe's eyes, ears, nose and throat. He dies after 4 painful rounds.	Burst destroys lungs. Heart explodes. Foe falls and is inactive for 3 agonizing rounds before dying. +20 hits.
67-70	Break foe's collar bone. +6 hits. Foe is stunned for 4 rounds and may not parry for two rounds. Foe at -20.	Blow to foe's neck. Foe stunned for 6 rounds and may not parry for 3 rounds. Foe operates at -10. +10 hits.	Blow to collar area. Foe is stunned for 12 rounds choking. He operates at -80. +13 hits.	Massive cellular disruption in foe's shoulder. +14 hits. Foe stunned for 6 rounds and operates at -60.	Blast inside shoulder sends arm flying. Foe stunned and unable to parry for 12 rnds, +22 hits, 6 hits/rnd. Add +10 to your next attack.
71-75	Disrupt tendons in lower leg. Foe at -50 and knocked to one knee. Foe stunned for 3 rnds and takes 2 hits per rnd.	Muscles burst in foe's calf. Foe at -50 and receives 5 hits per round. +11 hits.	Foe's calf muscle destroyed, tendons disrupted and bone shattered. Foe is at -50; takes 6 hits/rnd. Add +10 to your next attack.	Blast destroys foe's foot. He is at -50 for 5 rounds before passing out. Foe takes 5 hits per round.	Shuddering blast scraps leg. Bone, muscle and blood vessels burst. Foe knocked down, stunned for 6 rnds. He takes 6 hits/rnd. +24 hits.
76-80	Disrupt foe's bicep. +7 hits, and 3 hits per round. Foe at -30 and stunned for 4 rounds.	Non-weapon arm disrupted. Foe at -40 and takes 6 hits/rnd. He is stunned and unable to parry for 7 rnds. Arm useless.	Non-weapon arm disrupted and useless; muscles destroyed; bone fractured. Stunned for 12 rnds; takes 4 hits/rnd. +14 hits.	Foe's non-weapon arm explodes and is messily removed from his body. Stunned and unable to parry for 18 rnds, 6 hits/rnd, +20 hits.	Foe's weapon arm bursts open. It is destroyed. Foe takes 6 hits per round, and is stunned for 36 rounds. +30 hits.
81-85	Strike foe in the side. Internal bleeding delivers 7 hits per round. Foe stunned 8 rounds. Add +10 to your next attack.	Blow to foe's side. +12 hits. Foe takes 8 hits per round. He is stunned for 12 rounds and operates at -40.	Blow to side of lower abdomen. +15 hits. Internal bleeding causes 6 hits/rnd. Foe fights for 24 rnds then dies due to organ failure.	Variety of foe's abdominal organs explode. He takes 8 hits per round and is at -80 for 4 rounds before expiring. +30 Hits.	Foe's backbone shattered by blast. He falls and dies after 6 quiet rounds due to massive organ failure. +40 hits.
86-90	Disrupting blast along foe's back. Foe takes 4 hits/rnd and is stunned for 5 rnds. +8 hits.	Strike to back of foe's head. The subsequent brain disruption kills foe instantly. +15 hits.	Shot pulps foe's brain. He dies instantly. +25 hits. Add +15 to your next attack.	Shattering blast destroys foe's kidneys and severs spine. +40 hits. Foe drops, then dies next round.	Strike disrupts hip joint. Leg is lost. Foe lapses into unconsciousness, dying in 6 rounds. +30 hits.
91-95	Blow off foe's ear. +9 hits. Foe takes 5 hits per round and hearing is at -50. Foe stunned for 10 rounds.	Blast disrupts hip, destroying the joint, +15 hits, stunned for 10 rnds before passing out. Add +20 to your next attack.	Foe's chest explodes from the inside. Heart destroyed. Foe drops then dies next round. +35 hits.	Disgusting strike guts through opponent. He is disemboweled and dies instantly. Add +20 to your next action.	Foe's arm and side destroyed by disrupting blast. He is stunned and unable to parry for 8 rounds, then dies. +35 hits.
96-99	Disrupting strike to middle of face, stunned and unable to parry for 12 rnds, 5 hits/rnd. Add +5 to your next attack.	Blast blows out side of foe's head. Foe drops and takes 5 hits per round for three rounds before dying.	Blast shatters backbone and exposes upper chest cavity. Foe dies instantly. +45 hits.	Back blow sends foe reeling. Broken in half, foe drops and dies next round.	Internal explosion sends rib fragments flying. Foe drops and dies immediately. Add +20 to all actions for the next 2 rounds.
100	Strike disrupts foe's neck, severing his head from the rest of his body. Foe dies immediately. +20 hits.	Head strike destroys brain. Foe is dead.	Foe's head explodes. He is very dead, permanently.	Head shot destroys brain in a gruesome display. Foe's lifeless, headless body tossed back 3 meters.	Foe's body ripped apart by cruel disrupting blast. He is no more. Good work.

18.1 RADIATION CRITICAL STRIKE TABLE

	A	B	C	D	E
01-05	What radiation?	They're only sub-atomic particles.	Nothing worse than a day at the beach.	Target looks a little red, but it's nothing serious.	Target was lucky, this time.
06-10	Warm draft.	Fast neutrons stay clear of target. Lucky.	This could have been really bad.	+3 hits.	+5 hits. It must have been those cool sun glasses.
11-15	The experts say it's nothing to worry about.	Target has little to worry about.	A mild headache is the end result.	+4 hits. These may only be healed by anti-radiation treatment.	+8 hits. These may only be healed by anti-radiation treatment.
16-20	Bright flash reduces target's vision by 50% for 3 rounds.	Zip.	Insignificant damage.	Mild irradiation. Target at -10 until treated.	Radiation sickness. Target loses hair, teeth, and nails within a day. He is at -50 for 5 days, after which he dies.
21-35	Afterglow reddens target a shade.	Walking in front of a neon sign would be more dangerous.	+4 hits; may only be healed by anti-radiation treatment.	Rad build-up will produce a cancer in target within the next 5 years.	Severe exposure drops all of target's temporary stats by 1-10 . Really bad.
36-45	Microbes on target's skin have a rough time of it.	+2 hits.	Mild radiation sickness. Hair falls out in three days, and target is at -30 until treated.	Target's vision blurs. Perception is at -30 until treated. +5 hits.	Sizzling beams raise blisters on target's red-hot skin. He is at -60 until treated and takes 1 hit per round whenever he moves. +10 hits.
46-50	A few cells spontaneously mutate, but quickly die off.	Target may (50% chance) develop tumour within 5 years.	Target has a 10% chance of fainting each minute. He is out for 1-10 hrs and at -20 for 5 days.	Organ damaged. One of target's internal organs will fail in 1-10 hours.	Severe Radiation sickness. Target will die within a day unless treated, and is at -50 while he waits. +12 hits.
51-55	Target will feel queasy (-10) in an hour. It will last for only 4 hours.	Target will feel ill. -15 to actions for 6 hours, beginning in one hour.	Mild radiation sickness. Hair falls out; sores develop in 1-5 days. Target at -30 until treated. 50% chance of a cancer within a year.	Rays weaken target. His temporary Strength stat is reduced by 15 while the temporary Constitution stat falls by 5.	Deadly rays course through target. In ten minutes, he is struck by severe nausea (operates at -60) lasting 1-10 days. Target then dies.
56-60	Target's vision becomes hazy in 30 minutes (perception at -20). It will last until treated.	Telepathic target loses 1-10 PP's. All targets at -10 until treated.	Rad accumulation will produce a cancer within a year.	Waves give target +20 hits that may only be healed by anti-radiation treatment. Target stunned 6 rnds.	Severe burns. Target at -70 until treated. He is stunned for 6 rounds.
61-65	Some tactile sensation will be lost to the target (operates at - 5) until treated. Effect manifests itself after an hour.	Target will have a headache in 10 min which will last for 1-10 hrs during which target will be at -20. It will recur 1 day later.	Telepathic target loses 1-10 PP's and is stunned for 6 rounds. All targets at -15 until treated.	Telepathic target loses Psion casting ability for 1 day. All target's are at -20 until treated.	Telepathic target loses Psion casting ability for 1-10 years. All targets at -50 until treated. +15 Hits.
66	Rays course through body. Target has 50% chance of producing mutated offspring.	Bitter chromosome damage to target's reproductive organs. Offspring have a 75% chance of being mutants.	Hot rays sterilize target. +5 hits. Sad.	Rays sterilize target. Target will die in 10 hours due to organ failure.	Widespread cellular damage gives target +40 hits and sends him into a coma. He will die in 1-10 minutes.
67-70	Minor loss of hand-eye coordination manifested in 2 hours. Static maneuvers at -15. Effect will last for 2 days.	Loss of hand-eye coordination for 5 days. Static maneuvers at -20 during that time.	Target loses hand-eye coordination and is at -40 to all maneuvers until treated.	Beams daze target. He is stunned for 20 rounds and is at -50 for all activities until treated.	Target dazed. He is stunned and unable to parry until treated. +17 hits. These hits may only be healed by anti-radiation treatment.
71-75	A minor skin cancer will develop within a year.	Target has difficulty concentrating. Reduce temporary Reasoning stat by 10 until treated.	Violent electromagnetic radiation raises sores on target's skin. He is at -30 until treated.	Radiation sickness. Hair lost, teeth and fingernails fall out, and sores appear within 1 day. Target at -40; will die in 1-10 days unless treated. Telepaths lose 1-10 PP's. +10 hits.	Target's skin blackened. He takes 4 hits per round and is at -80 until treated. Permanent Quickness and Agility stats are reduced by 2-20 points each.
76-80	Mild burn. Target at -10 for 2 days.	Rays give minor burn. Target takes 4 hits and is at -10 for 2 days.	Lingering radiation sickness. Target at -50 within one day. Hair and teeth begin to fall out. Target will die in 30 days unless treated.	Rad build-up will produce a malignant tumour within 6 months. Target at -40 until treated.	Target blinded and sent into a coma. Severe radiation sickness will kill target within a day unless treated.
81-85	Lingering rad buildup has a 50% chance of producing a cancer within 5 years.	Exposure gives target 7 hits which may only be healed by anti- radiation treatment.	Target receives second degree burns. He is at -30 for 6 days.	Selective rays destroy target's eyes. +15 hits.	Horrible rays reduce all of target's temporary stats by 2-20 and all permanent stats by 1-10. +19 hits.
86-90	Mild burn. Target at -5 for 5 days.	Target irradiated and loses hair in two days. He operates at -20 until treated.	Electromagnetic waves damage a random internal organ. It will cease to function in 1-10 days. Tough.	Severe burns give target 3 hits per round. He is at -30. +17 hits.	A multitude of target's internal organs fail. Target drops and dies in 1-10 rounds. Telepathic targets lose all Psion Power.
91-95	Insidious exposure delivers 4 hits that may only be healed by anti-radiation treatment.	Burns crack target's skin. Target takes 1 hit per round and is at -10 until treated.	Target sees flash. He is blinded for 1-10 days, then at -30 to vision from then on.	Target zapped. He is blinded and stunned for 10 rounds, then operates at -60. He will die in one day unless treated.	Blistering rays fry target. He is sent into a coma and dies in 6 rounds.
96-99	Second degree burn gives target 5 hits.	Bright flash blinds target for 1-10 hours.	Heavy rad dose reduces temporary Constitution stat by 20. Permanent Constitution is lost at the rate of 1 point/hr until treated.	Severe exposure. Target slips into coma and dies in 1-10 hours.	Sizzling burst leaves but a few remains of target's former self. Sad.
100	Flash burns give target 10 hits. Target at -15 for 7 days.	Target at -20 until treated, and will develop a cancer within 6 months.	Target's skin flash-fried. +30 hits. Target knocked out and takes 4 hits per round. He will die in 2-20 hours unless treated.	Target's blood boils. He drops immediately and dies in 6 rounds due to massive internal damage.	Target glows white before vanishing utterly.

