REFEREE SCREEN

COMBAT

INITIATIVE

Initial round, roll 2D6+ Dex DM for unprepared combatants, take a straight 12+Dex DM for prepared fighters. The highest Effect of any Tactics rolls made for each side gets added to each allied combatant's initiative. Initiative remains the same throughout combat, any effects that change initiative only last for one round. You may hasten once each round to add +2 to initiative at the cost of a -1 DM to all actions that round.

ACTIONS

Each round you get two minor actions, one significant action, unlimited reactions and a reasonable number of free actions.

MINOR ACTIONS

Move: Six metres per minor action. Halved in rough terrain or while crouching.

Change Stance: Switch from standing, crouched or prone to any other position.

Draw/Reload: Usually 1 minor action each, but various weapons take longer.

Aim: Get +1 to next ranged attack so long as you take no other action before shooting. May aim until your bonus is +6.

Miscellaneous: Take any action or skill roll that a person could reasonably do with only part of their attention, such as scanning an area or grabbing something within reach.

SIGNIFICANT ACTIONS

Minor: Trade in significant action for two minor actions.

Miscellaneous: Any action or skill roll that requires your full attention.

Attack: Pick a target within range of the weapon you're using. Allow target to declare any reactions. Roll 2D6+Attack Skill+Characteristic DM (Dex or Str for Melee, Dex for Ranged and Thrown)

Attack Bonuses: +1 per level of aiming, +1 if aiming with sight or scope, +1 