18.2 ELECTRICITY CRITICAL STRIKE TABLE

	A	B	C	D	E
01-05	A lot of static. +0 hits	Foe's hair stands up. +0 hits	+1 hit	+2 hits	+3 hits
06-10	+1 hit	+2 hits	+3 hits	+4 hits	Foe loses initiative for 1 rnd. +4 hits.
11-15	Foe loses initiative for 1 round. +2 hits.	Foe loses initiative for 1 round; the metal he bears begins to buzz. +2 hits.	Foe hears crackling sound and loses 1 round of precious initiative. +3 hits.	Foe loses initiative for 1 round. The smell of danger is in the air. +4 hits.	If foe has metal armor, he loses 2 rounds of initiative. If not, foe is stunned but 1 round. +5 hits.
16-20	Foe is spun about and loses 1 round of initiative. +3 hits.	Explosion of light causes foe to lost 1 rnd of initiative. +4 hits.	Eruption of smoke forces foe to lose 2 rnds of initiative. +3 hits.	Foe is unbalanced, but the strike is weak. Must parry next rnd. +4 hits.	Glancing strike stuns foe for 1 round. +6 hits.
21-35	Blast unbalances foe. He loses 2 rounds of initiative. +4 hits.	Crackling blast forces foe to lose 2 rnds of initiative. +5 hits.	Strong but glancing blast forces foe to parry next round. +6 hits.	Light burns. Foe must parry for 2 rnds; takes 1 hit per rnd. +5 hits.	Foe gets a minor scorching and is stunned for 2 rounds. +10 hits.
36-45	Light distracts foe, and he must parry for 1 rnd. +5 hits.	Minor burns. Must parry for 1 rnd; takes 1 hit/rnd. +2 hits.	Foe feels the heat and must parry for 2 rounds. +7 hits.	Blast stuns for 1 round. Foe fights at -10 for 2 rounds. +7 hits.	Smoke and light stun foe for 2 rnds. Foe fights at -10 for 2 rnds. +12 hits.
46-50	Minor burns. Foe must parry for 1 round and takes 1 hit per round. +2 hits.	Blast forces foe to parry for 2 rounds. +6 hits.	If foe has metal armor, he is stunned 2 rounds. If not, foe is stunned for 1 round. +7 hits.	Explosion of light and fire stuns foe for 2 rounds. Foe fights at -10 for 2 rounds. +7 hits.	If foe has metal armor, he is stunned and unable to parry for 2 rnds. If not, foe is stunned 2 rnds. +13 hits.
51-55	Sizzling but weak blast stuns foe for 1 round. +6 hits.	Foe is spun about and is stunned for 1 round. A minor burn on foe's leg causes 2 hits per round. +7 hits.	Strike to foe's leg. If foe has leg armor, he is stunned 1 rnd. If not, foe is stunned and unable to parry 1 rnd and takes 3 hits per rnd.	Blast stuns foe for 2 rounds and foe is unable to parry for 1 round. +10 hits.	Hot smoke and light stuns foe for 4 rounds. Foe loses initiative for 6 rounds. +13 hits.
56-60	Foe is unbalanced and is forced to parry next 3 rounds. +7 hits.	Foe is stunned for 2 rounds. If foe has metal armor, he cannot parry for 1 rnd. +8 hits.	Blast stuns foe for 2 rounds. Foe cannot parry for 1 round, leg hit. +9 hits.	Strike to foe's non-weapon arm. If foe has metal armor, he is knocked out for 1 day. +15 hits.	Strike to foe's weapon arm. Foe drops all that is in his weapon hand. Stunned for 2 rnds. 2 hits per rnd.
61-65	Chest strike. If foe has metal armor, he is stunned for 2 rounds. If foe has no armor, he is stunned 3 rounds.	Upper leg strike. Foe is stunned and unable to parry for 1 round. +9 hits.	Foe is stunned and unable to parry for 2 rounds. +10 hits.	If foe has armor over abdomen, he takes 2 hits/rnd, stunned 2 rnds due to minor burns. If not, burns stun foe 6 rnds, 3 hits/rnd.	Leg strike. Foe is knocked down and stunned for 2 rounds. Foe cannot parry for 1 round. +14 hits.
66	Blast of light and smoke stun all within 5 feet of foe for 1 round. Foe is knocked down and stunned for 3 rounds.	Chest strike. Foe is stunned and unable to parry for 3 rnds, takes 3 hits per rnd, and fights at -20. +15 hits.	Chest strike. If foe has metal armor on arms and over chest, it becomes fused and he cannot use arms. If not, foe is knocked out for 6 hours and takes +9 hits.	Neck blast knocks foe out. Foe cannot speak for 2 months and takes +4 hits per round. +20 hits.	Head strike. If foe has a leather helmet, it is destroyed and foe is in a coma for 2 months. If not, foe's brain is fried and he dies instantly. Add +10 to your next roll.
67-70	Back strike. Foe is stunned and unable to parry for 1 round. +7 hits.	Back strike. Foe is stunned for 2 rounds and cannot parry for 1 round. +10 hits.	Back strike. Foe is stunned and unable to parry for 2 rnds. Burns force foe to fight at -10. +11 hits.	Back strike. Foe is knocked down and out of action for 1 rnd. Minor shock. Foe fights at -20. +12 hits.	Back strike. Foe is stunned and unable to parry for 4 rounds. Minor shock. Foe fights at -25. +15 hits.
71-75	Blast stuns foe for 3 rounds, foe fights -5 for 6 rounds. +8 hits.	Strike to foe's non-weapon arm. If foe has arm armor, he is stunned for 4 rnds. If not, foe's arm is useless, foe is stunned and not able to parry for 2 rnds.	Strike to foe's non-weapon arm. If foe has a metal arm armor, he is stunned for 6 rnds and takes +12 hits. If not, foe is knocked down, arm is useless, +13 hits.	Strike to foe's weapon arm. Arm is useless and foe is stunned for 3 rounds. +13 hits.	Shoulder strike shatters bone in foe's weapon arm. Muscle and cartilage damage. Arm is useless, foe is stunned for 6 rounds, and takes 3 hits per round.
76-80	Strike to foe's upper chest stuns foe for 2 rounds. Foe cannot parry for 1 round. +9 hits.	Chest strike. Foe is knocked down and takes 2 hits per round due to bleeding. +11 hits.	Chest strike. If foe has chest armor, he is stunned 6 rnds, 2 hits/rnd, fights at -5. If not, foe is knocked out for 3 days (shock).	Chest strike. If foe has metal chest armor, he is knocked out, +25 hits. If not, foe is stunned and unable to parry for 6 rnds and takes +15 hits.	Chest strike. Foe is knocked out due to shock. Blood loss and nerve damage cost foe 3 hits per round. +18 hits.
81-85	Back blast. Foe is stunned and unable to parry for 2 rounds. +12 hits.	Back blast. Foe is stunned and unable to parry for 3 rounds. Muscle is torn and foe fights at -10. +13 hits.	Thigh strike. Foe takes 2 hits per round. Bones breaks and torn cartilage. Foe is stunned for 4 rounds and fights -40.	Lower back strike. Nerve damage and shock. Foe is stunned for 30 rounds and takes 3 hits per round. +15 hits.	Foe becomes a conductor and strike rearranges his entire nervous system. Foe drops and lies in shock for 12 rounds before dying.
86-90	Blast knocks foe down. If foe has metal leg armor, he loses use of leg due to nerve damage. If not, +15 hits and foe is stunned and unable to parry for 2 rounds.	Leg strike. If foe has leg armor, he is stunned and unable to parry for 6 rnds. If not, foe's leg is broken, it has damaged nerves, and foe is stunned for 6 rounds and fights at -50.	Blast shatters foe's knee and destroys a variety of nerves. Foe fights at -60 and is stunned and unable to parry for 2 rounds.	Abdomen strike. If foe has armor over abdomen, he is stunned for 9 rounds and takes 6 hits per round. If not, foe dies of shock and bleeding in 12 rounds.	Blast crushes pelvis and shatters lower backbone. Foe's spine is burned into a multitude of small parts. Foe is knocked out and dies in 12 rounds.
91-95	Hip strike. If foe has hip armor, foe is stunned 6 rnds; +10 hits. If not, foe is stunned 3 rnds and acts at -50 due to shock and nerve damage.	Head strike. Foe loses nose, he is temporarily blinded for 2 weeks, and is stunned for 9 rnds. Foe is at -95 while blind. If no helm, he is knocked down.	Strike through foe's lower abdomen. Massive shock and bleeding. If abdomen armored, foe is at -75; takes 5 hits per rnd. If not, foe dies in 6 inactive rnds.	Side strike devastates foe's nervous system. Foe falls into a coma and goes into severe shock. Foe is a living vegetable. +30 hits.	Side strike melts foe's lower skeleton and destroys a variety of organs. Foe dies in 9 inactive rounds. +25 hits.
96-99	Neck & shoulder strike. If foe has neck armor, he is stunned and unable to parry for 6 rnds. If not, he is knocked out; loses ability to speak. +10 hits.	Head strike. Blast cracks skull and causes massive shock and brain damage. Foe drops and dies in 9 rounds. +15 hits.	Chest strike destroys foe's heart and lungs. If foe has metal chest armor, it is a fused lump and foe dies in 6 rounds. If not, foe dies instantly.	Chest strike knocks foe back 10 feet. Massive nerve damage. Foe dies of fatal shock in 3 rounds. +20 hits.	Chest strike destroys both of foe's lungs and cuts foe in half. Blast continues to a point 10 feet beyond foe (subtract 20 if it strikes second target).
100	Head strike. Foe's brain falls victim to massive shock and surface burns. Foe drops into unconsciousness, and dies in 6 rounds. +20 hits.	Blast through foe's neck severs head and kills foe instantly. Add +10 to your next attack roll.	Foe's head is no longer available. Smoke and ozone surround the lifeless body. Add 10 to friendly witnesses' rolls for 3 rounds.	Foe's nervous system acts as a superconductor. Foe's sad instant death provides all the witnesses with a fine light show. Add +15 to your next roll.	Foe returns to the dust from which he came. Add +20 to your next roll.

	A	B	C	D	E
01-05	Cool breeze +0 hits	Cold breeze. +0 hits.	+1 hit	+2 hits	+3 hits
06-10	+1 hit	+2 hit	+3 hits	+4 hits	Foe loses initiative for 1 rnd. +4 hits.
11-15	Foe loses initiative for 1 round. Cold wind. +2 hits.	Foe loses initiative for 1 round. Cold chills. +3 hits.	Foe is slightly unbalanced and loses 1 round of initiative. +4 hits.	Light blast. Foe loses initiative for 1 round. +5 hits.	Cold blast. If foe has armor, he loses 1 rnd of initiative. If not, foe takes +6 hits and loses 2 rnds of initiative.
16-20	Foe loses initiative for 1 rnd. Freezing breeze. +3 hits.	Foe loses initiative for 2 rnds. Freezing wing. +4 hits.	Foe loses initiative for 2 rounds. Mild frosting. +5 hits.	Unbalancing blast. Foe must parry for 1 round. +6 hits.	Moderate blast. Foe must parry for 1 round. +7 hits.
21-35	Mild blast. Foe loses initiative for 2 rounds. +4 hits.	Frost laden blast forces foe to lose 2 rounds of initiative. +5 hits.	Moderate blast. Foe must parry for 1 round. +6 hits.	Chilling blast gives foe a frosty "burn". Foe must parry for 1 rnd at -20, takes 1 hit per rnd. +7 hits.	Parched, cold blast. Foe is unbalanced and must parry for 2 rounds at -15. +8 hits.
36-45	Frosty blast. Foe must parry for 1 round. +5 hits.	Freezing blast. Foe must parry for 1 round and loses 3 rounds of vital initiative. +6 hits.	Blisters give foe 1 hit per round. Foe must parry for 2 rounds. +7 hits.	Blast stuns foe for 1 round. Foe takes 2 hits per round and fights at -5 due to facial shock. +8 hits.	Strong, low blast stuns foe for 1 rnd; destroys foe's foot covering. If feet uncovered, foe is at -20 (frostbite).
46-50	Moderate blast. Foe must parry for 2 rounds. +6 hits.	Mild frostbite. 2 hits per rnd. Must parry for 2 rnds. +7 hits.	Blast stuns foe for 1 round. +8 hits.	Mild frostbite. Foe is at -10. +2 hits per rnd. Stunned 1 round. +9 hits.	Swirling blast spins foe about. +10 hits. Stunned 1 rnd. Drops weapon.
51-55	Unbalancing blast. Foe is stunned for 1 round. +7 hits.	Strong, but off-center blast stuns foe for 1 rnd. Foe takes 3 hits per rnd due to frostbite on shield wrist. +8 hits.	Blast is strong but low. Foe is stunned for 2 rnds. If foe has no leg armor, he takes 5 hits per round due to shock and pain.	Blistering blast to foe's side knocks foe back 5 feet. Foe takes 3 hits per round and is stunned for 2 rounds. +10 hits.	Strong side strike. Foe is stunned and unable to parry for 1 round, and takes 4 hits per round numbing pain. +11 hits.
56-60	Strong, but diffused, blast. Foe is stunned for 2 rounds. +8 hits.	Foe is stunned for 2 rounds, all wood exposed on foe's back is useless and brittle. Foe takes 2 hits per round. +9 hits.	Back blast freeze dries all organic material that is exposed on foe's back. Foe is stunned and unable to parry for 1 round. +9 hits.	Blast to foe's non-weapon arm. Frostbite. Foe is stunned and unable to parry for 1 round, takes 3 hits per round, and fights at -15.	Blast to foe's weapon arm. Foe is stunned and unable to parry 1 round, takes 4 hits per round, and fights -20.
61-65	Foe is stunned and unable to parry for 1 round. +9 hits.	Leg strike. Frostbite. Foe is stunned and unable to parry for 1 round, fights at -5, and takes 3 hits per round. +10 hits.	Leg strike. Frostbite. If foe has leather boots or greaves, they are destroyed. Foe is stunned for 4 rounds. +11 hits.	Strike to foe's non-weapon arm. If foe has arm armor, +20 hits. If not, arm is useless due to nerve and skin damage; foe is stunned 5 rnds.	Blast to foe's weapon arm. Foe drops whatever is in that hand. Foe is stunned and 3 rounds and fights at -30. +13 hits. Frostbite.
66	Blast causes foe to drop whatever he is holding. +10 hits. Foe is stunned and unable to parry for 3 rounds. Chest strike.	Foe is stunned and unable to parry for 4 rounds. If foe wears no armor or protective cloak, he takes 5 hits per round.	Foe is knocked down and stunned for 6 rounds. If foe has wrist armor, he takes 3 hits per round. If not, foe fights at -25 and takes +6 hits per round.	Neck blast. If foe has neck armor, he takes 4 hits per round and is stunned for 6 rounds. If not, foe fights at -50, takes 5 hits per round, is stunned 3 rounds.	Shoulder strike. Foe loses use of shoulder due to nerve and cartilage damage. If foe has not helmet he is knocked out for 1 day and takes 6 hits per round. +15 hits.
67-70	Back blast. Foe is stunned and unable to parry for 1 round. Frostbite. Foe fights at -5. +10 hits.	Back blast. Frostbite. Foe is stunned for 2 rounds and cannot parry for 1 round. Foe fights at -10. +11 hits.	Back blast. Foe is stunned for 2 rounds and cannot parry for 1 round. Foe fights at -15. Frostbite. +12 hits.	Back blast. Foe is stunned for 3 rounds and cannot parry for 1 round. Foe fights at -20. Frostbite. +13 hits.	Blast to foe's non-weapon arm. If foe has arm armor, he is knocked down and takes 2 hits per rnd. If not, massive frostbite, foe loses use of arm and is stunned 6 rnds.
71-75	Unbalancing blast. Foe is stunned for 2 rounds. Pain and shock cause foe to fight at -10. +11 hits.	Strike to foe's non-weapon side. Pain and shock give foe 3 hits/rnd. Foe is stunned and unable to parry for 2 rnds. +12 hits.	Strike to foe's side. Shock and frostbite. Foe fights at -20, takes 3 hits per round, and is stunned and unable to parry for 2 rounds.	Blast freezes foe's non-weapon shoulder. Arm is useless and foe is stunned for 2 rounds. +14 rounds.	Blast to foe's weapon arm. Frostbite and numbing pain make arm useless and stun foe for 3 rounds. +15 hits.
76-80	Chest strike. Foe is stunned for 2 rounds and cannot parry for 1 round. +12 hits.	Chest strike. Foe takes +3 hits per round, fights at -15, and is stunned for 4 rounds. +13 hits.	Chest strike. Foe takes 4 hits per round. If foe has chest armor, he is stunned for 3 rnds. If not, foe is knocked down, fights at -25.	Chest strike. Foe fights at -25 due to frostbite. Foe is stunned and unable to parry for 3 rounds. +15 hits.	Chest strike. Foe is knocked down and drops all he holds. Foe is stunned for 12 rounds. Shock and nerve damage. Foe fights at -30.
81-85	Back blast. Foe is stunned and unable to parry for 2 rounds. +13 hits.	Back strike. Foe is stunned and unable to parry for 3 rnds and takes 4 hits/rnd. +14 hits.	Thigh strike. Foe has broken bone and frostbite. Fights at -40, takes 5 hits/rnd, stunned 6 rnds.	Blast freezes both of foe's hands and foe loses use of both arms. Stunned 9 rnds, takes 6 hits/rnd.	Blast freezes foe's throat and lungs. Foe drops and dies in 12 rounds. +17 hits.
86-90	Leg strike. Foe is knocked down. If foe has leg armor, he is stunned for 2 rounds. If not, foe loses use of left foot, fights at -70 (frostbite).	Leg strike. Foe is knocked down. If foe has leg armor, he is stunned for 3 rounds. If not, foe loses use of foot, and fights at -75 (frostbite).	Lower leg blast destroys foe's foot covering, freezes both foe's feet, and stuns foe for 9 rounds. Foe takes 6 hits per round, fights at -80.	Upper chest blast knocks foe down. If foe has chest armor, he is knocked out. If not, foe dies in 12 rnds due to a cold, cold, heart.	Back blast freezes and shatters foe's backbone. Foe drops and dies in 9 inactive rounds. Broken neck. Massive shock.
91-95	Head strike. Foe is knocked down. If foe has helmet, he is stunned 3 rnds. If not, foe is stunned 6 rnds, fights at -50, and loses both ears.	Hip strike. Foe's hip is shattered. Foe is stunned and unable to parry for 3 rounds and fights at -75. +17 hits.	Abdomen strike. If foe has abdomenal armor, he is knocked out and takes +17 hits. If not, foe dies of organ damage in 9 rounds.	Foe's blood is entirely frozen solid. Foe dies in 9 inactive rounds. +18 hits.	Foe's lower body is fully frozen. Foe dies in 6 inactive rounds. +19 hits.
96-99	Neck strike. If foe has neck armor, he is stunned for 9 rounds. If not, foe loses lips, cannot speak for 2 weeks, and is knocked out.	Neck & collar strike. If foe has neck armor, he is knocked out. If not, foe's neck is frozen and shattered, and foe dies in 9 inactive rounds.	Side strike freezes and shatters foe's pelvis. Foe dies in 6 rounds due to shock and nerve damage. +18 hits.	Foe's heart and lungs are suddenly frozen. Foe dies in 6 inactive rounds of shock and suffocation. +19 hits.	Foe is a lifeless, frozen statue — well preserved, but quite dead. Add +10 to your next roll. +20 hits.
100	Foe is sent into a month long coma and loses nose as a result of severe frostbite and shock. +21 hits.	Blast freeze-dries foe's head. Foe dies in 1 round. Foe's skull and brain are brittle and lifeless. Add 5 to your next roll.	Head strike. Foe's eyes are destroyed; foe is in a coma for 2 weeks and is permanently paralyzed from the neck down.	Massive strike shatters foe's chest and freezes foe's body fluids. Foe dies in 2 rounds. +20 hits.	Foe freezes solid and then shatters into thousands of pieces after falling down 20 feet behind impact point.

18.4 CRUSH CRITICAL STRIKE TABLE

	A	B	C	D	E
01-05	Zip	Weak grip. No extra damage.	+1 hit	+2 hits	+3 hits
06-10	+1 hit	+2 hits	+3 hits	+4 hits	Glancing blow +6 hits. Foe is slightly unbalanced. You have initiative next round.
11-15	Glancing blow. Foe takes +3 hits. You have the initiative next round.	Glancing blow. +3 hits. You have initiative next round.	Blow to foe's side. +7 hits. You receive initiative next round.	+5 hits. Foe must parry next round at -10.	+6 hits. Foe is stunned for 1 round. Add +5 to your next swing.
16-20	+2 hits. Foe must parry next round of action.	Blow to foe's side. +4 hits. Foe must parry next round at -10.	Blow to foe's side. +6 hits. Foe must parry next round at -20.	Minor fracture of ribs. +5 hits. Foe fights at -5. You have initiative next round.	Strong blow. Foe is stunned and unable to parry next round. Add +10 to your next swing.
21-35	Foe must parry next round. +3 hits. Add +5 to your next swing.	Foe must parry next round at -20. +4 hits.	You break foe's rib. +5 hits. Foe is stunned during next round. Hard blow to foe's side.	Strike to foe's side. +4 hits. Foe is stunned and unable to parry during next round.	Strike cracks foe's ribs. +6 hits. Foe is at -10. You have initiative next round.
36-45	Bruise foe's calf. +6 hits. You gain the initiative. Foe fights at -5 for next round.	Bruise foe's calf. +6 hits. You gain the initiative. Foe fights at -20 for next 2 rounds.	Bruise foe's calf. +9 hits. You gain the initiative. Foe fights at -25 for next 2 rounds.	Major calf bruise. +10 hits. Foe fights at -10. You have the initiative next round.	Strike to upper leg. Minor fracture. +12 hits. Foe fights at -10. You have the initiative next round.
46-50	Blow to foe's back. +4 hits. Foe must parry next round at -25. Hard, glancing strike.	Blow to foe's back. +6 hits. Foe must parry next round at -25.	Hard blow to back. +5 hits. Foe is stunned and unable to parry next round. You have the initiative for 2 rounds.	Hard blow to back. +10 hits. Foe is stunned and unable to parry during next round.	Strike to foe's lower back. +15 hits. Foe is stunned and unable to parry during next round.
51-55	Blow to foe's chest. +5 hits. Foe must parry next round at -25. Foe has a bruised rib.	Blow to foe's chest. +6 hits. Foe must parry for next 2 rounds.	Hard blow to chest. +5 hits. Foe fights at -10. Foe is stunned during next round.	Blow to chest. +10 hits. Foe has a pair of broken ribs and must fight at -15.	Blow to chest. +15 hits. Foe is stunned for 2 rounds. Foe fights -15.
56-60	Strike foe's thigh. +5 hits. Foe is forced to parry next round at -25. Glancing blow.	Strike foe's thigh. +6 hits. Foe has a bruise and is forced to parry 1 round. Foe is at -5.	Strike foe's thigh. +6 hits. Foe is at -5. Add +10 to your next swing. Foe must parry next rnd.	Blow to thigh. Foe is stunned next round. +6 hits. Foe is at -10 and is upset.	Blow to thigh. Foe is stunned and unable to parry next round. +10 hits. Foe is at -10.
61-65	Blow to foe's forearm. +5 hits. Foe is stunned during next round. Add +20 to your next swing.	Blow to foe's forearm. Foe is at -10. +9 hits. Foe is stunned during next round.	Disarm foe with a blow to forearm. +8 hits. Foe is stunned during next round.	Blow to forearm. Foe is stunned and unable to parry next round. +10 hits. Foe at -10.	Blow to forearm. Foe drops weapon. Foe is at -15. +10 hits. Foe is stunned for next round.
66	Shatter shoulder in foe's non-weapon arm. Arm is quite useless. Foe is stunned and unable to parry for the next 2 rounds. +8 hits.	Shatter elbow in foe's weapon arm. Arm is useless. Foe drops weapon, and is stunned and unable to parry for 3 rounds.	Shatter foe's knee. +9 hits. Foe is knocked down and is stunned and unable to parry for 3 rounds. Foe at -90.	Blow to side of foe's head. If foe has no helmet, you crush his skull. If foe has helmet, you knock him out for 4 hours. +20 hits.	Blow to back of neck, crushes backbone and severs spine. +15 hits. Foe dies instantly. Add +10 to your next swing.
67-70	Strike upper chest area. +8 hits. Foe is stunned for 3 rounds and unable to parry during next round.	Strike upper chest area. Foe is stunned and unable to parry for 2 rounds +10 hits. Foe is at -10.	Strike upper chest area. Foe is stunned for 3 rounds and unable to parry during next 2 rounds, +10 hits. Foe is at -10.	Blow to foe's shoulder area. Minor fracture. Foe is at -20. Foe is stunned and unable to parry for 2 rounds.	Blow to foe's non-weapon shoulder. If foe has arm armor, it if broken; otherwise, the shoulder is shattered, arm useless.
71-75	Blow to foe's lower leg. Bad bruise. +5 hits. Foe is stunned for 2 rounds and unnable to parry next round. Foe at -20.	Blow bruises foe's calf. Foe is at -35. +10 hits. Foe is stunned 2 rounds and unable to parry next round.	Blow bruises foe's knee. Foe is at -40. +10 hits. Foe is stunned and unable to parry for 2 rounds.	Blow breaks bone in leg. Foe is at -50. +12 hits. Foe is stunned and unable to parry for 2 rounds. Major cartilage damage.	Blow breaks foe's hip. Foe is at -75 and is knocked down. +15 hits. Foe is stunned 3 rounds.
76-80	Blow to foe's non-weapon arm. If foe has arm armor, it is broken; otherwise, the arm is badly broken and useless.	Blow to foe's non-weapon arm, shatters wrist. Arm is useless. Foe is stunned for next round. +6 hits.	Blow to foe's weapon arm. Bad bruise. +9 hits. Foe is stunned and unable to parry for next round. Foe is at -50.	Blow breaks foe's weapon arm. Foe is stunned and unable to parry for 1 round. Arm is useless. +8 hits. Tendon damage.	Blow to foe's elbow. +9 hits. Joint is shattered. Arm is useless. Foe is stunned and unable to parry for 2 rounds.
81-85	Blow to foe's side. +10 hits. Foe is stunned and unable to parry for 2 rounds. Foe is at -20.	Blow to foe's side. +12 hits. Foe has broken ribs. Foe is stunned and unable to parry for 2 rounds. Foe is at -25.	Strike to foe's side. Breaks 3 ribs. Foe is at -40. +12 hits. Foe is stunned and unable to parry for 3 rounds.	Strike to foe's side +15 hits. Foe is knocked down. Add +10 to your next swing. Foe is stunned and unable to parry 3 rounds.	Catch foe in armpit. +30 hits. Crush foe's ribs and destroy side. Foe drops and dies of nerve and organ damage in 3 rounds.
86-90	Strike Foe in back. +12 hits. Muscle and cartilage. Foe is stunned and unable to parry for 3 rounds. Foe is at -25.	Strike to back knocks foe down and smashes tendons. Foe is stunned and unable to parry for 4 rounds. Foe is at -30.	Blow to back smashes muscle and breaks bone. +20 hits. Foe is at -50. Foe is knocked down and stunned for 6 rounds.	Blow to foe's neck area breaks backbone and destroys spine. +25 hits. Foe falls and dies in 2 rounds.	Neck strike shatters bone and severs an artery. Foe cannot breath and is inactive for 12 rounds. The poor fool then expires.
91-95	Break foe's nose. Foe is stunned and unable to parry for 3 rounds. +15 hits. Foe fights at -30 for 2 days. Close.	Upper head hit. If foe has no helmet, he is in a coma for 3 weeks; otherwise, +20 hits and foe is stunned 12 rnds.	Blow shatters thigh. +9 hits and a compound fracture. Bone severs an artery. Foe dies after 12 rnds of inactivity.	Blow shatters non-weapon arm. Bone severs vein and an artery. Foe dies of shock and blood loss after 9 inactive rounds.	Blast to foe's back. +25 hits. Bone is driven into vital organs and foe is down for 6 rounds ...Then dies, sad.
96-99	Blow to foe's head. If foe has no helmet he is dead; otherwise, he is knocked down and stunned 6 rnds, +20 hits.	Blast foe's chest. Send ribcage through heart. Foe drops and dies. Add +20 to your next swing.	Blow to foe's abdomen destroys a variety of organs. The poor fool expires after 6 rnds of inactivity.	Blow to foe's side crushes chest cavity. Foe drops and dies in 3 rounds. Add +25 to your next swing.	Crush foe's skull. +30 hits. Opponent dies immediately. Add +20 to your next swing. You have a half round left to act.
100	Blow to foe's jaw. Drives bone through brain. Foe dies instantly. +50 hits, add +20 to your next swing.	Blow to back of neck paralyzes foe from the shoulders down. +25 hits. Foe is quite stunned.	Strike to forehead. +30 hits. You squash foe's eyes and destroy them. Foe is stunned and is unable to parry 24 rounds.	Blast to foe's chest area. Destroy foe's heart. Foe dies immediately. +25 hits. Fine work.	Crush foe's hip. +35 hits. Opponent is stunned for 2 rounds, active following 4 rounds at -30, then dies of nerve damage.

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	A	B	C	D	E
01-05	Weak grip. No bonus.	Indecision and an opportunity lost.	+1 hit	+2 hits.	+3hits
06-10	+1 hit	+2 hits.	+3 hits	+4 hits.	Glancing attack. You have the initiative next round. +5 hits
11-15	Glancing attack. No extra damage, but you have the initiative next rnd. Practice.	Passing strike. You have the initiative next round. +2 hits.	Grazing side strike. You receive the initiative next round. +4 hits.	Glancing blow. You receive the initiative next round. +6 hits.	Lame attack, but foe must parry next round. +6 hiits.
16-20	Foe is free, but you have the initiative next round. +3 hits.	Foe fends off attack. But is forced to parry 1 rnd. +2 hits.	Foe recovers but is forced to parry next round. +4 hits.	Side strike unbalances foe. You have initiative for 2 rnds. +5 hits.	Strong, passing blow. Foe is stunned for 1 round. +3 hits
21-35	Grazing hip strike. You have the initiative next round. +5 hits.	Attack has punch, but nothing more. Foe must parry next round at -20.	Glancing attack. Foe is stunned for 1 round. +2 hits.	Hard but misplaced strike. Foe eludes grip but is stunned for 1 round. +3 hits.	Disjointed attack and a little luck allow foe to escape grasp. Foe is stunned for 1 round. You have initiative 2 rounds.
36-45	Blow to lower back. Foe must parry next round.	Unbalance foe. +4 hits. Foe must parry next round. You have initiative for 2 rounds.	Flailing attack. Foe is stunned for 1 round and must parry the following round.	Strike to foe's shield arm. If foe has shield, +3 hits. If not, arm is caught for 6 rounds (and immobile), and foe stunned 3 rnds.	Attack to upper leg. Foe is spun about and breaks loose, but is stunned and unable to parry 1 round.
46-50	Passing hip strike. Foe must parry next round at -20. +3 hits.	Blow to chest stuns foe for 1 round. +5 hits.	Your attack produces a weak grasp around foe's waist. Foe is at -25 for 3 rounds.	Attack yields weak hold around foe's chest. Foe is at -30 for 3 rounds. You have initiative 4 rnds.	Attack produces a hold around foe's leg. Foe slips away, but is stunned 2 rnds and is unable to parry next rnd.
51-55	Slightly unbalancing blow to chest. Foe must parry next round. You have initiative for 2 rounds.	Blow to back stuns foe for 1 round. +7 hits.	Attack yields slipping grasp around foe's leg. Foe is stunned and unable to parry for 1 round.	Attack results in slipping grip around foe's waist. Foe is at -50 for 3 rounds.	Foe breaks free of hold around shield arm. Foe is stunned for 2 rounds and unable to parry next round. +5 hits.
56-60	Glancing back blow. Foe must parry next round at -25. You have initiative 2 rounds.	Unbalancing strike. Foe spins free but is stunned for 1 rnd and must parry the following rnd.	Foe breaks free of hold around thigh, but is stunned and unable to parry 1 round. +3 hits.	Attack produces hold around leg. Grip is slipping but foe stunned 3 rounds. +6 hits.	Grasp around foe's leg. Foe is stunned and unable to parry 1 round and is at -25 the following 3 rounds.
61-65	Blow to shoulder. Foe is stunned 1 round. +3 hits.	Slipping grasp around foe's waist is weak. Foe is stunned for 2 rounds.	Grasp around foe's chest. Foe is at -50 for 3 rounds. +3 hits.	Grasp around foe's chest. Foe is stunned and unable to parry for 1 round and is at -20 for the following 2 rounds.	Attack to foe's non-weapon arm. If foe has arm armor, +6 hits. If not, foe is stunned and unable to parry for 3 rounds, takes +7 hits.
66	Grasp around weapon arm disarms foe. +2 hits. Foe is stunned for 2 rounds.	Grasp around weapon arm disarms foe and sprains his wrist. Foe is stunned 2 rounds, and fights at -25.	Grasp around both of foe's legs. Foe slips away, but is knocked down and prone for 1 round. +5 hits.	Grasp around leg knocks foe down. Tight grip. Foe is prone and immobile 2 rounds. +6 hits.	Grasp foe around neck and knock him down. Foe has torn neck muscles, is at -20. Foe is prone and immobile for 3 rounds.
67-70	Passing chest strike. Foe eludes entanglement, but must parry next two rounds at -20.	Entangle foe's leg. +4 hits. Foe is stunned and unable to parry for 1 round.	Entangle non-weapon arm. If foe has arm armor, he is at -50 until he removes it. If not, he is at -50.	Entangle leg. Foe is stunned for 2 rounds and unable to parry next round. +7 hits.	Entangle weapon arm. Foe is stunned and unable to parry for 2 rounds, and at -75 round following.
71-75	Attack results in an uneasy hold on foe's midsection. Foe is at -50 for 2 rounds. +5 hits.	Attack yields a weak hold around foe's lower chest. Foe is at -50 for 3 rounds. +4 hits.	Attack results in loose grasp on foe's midsection. Foe is stunned for 2 rounds and is at -50 for the following 3 rounds.	Attack yields loose hold around foe's midsection. Foe is stunned and unable to parry 1 round and is at -70 the following 3 rounds.	Entangle foe's leg. Foe is knocked down, and stunned and unable to parry for 2 rounds. +9 hits.
76-80	Infirm hold on foe's midsection. For the next 3 rounds foe is at -50 and you have the initiative.	Entangle non-weapon arm. If foe has arm armor, he is at -30 until he removes it. If not, he is at -40.	Entangle weapon arm. Foe is stunned and unable to parry for 2 rounds, and is at -50 during the following round.	Entangle foe's weapon arm. Foe hangs onto weapon, but the arm is immobilized. +3 hits.	Grapple weapon arm. Foe is disarmed and is left stunned for 3 rounds. Torn ligaments and pulled muscle leave foe at -40.
81-85	Grasp foe's leg. Foe breaks free but is stunned for 2 rounds. +3 hits. You have initiative 6 rounds.	Infirm grasp on foe's midsection. For the next 6 rounds foe is at -50 and you have the initiative.	Grasp around foe's chest breaks rib and leaves foe stunned and unable to parry for 3 rounds. Foe fights at -5.	Entangle foe's leg. Foe is knocked down, stunned and unable to parry 2 rounds, and is disarmed. Fall breaks non-weapon arm.	Entangle both of foe's arms and pin them to his chest. Foe cannot move his arms and has mobility reduced by -75.
86-90	Attack foe's non-weapon arm. If foe has arm armor, he must parry next round. If not, arm is immobilized; foe is at -50.	Entangle foe's leg. Foe is knocked down and is stunned and unable to parry for 2 rounds. Pulled muscle leaves foe at -10.	Entangle foe's foot. Foe stumbles, falls, and breaks shoulder. +8 hits. Foe is stunned 6 rounds and fights at -30.	Tie up both of foe's arms so they are immobile. Foe is stunned for 9 rounds and cannot fight. +6 hits.	Entangle foe's foot. Foe stumbles, falls, breaks weapon on impact, and is stunned 2 rounds. If no chest armor, roll "D" crush crit.
91-95	Entangle foe's leg. Foe is knocked down. Stunned and unable to parry for 2 rounds. +3 hits.	Both of foe's legs are tied up. Foe is at -25, downed, disarmed and stunned and unable to parry for 2 rounds. Ankle sprain.	Pin both of foe's arms to chest. Foe is stunned and unable to parry 44 rounds, then fights at -95.	Entangle and completely immobilize foe's legs. Foe falls and is left stunned and unable to parry for 30 rounds. +10 hits.	Wrap up both of foe's legs. Foe tumbles to ground and is knocked out. Foe is at -95 due to 2 broken arms and a broken ankle. +20 hits.
96-99	Tie foe up completely. Foe is entirely immobilized for 12 rounds, and is at -60 for the following 3 rounds. +7 hits.	Attack completely entangles and immobilizes foe. Broken leg leaves foe at -40. The pitiful creature is left prone but conscious.	Entangle and completely immobilize foe's legs. Foe falls, is disarmed, breaks weapon arm, and is knocked out. +20 hits.	Grapple foe's neck. If foe has neck armor, he is left disarmed, and stunned and unable to parry for 3 rounds. If not, he dies in 6 rounds.	Attack resuls in strangling hold. Foe is unable to break free and dies after 9 rounds of amazingly helpless struggling. Grim.
100	Both of foe's legs are entangled. Foe is downed and knocked out.+9 hits. Add +20 to your next roll.	Attack yields vicious hold around foe's neck. Foe is knocked out. Spained neck leaves foe at -90.	Grapple foe's neck. If he has neck armor, he is at -75 due to a neck sprain and stunned for 3 rnds. If not, he dies of broken neck.	Grapple foe's head. If foe has helmet, he is stunned and unable to parry for 9 rounds. If not, foe falls into coma due to fracture.	Crush foe's windpipe. Foe dies instantly due to massive shock and savage asphyxiation. Add +25 to your next roll.

18.6 VACUUM CRITICAL STRIKE TABLE

	A	B	C	D	E
01-05	Cool breeze delivers no hits.	Refreshing breeze ruffles hair. Boy, does he look cool.	Target's ears pop. +1 hit.	Winds distract target: he loses initiative for 1 round.	+1 hit.
06-10	Chilly breeze delivers 1 hit.	+1 hit.	Target's ears pop audibly; +2 hits.	+2 hits; target forced to parry 1 rnd.	+3 hits, target must parry next round.
11-15	Cold breeze delivers 2 hits.	+2 hits.	Target's ears really pop. +3 hits, permanent minor hearing loss.	+4 hits and target must parry for 1 round.	+5 hits.
16-20	Icy wind delivers 5 hits; target loses a round of initiative.	Target is unbalanced. +3 hits and he must parry one round.	Inner ears pop. Target unbalanced. +5 hits, must parry 1 rnd.	Escaping air stuns target for 1 round; he takes 6 hits.	Airburst stuns target and delivers 7 hits.
21-35	Staggering airburst gives target 3 hits and he loses 2 rounds of initiative.	Blast of air unbalances target. +5 hits and he is forced to parry 1 round.	Pressure change causes equilibrium problems. +6 hits, stunned 1 round.	Fleeing oxygen gives target pause; he is stunned for 2 rounds.	Target stunned no parry 1 round; 9 hits.
36-45	Rushing winds deliver 3 hits; target unbalanced (and stunned 1 round).	Escaping environment buffets target, delivering 8 hits and stunning him for 1 round.	Target is muddled and must parry for 2 rounds. +7 hits.	Roaring winds confuse target. He is stunned 3 rounds and takes 8 hits.	Target stunned 4 rounds by freezing air.
46-50	Target loses 3 rnds of initiative in the rush of air. +2 hits.	Howling winds force target to parry for 2 rounds. +6 hits.	Target stunned for 1 round. +8 hits	Target slashed by debris: +10 hits and 5 per round.	Target struck by debris: +20 hits, 2 per round and stunned 2 rounds.
51-55	Target unbalanced. +6 hits, stun for 1 round.	Whirlwind stuns foe for 1 round. +8 hits.	Debris strikes target in leg; he is stunned 1 round, and takes 2 hits per round.	Target's hand is struck by debris: off-hand wrist is sprained and at -50. +12 hits and stunned for 2 rounds	Target struck in weapon-arm: 50% chance item in hand is dropped (and lost in vacuum). +10 hits and stunned 5 rounds
56-60	Cold and air loss take target's breath away; he is stunned for 3 rounds and takes 15 hits.	Deafening howl of escaping air; +10 hits; renders target stunned and unable to parry for 1 round.	Blast stuns target for 2 rounds; he cannot parry for the first round. Leg hit, +9 hits.	Airburst staggers target, +10 hits; he is stunned and unable to parry for 1 round.	A flurry of sharp metal fragments slash target. +20 its and 7 per round.
61-65	Fog of rushing air stuns target for 2 rounds. +10 hits.	Target does a forced about face, stunning him for 3 rounds.	Target spun about. +5 hits. Stun 3 rnds, loses initiative for 3 more.	Target spins like a top. +10 hits, and foe is stunned no parry 2 rnds.	Target whirls like a gyroscope. +15 hits; foe is stunned no parry 2 rnds.
66	Blast sends target spinning. +10 hits, left arm is broken and useless, he is stunned for 5 rounds.	Target hears bells; eardrums burst and hearing permanently damaged. Nose bleeds; 2 hits/rnd. +18 hits. -50 to activity for 5 rounds.	Flying debris strikes target in head, +12 hits and he is stunned 6 rounds by impact. If no helmet skull is fractured, target unconscious with concussion.	Target flung outward by winds, but gets a reflexive grip on the edge of the breach. 25 hits, Stunned no parry 5 rnds (but holding on until unconscious).	Wasting no time, target zips out through hull breach. Surrounded by a cloud of frozen oxygen, he explores the final frontier. If he has a spacesuit, fine; if not, he is dead after 6 rounds. Wave good-bye.
67-70	Flying debris strikes target in back; he is stunned for 1 round. +8 hits.	Winds stun target 1 round, deliver 2 hits.	Back strike. Target is stunned and cannot parry for 2 rounds. Target is at -10. +11 hits.	Target thrown 2 meters and slammed against a bulkhead. He is stunned 3 rounds and takes 10 hits.	Lack of air takes target's breath away. He is at -50, stunned 3 rounds, and takes 10 hits.
71-75	Blast of fleeing atmosphere disorients target; he is stunned and unable to parry for 1 rnd.	Fog of escaping gas confuses target and stuns him 3 rounds.	Airborne stuff blinds target, stunning him for 2 rounds and delivering 10 hits.	Whirling debris strikes target in head; +15 hits; a minor concussion; stunned no parry for 2 rnds.	Flying debris strikes target in head. He is stunned no parry 2 rounds, +15 hits.
76-80	Crystallizing atmosphere cloud stuns target for 2 rounds, +15 hits. Foe is unable to parry for one round.	Whirling oxygen crystals blind target, stunning him for 4 rounds.	Now you know why it's called "Hard" vacuum: blast knocks the wind out of target, +15 hits, breaks ribs; stuns him for 3 rnds.	Depressurization damages ears. Inner ear equilibrium upset, stun 3 rnds, +10 hits. Maneuvers at -50 for 2 days. Permanent deafness.	Decompression collapses one lung and destroys hearing. Target at -70; +20 hits and he is stunned 6 rounds.
81-85	Swirling debris delivers 10 hits and breaks two of target's ribs; he is at -25.	Blast sends target careening 2m, impact causing broken leg. Foe is at -50, stunned 3 rnds; +15 hits. (Strapped in target only takes 5 hits).	Brutal wind carries target 3 meters, slamming him against a hard surface. Foe is stunned for 10 rnds; +25 hits. (Strapped-in target only takes 10 hits).	Escaping atmosphere drags target 4m, battering him on the way. Both of his arms are broken; stunned for 4 rnds; +25 hits. Strapped in target: only +15 hits; stunned 2 rnds.	Explosive decompression hurls target 5m, pummeling his poor body. Internal organs are damaged; +50 hits; dies in 12 rnds. Strapped in target: only +25 hits; stunned 8 rnds.
86-90	Target feels his blood simmering. +10 hits and 5 per round while exposed.	Target's boiling blood delivers 15 hits and 7 per round while he is exposed to vacuum.	Target 's blood starts to boil: +30 hits and 10 per round while exposed. He is stunned for six rounds.	Target 's blood is bubbling: +40 hits and 15 per round while exposed. He is stunned for eight rounds.	Target 's circulatory system becomes a balloon: +50 hits; 20 hits/rnd while exposed. Stunned for 3 rnds, then (if exposure continues) unconscious as major organs are seriously damaged. Poor bloated fool dies in 12 rnds.
91-95	Disconcertingly, target bleeds through nose and ears. He is at -30, takes 10 hits, 3 hits per round and is stunned for 5 rounds.	Unpleasantly, target bleeds through eyes, nose, and ears. He is at -50, takes 15 hits, 5 hits per round and is stunned for 7 rounds.	Grossly, target begins to bleed through eyes, nose, ears and under fingernails. He is at -70, takes 20 hits, 7 hits per round and is stunned for 9 rounds.	Disgustingly, target bleeds through all of his bodily orifices. He is at -80, takes 25 hits, 9 hits per round and is stunned for 10 rounds.	In a clear attempt to gross everyone out, target bleeds through all of his pores. He is at -90, +30 hits, 12 hits/rnd and is stunned for 6 rnds before losing consciousness (if not before).
96-99	Target is struck in the head; +20 hits. If foe has a helmet, he is unconscious for 1 day; otherwise he is in a coma for 10 days.	Target's lungs collapse. +20 hits; target is at -80 and dies in 12 agonizing rounds of asphyxiation.	Sudden pressure change causes multiple internal organ malfunctions. Foe is completely incapacitated for 10 rounds, then dead.	Target is slammed by rushing air. +25 hits, bone is driven into target's internal organs, killing him in three helpless, painful rounds.	Target unwittingly attempts to turn inside out. Unsuccessful (sort of), he loses use of all sensory organs as well as lungs; tumbles, unconscious, through deep space. +80 hits.
100	Target is knocked down and is struck on the head. +25 hits. Helmet is crushed and useless, target stunned 5 rounds. If no helmet, skull is fractured, target dies in 3 rounds.	Luckily, target is lodged between conduits within 3 meters of a door to safety, avoiding an unpleasant space walk. Unluckily, his spine is damaged and he is paralyzed from the waist down. +25 hits.	Explosive blast sends target's brain out through ears. He is quite dead.	Lack of air pressure disrupts lungs, eyes and ears. Not a pretty sight. Target dies in 12 messy rounds, blind and deaf.	Rather abrupt decompression. Target explodes into billions and billions of tiny bits of flesh, quite severely dead.

	A	B	C	D	E
01-05	Sorry.	Fine artistry, but no extra damage.	+1 hit	+2 hits	+3 hits
06-10	+1 hits	+2 hits	+3 hits	+4 hits	Glancing strike makes foe respect you a little more. +5 hits.
11-15	Weak strike, but you gain the initiative. +3 hits	Mild blow. You gain the initiative next round. +4 hits.	Mild strike. You have the initiative next round. +5 hits.	Kick to foe's side yields +6 hits. You have the initiative next round.	Moderate strike stuns foe for 1 round. +7 hits.
16-20	Kick to foe's side yields +4 hits and you have the initiative next round.	Side strike. Foe loses initiative next 2 rounds. +5 hits.	Side strike forces foe to parry next round. +6 hits.	Side strike forces foe to parry at -10 next round. +8 hits.	Side strike cracks foe's ribs and stuns foe for 1 round. +5 hits. Foe is at -10.
21-35	Light, but well-placed strike forces foe to parry 1 round. +5 hits.	Strong, but poorly aimed strike forces foe to parry next round. +6 hits.	Kick foe in ribs and stun him for 1 round. +6 hits.	Side strike. Foe is stunned next round and loses initiative for 3 rounds. +2 hits.	Fine side strike cracks 3 ribs. Foe is at -20. +6 hits.
36-45	Mild chest strike forces foe to parry next round at -10. +6 hits.	Chest strike. Foe must parry next round at -20. +7 hits.	Clever fake yields fine but light chest strike. Foe is stunned for 1 round. +8 hits.	Chest strike. Foe is stunned and unable to parry next round. +5 hits.	Back strike stuns foe 1 round. You have a clear shot to foe's rear next round.
46-50	Acrobatic move forces foe to parry next round at -25. +6 hits.	Glancing kick to foe's back. Foe is stunned 1 round. +5 hits.	Strike to foe's back. Foe is stunned and unable to parry for 1 round.	Chest strike. Foe is stunned for 2 rounds. Broken ribs. Foe is at -10. +3 hits.	Chest strike. Foe is stunned for 2 rounds and unable to parry for 1 round. +5 hits.
51-55	Strike to hip stuns foe for 1 round. +3 hits.	Strike to foe's chest. Stuns him for 1 round. +6 hits.	Side strike. Foe is stunned and unable to parry next round. Add +20 next attack.	Upper leg strike causes deep bruise. Foe operates at -25. +6 hits.	Hip strike spins foe. +5 hits. Foe stunned for 3 rounds.
56-60	Strike to foe's lower chest stuns foe for 1 round. +5 hits.	Back strike. Foe is stunned for 2 rounds. +3 hits.	Strong wheel kick sends foe 10 feet in any desired direction. Foe is stunned 2 rounds. +8 hits.	Back strike. Foe is stunned for 3 rounds. +4 hits.	Chest strike. Foe is stunned for 2 rounds, unable to parry next round and operates at -10.
61-65	Blow to top of foe's foot is slightly misplaced but quick. Foe operates at -20 +5 hits.	Strike to back of lower leg. Foe is stunned for 2 rounds. +7 hits.	Upper leg strike. Foe has deep bruise and operates at -25. +5 hits.	Blow to nerve in upper leg. Foe is stunned 2 rounds and operates at -25 for 6 rounds.	Forearm strike cleanly disarms foe. +3 hits.
66	Strike to Achilles tendon. Vicious bruise. Foe is at -50. +7 hits and foe stunned 2 rounds.	Kick to foe's head sprains neck and fractures jaw. Foe is stunned 9 rounds, operates at -50.	Knife hand strike breaks foe's weapon arm, leaving it useless. Follow-up punch to solar plexus knocks foe out.	Superb move. Break foe's weapon. Foe is stunned for 3 rounds. Add +20 next roll.	Simultaneous open palm strikes destroy foe's hearing and balance. Foe at -95. He is stunned 24 rounds.
67-70	Weak spear hand stuns foe for 2 rounds. +2 hits.	Spear hand to foe's chest. Foe is stunned 3 rounds.	Strong knife hand to upper portion of foe's non-weapon arm. Arm is broken and useless.	Strike to top of foe's foot. Foe is stunned and unable to parry for 2 rounds.	Combination elbow to solar plexus and back fist to face drops foe. Foe is stunned 3 rounds and unable to parry 2 rounds.
71-75	Knife hand, spear hand combination. Foe must roll on fumble table and is stunned 1 round.	Strike to foe's weapon arm. Deep bruise. Foe is at -20. +6 hits. Foe stunned 2 rounds.	Strike to back of lower leg. Foe is stunned and unable to parry for 2 rounds.	Knife hand strike breaks foe's collarbone. Foe is stunned and unable to parry 2 rounds, acts at -25.	Heel kick breaks bone is foe's foot. Foe is at -50. +5 hits. Fool is stunned for 3 rounds.
76-80	Kick to foe's non-weapon arm. Arm is useless and +6 hits.	Blow to back of foe's knee damages tendons. Foe is stunned 2 rounds and operates at -25.	Kick disarms foe and stuns him for 1 round. Foe fights at -10 due to cartilage damage.	Strike to area behind foe's knee. Tendon and cartilage damage. Foe is at -75.	Front kick to midsection doubles foe over. You follow with knee strike which breaks foe's nose and knocks him out.
81-85	Kick to foe's weapon arm disarms him. +3 hits.	Kick foe's weapon 5 feet away and break 2 fingers. Foe stunned 2 rounds and fights at -20.	Heel kick breaks bone in foe's foot. Foe is at -50; he is also stunned and unable to parry for 2 rounds.	Kick breaks foe's leg. Foe is stunned and unable to parry 2 rounds and operates at -75. +5 hits.	Strike to knee shatters joint. Foe drops and is stunned and unable to parry 6 rounds. Foe is at -80. +6 hits.
86-90	Fluid move followed by a leaping kick to foe's back knocks foe down and stuns him 3 rounds.	Wheel kick knocks foe flat. Smash tendons and tear muscle. Foe is at -30. He is also stunned 9 rounds.	Strike to leg severs Achilles tendon and drops foe. +10 hits. Foe stunned 9 rounds, acts at -80.	Open-handed blow to foe's adam's apple (neck) crushes windpipe. Foe dies in 18 rounds — shock and asphyxiation.	Roundhouse kick hits kidney drops foe. Your follow-up knife hand snaps foe's neck. He is knocked out, dies in 9 rounds.
91-95	Strike to nerve in upper leg. +8 hits. Foe stunned and unable to parry for 2 rnds, and operates at -40 for 6 rnds.	Strike to foe's knee shatters joint. Foe drops, is at -85. He is stunned and unable to parry 4 rounds.	Flying kick to foe's back. You knock foe down, disarm him, and leave him stunned and unable to parry for 12 rounds.	Jab to foe's eyes blinds him. Crescent kick sends foe 10 feet to right or left. Sucker is at -100. He is stunned 10 rounds.	Strike to stomach destroys a variety of organs. Foe drops helplessly and dies in 12 rounds. Add +10 to your next round.
96-99	A chop deflects foe's attack, and a later strike knocks him down. Foe stunned and unable to parry for 3 rounds.	Roundhouse kick knocks foe out and fractures collarbone. Foe has sprained neck and shoulder.	Kick to solar plexus drops foe and leaves him stunned and unable to parry 30 rounds. +30 hits.	Brutal head kick flips foe over onto his head. Skull fracture is minor but concussion severe. Foe dies of hemorrhage in 9 rounds.	Double palmstrike to foe's nose breaks cartilage and drives bone into brain. Foe drops helplessly and dies in 6 rounds.
100	Gooseneck strike. Foe's inner ear ruptured. (He hears at -50, operates at -75.) Foe is knocked out by follow-up strike.	Knife hand strike to foe's weapon arm breaks bone. Kick to lower back breaks backbone, leaving foe paralyzed from waist down.	Sweep lays foe out and heel strike to foe's sternum collapses the ribcage. Foe is helpless and dies in 4 rounds.	Awesome spear hand strike finds seam, penetrates solar plexus and ruptures the heart. Foe dies instantly.	Kick disarms foe. A follow-up chop snaps his neck and subsequent flip sends foe 5 feet in any direction. Foe dies.

18.8 M.A. 'SWEEPS & THROWS' CRITICAL STRIKE TABLE

	A	B	C	D	E
01-05	Acrobatic, but no extra damage. +0 hits	Shoddy follow through. +0 hits	+1 hit	+2 hits	+3 hits
06-10	+1 hit	+1 hit	+2 hits	+3 hits	Unbalance foe. You have initiative next round. +4 hits.
11-15	You have initiative next round. +1 hit.	Foe takes 3 extra hits and you have the initiative next round.	You have the initiative next round. Add +20 to your next attack. Foe is confused.	Foe must parry next round. +4 hits.	Stun foe with your fine moves. Add +10 to next attack. Foe is stunned 1 round.
16-20	Foe must parry next round. +2 hits.	Dazzle foe. He must parry next round at -10.	Foe unbalanced and must parry next round at -20. +3 hits.	Foe is stunned for 1 round. +4 hits.	Sweep staggers foe. +2 hits. Foe is stunned and unable to parry 1 round.
21-35	Sweep forces foe to parry next round at -10. +2 hits.	Sweep unbalances foe. +3 hits. Foe must parry next round at -20.	Sweep stuns foe for 1 round. +4 hits.	Sweep sends foe to his knees. Foe is stunned and unable to parry for 1 round. +4 hits.	Sweep downs foe. Foe is stunned for 2 rounds.
36-45	Sweep staggers foe. Foe must parry next round at -20. +3 hits.	Sweep bruises foe's leg. Foe operates at -25 for 3 rounds. +4 hits.	Sweep bruises foe's leg. Foe fights at -10. You have the initiative next round.	Sweep bruises foe's calf. Foe operates at -20. +5 hits.	Sweep drops foe and bruises thigh. Foe is stunned 1 round. +5 hits. Foe is at -20.
46-50	Sweep forces foe to parry next round at -25. +4 hits.	Sweep stuns foe for 1 round. +5 hits.	Sweep downs foe. +4 hits. Foe is stunned for 2 rounds while trying to rally.	Sweep drops foe. +5 hits. Foe is stunned and unable to parry for 1 round.	Foe slips to his knees. +7 hits. Foe is stunned for 2 rounds and is unable to parry next round.
51-55	Sweep drives foe back 3 feet. Foe must parry next round at -30. +5 hits.	Throw knocks wind out of foe, and he is stunned for 1 round. +6 hits.	Throw stuns foe for 2 rounds. +6 hits.	Throw breaks 3 of foe's ribs. Foe is stunned for 1 round and operates at -20. +6 hits.	Throw drops foe. +8 hits. Foe is stunned for 3 rounds.
56-60	Throw stuns foe for 1 round. +6 hits.	Throw stuns foe for 1 round and sprains a finger on his weapon hand. Foe is at -10.	Sweep knocks foe back 5 feet. Foe is stunned and unable to parry for 1 round.	Sweep nearly knocks foe down. Foe is stunned and unable to parry for 1 round. +7 hits.	Surprising sweep sends foe reeling. Foe is stunned for 3 rounds. +9 hits.
61-65	Throw downs foe, but there is a good recovery. Foe is stunned for 1 round. +7 hits.	Throw pulls muscle in foe's weapon arm. Foe is stunned for 1 round. +3 hits. Foe is at -20.	Throw disarms foe. +3 hits and foe is stunned for 1 round. If you want to run, the time is now.	Throw disarms foe and leaves him stunned for 2 rounds.	Fine throw. Foe lands on his weapon arm, is disarmed, and is stunned for 3 rounds.
66	Throw dislocates foe's non-weapon shoulder. Foe is stunned and unable to parry 3 rounds, and is -50.	Nifty throw. You have foe pinned, on his face, and in an arm lock. +9 hits. Foe is disarmed and immobilized.	Sweep shatters foe's knee. Foe is stunned and unable to parry 4 rounds, operates -80.	Smooth throw. Foe lands on his head. If foe has helmet, he is knocked out. If not, he is paralyzed from the waist down.	Perfect toss sends foe flying over your shoulder and 10 feet. Foe dies on impact. Add +10 next roll.
67-70	Hard, but unsmooth throw stuns foe for 2 rounds. +7 hits.	Strong throw stuns foe for 2 rounds. You have the initiative for 6 rounds. +8 hits.	Foe is knocked back 5 feet and has a bruised chest muscle. Foe is stunned 2 rounds, is -10.	Throw drops foe on his non-weapon shoulder. Arm and collar bone +5 hits.	Foe lands on non-weapon arm. If foe has rigid arm armor, +10 hits. If not, foe's arm is shattered and useless, +20 hits.
71-75	Fall bruises foe's thigh. Foe is stunned and unable to parry 1 +2 fits. Foe is at -5.	Fall tears ligament in upper leg. Foe is at -10. +5 hits. Foe is stunned and unable to parry for 1 round.	Fall pulls muscle in foe's leg. Foe stunned 2 rounds and unable to parry next round. Foe operates at -25.	Foe falls and breaks leg. Minor fracture, but foe operates at -30. Poor fool stunned for 3 rounds.	Foe falls and breaks his hip. Mild fracture, foe is at -40. He is stunned and unable to parry 2 rounds.
76-80	Foe lands on non-weapon arm. Foe's arm is sprained, he is at -10, and he is stunned for 2 rounds.	Foe breaks fall with his weapon hand and sprains 2 fingers. Foe is at -25 and is stunned for 2 rounds.	Foe falls and dislocates non-weapon shoulder. +6 hits. Foe is at -40 and must parry for 6 rounds.	Throw puts foe on back an breaks shoulder blade. Foe is at -20. +9 hits. Foe stunned and unable to parry 2 rounds.	Throw sends foe down on his elbow. Joint shattered and arm is useless. Foe is stunned 4 rounds.
81-85	Sweep unbalances foe. +3 hits. Foe is stunned for 3 rounds. Add +25 to your actions next round.	Sweep knocks foe 10 feet to side. Foe stunned and unable to parry 2 rounds. +9 hits.	Sweep staggers foe. +7 hits. Foe is stunned and unable to parry 2 rounds. Add +30 to next attack.	Break foe's wrist on weapon arm. Arm is useless. +10 hits. Fine hand throw.	Throw foe 10 feet. Foe is down on his face, disarmed and stunned an unable to parry 6 rounds.
86-90	Foe lands on his back. Muscle and cartilage damage. Foe quickly recovers, but is stunned and unable to parry for 2 rounds. Foe is at -20.	Foe lands on his back and is stunned and unable to parry for 2 rounds. Torn tendon and broken bone, foe is at -25.	Throw drops foe on his back. Vertebrae cracked and foe is at -50. Foe is stunned and unable to parry 3 rounds.	Throw drops foe and you put him into a severely immobilizing arm lock. Foe is stunned and unable to parry for 6 rounds.	Throw sends foe flying into nearest enemy within 10 feet. All involved are stunned and unable to parry 3 rounds, take +9 hits.
91-95	Throw downs foe and breaks his nose. Foe is at -25. +7 hits. Foe is stunned and unable to parry 2 rounds.	Fall breaks ribs, disarms foe, and sends him rolling 10 feet. Foe is at -30 and is stunned and unable to parry for 12 rounds.	Sweep downs foe and you put him in a leg-breaking hold. +9 hits. Foe is pinned; stunned and unable to parry 15 rounds.	Throw bashes foe against nearly hard surface. Foe is knocked out and you can use a killing kick if you so desire.	Sly rolling throw sends foe into the air. Foe is left disarmed and unconscious. You spring to your feet 10 feet away.
96-99	Throw sends foe down on his head. If foe has helmet, he is stunned 9 rounds. If not, foe is knocked out.	Sweep stuns foe; kick disarms him; and another sweep knocks him flat on his back. Foe is unconscious. +20 hits.	Throw cracks foe's skull. If foe has helmet, he is in a coma. If not, he dies of brain damage in 1 round.	Throw sends foe down. He is impaled by broken rib or his own weapon and dies in 6 rounds.	Fall snaps foe's neck, killing him instantly. Add +25 to your next attack.
100	Snazzy throw. Foe is stunned and unable to parry 6 rounds. Foe is prone and you can finish him (if you desire) with a knee to the solar plexus.	Fabulous throw sends foe flying. Foe's neck is broken on impact and he dies after rolling 15 feet.	Fall breaks foe's back. +12 hits. Foe paralyzed from the neck down. Add +20 next roll.	Sweeps sends foe twisting backwards 5 feet. Foe's spine is snapped and he is left a quadriplegic.	Using but half the round, you use a rolling throw to send foe against nearest hard surface. Foe dies, you are up, press on.

19.1 ARCHAIC WEAPONS FUMBLE TABLE

	HAND ARMS (1-handed)	HAND ARMS (2-handed)	SPEAR & POLE ARMS	MOUNTED ARMS	THROWN ARMS	BOWS
01-25	Lose your grip and the opportunity to get in an open blow. Maybe you will improve.	Lose your grip. You lose the opportunity to take an open swing.	Lose your grip. You lose the opportunity to take an open swing.	Lose your grip. You lose the opportunity to take an open strike.	Lose your grip. You elect not to attack because of lost control.	Lose your grip. You elect not to attack. Good choice.
26-30	Drop your weapon. It will take 1 round to draw a new one, or 2 rounds to recover old one.	Drop your weapon. It will take 2 rounds to draw new one or 4 rounds to recover old one.	Fumble your delivery. You lose the option to attack but you can still parry.	Fumble your delivery. You lose 2 rounds but can still parry.	You fumble your delivery and hang onto your weapon. Subtract 10 from your next attack.	One's ten thumbs just cannot handle loading. You lose the rounds.
31-40	You slip with grace and lose the opportunity to get in the vital blow.	You slip into fog of mind. You lose 1 round in order to collect your thoughts.	You slip and are stunned for 1 round. All right, you just look clumsy. Try again.	You slip and lose your saddle position. You lose 2 rounds but can still parry.	You slip and lose 2 rounds to fully recover. You hold onto weapon and still parry.	You fumble your ammunition. You lose 2 rounds trying to recover. Real weak, kid.
41-50	Bad follow through. You lose your opportunity and give yourself 1 hit. Real weak.	Stumble over an unseen imaginary deceased turtle. You lose 2 rnds of offensive action but can still parry.	Lose your grip and juggle weapon for 2 rounds. You can still parry. Your next swing is at -10.	Your mount rears and you are quite stunned for 2 rounds during the recovery.	You fumble your weapon after losing your grip. You are stunned for 3 rounds.	Break arrow and lose your cool. You find yourself out of 2 rounds of action.
51-60	You slip without grace and lose 2 rounds worth of opportunities. Good luck Pal.	Bad move. You lose 2 rounds of open swings. Fortunately, you can still parry.	You slip and almost fall. You are stunned and unable to parry for 2 rounds.	You lose your grip and fumble your weapon. You are stunned for 3 rounds.	Poor release. Weapon lands harmlessly 20 feet to the left of target.	Drop your arrow. You lose 2 rounds reloading. Try hand arms next time.
61-70	Lose your grip and juggle your weapon for 2 rounds. You can still parry.	Lose you grip and juggle your weapon for 2 rounds. You can still parry.	Lose your grip and juggle your weapon for 3 rounds. Your next swing is at -10.	Your poor mount stumbles and you are stunned and unable to parry for 2 rounds.	Very poor release sends weapon off directly to the right. Reroll if someone lies in the new path.	Drop your bow. You lose 2 rounds while retrieving and reloading it.
71-80	Lose your grip and juggle your weapon for 2 rounds. Unfortunately, you cannot parry.	Very bad move. You are stunned and unable to parry for 2 rounds. Not good.	Fumble your follow-through. You lose 3 rounds. You are stunned for 2 rounds.	You break your weapon and lose 2 rounds while drawing a new one.	You slip and lose 3 rounds to fully recover. You hold onto weapon, but cannot parry.	Bowstring breaks. You lose 6 rnds while restringing bow or 2 rnds while drawing a new weapon.
81-85	You lose your "wind" and realise that you should relax and not swing for 2 rounds.	Lose your grip and juggle your weapon for 3 rounds. You can still parry.	Clumsy move. You are stunned and unable to parry for 3 rounds.	You drop your weapon in one of you lighter moments. Lose 2 rounds drawing a new one.	You drop your weapon. It will take 2 rounds to draw new one or 4 rounds to recover old one.	You fumble your weapon. You are stunned and quite unable to parry for the next 3 rounds.
86-90	Foe's smooth moves leave you stunned for 2 rounds. Hopefully, you will learn.	Incredibly bad move. You are stunned and unable to parry for 3 rounds.	Drop your weapon. It will take 2 rounds to draw new one or 6 rounds to recover old one.	You break your weapon and lose 2 rounds drawing a new one. You take 10 hits.	You fumble your weapon badly but hang onto it. You are stunned and unable to parry for 6 rounds.	You let your arrow fly much too soon. You strike 20 feet short of target. You are out 2 rounds.
91-95	You stumble. The classless display leaves you stunned for 3 rounds. You might still survive.	You stumble and nearly fall down in an apparent attempt to commit suicide. You are stunned 4 rounds.	You trip and fall. It will take 4 rounds to recover. You are unable to parry for 3 rounds.	Your seating is improper and you find yourself stunned and unable to parry for 3 rounds.	You let go of weapon too early and send it off 30 feet behind you.	Slip and fall down. You are stunned for 6 rounds, and unable to parry 2 rounds. Your shot goes astray.
96-99	Swallow tongue in the excitement. You are stunned and unable to parry for 3 rounds.	You trip and fall. It will take 4 rounds to recover. You are unable to parry for 3 rounds.	You injure your shoulder. You are stunned and unable to parry for 3 rounds and fight at -25.	Your body absorbs the impact. You take 20 hits and are stunned and unable to parry for 6 rounds.	You fall down. Your shot goes astray. You are stunned for 12 rounds.	Break your bow. You are stunned and unable to parry for 4 rounds of action. Good luck, pal.
100	Bad taste and poor execution. You attempt to maim yourself. Roll on the "D" critical table (slashes).	Worst move anyone has seen in ages. 50% chance you are out 2 days with a pulled groin. 50% chance opponent out 3 rounds laughing.	You break your weapon and are stunned and unable to parry for 6 rounds.	You fall off of your mount. Role on the "D" crush critical strike table.	You hit yourself during delivery. Roll on the "D" critical strike table (crushes).	Poor judgement. You let arrow fly and lose an ear. +5 hits. You take 2 hits per round.

	Mini Weapon	Energy (1-handed)	Energy (2-handed)	Projectile (1-handed)	Projectile (2-handed)	Grenade/ Missile Launcher
01-25	Fumbling with your weapon, you miss an opportunity. No firing 'till the next available phase.	Trigger, trigger, where is the trigger? Forget shooting this fire phase.	Poor grip. Try next Phase.	Mysteriously, you elect not to fire at this time.	A moment's hesitation loses you the opportunity to fire this phase.	Uncertain aim causes you to elect to not fire this phase.
26-30	One's ten (12?) thumbs just cannot locate that eluse trigger. No further activity for you this round.	Stun, disrupt, vaporize or purée? The little dials on your weapon give you pause for a whole round.	Worse grip. Try again next round.	Your clumsy maneuvers prevent an effective shooting opportunity. Try again next fire phase.	Poor grip and nasty kickback conspire to deliver 10 hits (and you miss).	Your slowness with the weapon causes you to delay firing till next phase.
31-40	You discover just before firing that you are holding the thing backwards. Spend the rest of the round to re-orient. Read the manual next time!	The Safety was on. -50 to activity for this round and the next while trying to recover your self-confidence.	Get a grip. You are stunned (for 1 round) by your own incompetence.	Distracted by the Winged Victory of Samothrace, you fail to fire this round.	You empty the clip into the air, then you're stunned for 1 round as you realize your foolishness.	You elect not to fire for a full round.
41-50	Lose your grip. No further activity for the next round.	Oops, that was the cartridge ejection button, not the trigger. Spend 1 round re-inserting your weapon's power supply.	Cleverly, you eject the weapon power pack and watch it bounce a full 3m away. Spend 2 rnds inserting a new power supply, or 3-5 rnds recovering that one.	Get your eyes checked. Momentary double vision convinces you to wait out the rest of this round (you are at -50).	You empty a round/burst into the ground. Your sheer incompetence costs you 2 rounds of stunned amazement.	You tilt the launcher forward and all of its ammunition tumbles out onto the ground. Faulty loading by somebody.
51-60	You mishandle your weapon and are unable to fire for one round.	You really mishandle your weapon and are stunned for the next round.	You fire the weapon into the ground at your feet. ("Just testing the power charge.")	The ammo cartridge is jammed. It will take 2 rnds to draw a new weapon or 1-6 to wrest this one free.	Slight sprain to your non-weapon wrist causes all further 2-handed attacks to be at -20. You take 5 hits.	Confusion and a personal crisis stun you for 2 rounds.
61-70	Random distractions stun you for 1 round.	Trembling hands cause you to rethink your tactics. Take deep breaths for 2 rounds (i.e. you're stunned) to calm yourself.	You really, really mishandle your weapon and are stunned for the next 2 rounds.	Your spastic shooting hits 3 meters short of the target. You are at -30 to activity next round.	Break a finger and take 8 hits. You are stunned 2 rounds, and all weapon attacks using that hand are at -70.	A mental lapse: Did I load fusion missiles or smoke grenades? gives you pause for 3 rounds of complete inactivity.
71-80	The weapon pops open in your hand, and the energy cell(s) tumble merrily away. Spend 1 round per cell recovering and reinserting them.	A muscle spasm delivers 10 hits and stuns you for 2 rounds.	A painful muscle spasm delivers 12 hits and stuns you for 2 rounds.	Poke yourself in the eye while trying to get fancy. +8 hits, -20 to activity and stunned 2 rounds.	Trigger slips as you take aim. Make an attack with no modifications on the closest opponent.	Premature ejection causes the grenade to fire 30° to the left of intended target.
81-85	Suddenly more slippery than a greased tachyon, the little toy pops out of your hand and hits the floor. Make a Light roll on the Equipment Mishandling Chart.*	As if of its own volition, your weapon leaps out of your hand. Check the Equipment Mishandling Chart.*	Have you ever used one of these before? You drop your precious weapon. Check the Equipment Mishandling Chart *	Those pistols are a little tough to get a grip on. You unceremoniously drop the thing and it bounces a good 2 meters away. Check the Equipment Mishandling Chart *	Whirling around for no apparent reason, you bash your weapon against a nonagressive surface. Check the Equipment Mishandling Chart *	You manage to hit yourself with the weapon and take 8 hits, stunned 3 rounds.
86-90	Trip over yourself and fire into space. Two rounds of stunned contemplation will return you to your equilibrium.	A cruel flashback from your childhood leaves you stunned 2 rounds.	The weapon separates in your hands for easy storage. 1 round stunned and staring, and 2 rounds frantically putting it back together.	Cartridge drops out of weapon, scattering ammo, on which you slip and fall down in a comic display. You are down and stunned next round (and red-faced).	Horror at your own shooting ineptitude stuns you for 3 rounds.	Improper loading (whose fault is that?) causes the grenade to travel only half of the intended range.
91-95	You drop your weapon then step on it. Real swift, buddy. Make a Very Severe roll on the Equipment Mishandling Chart.*	Your funny bone isn't always so funny, is it? You're stunned 4 rounds of intense agony.	Instead of your original target, you fire at the phantasmal Vogon Bulldozer 30° to the right. (You miss.)	Fingers mysteriously entangled in weapon cause you some consternation and 3 rounds of stunned extrication.	Burn yourself on the hot casing as you fire ineffectively. You take 4 hits and are stunned two rounds.	Your exhuberant hefting of the weapon gives you a hernia. +15 hits, and you are at -70 until cured.
96-99	Your clumsy fingers jam the firing mechanism. Spend 3 rounds unjamming it.	You seem to think that your weapon is a baton. It slips, however, and in trying to recover it you drop-kick it 3 meters away. Check the Equipment Mishandling Chart.*	You boldly go… on your face. Fall down, on top of your precious weapon, and make a Severe roll on the Equipment Mishandling Chart.* You are also down and stunned for 1 round.	While daydreaming, you put your hand in front of the barrel while firing. Lose a finger. +10 hits; 5 hits per round and stunned 3 rounds.	Very poor grip causes you to fire wildly. 20% chance you hit someone in a 180° arc in front of you (roll attack w/no skill bonus). Your foolishness stuns you for 4 rounds.	Too late, you realize you are aiming the thing backwards. Your shot fires exactly 180° from the intended direction, roll randomly for range.
100	Poor judgement and worse aim. You pull the trigger, lose an ear and take two hits per round.	Only you could get your finger caught in the trigger. You are stunned for 4 rounds of action. Try surrendering.	That heavy gun slips in your sweaty palms as you fire. You shoot off your toe. Now you're at -50 an take 8 hits, 2 hit per round, and are stunned next rnd.	You artfully spin the weapon in your hand and deal a point-blank burst attack on yourself (no skill bonus). Roll the attack and say your prayers, buddy.	You pull the trigger and empty the gun into your own foot. + 20 hits; 8 hits per round. -70 to activity and stunned 3 rounds.	With a puff of smoke and a "foof", the grenade plops out of the launcher and lands at your feet. It will detonate before you can move. Panic.

* Refer to the Equipment Mishandling Chart in the **Player Book**, pg 77.

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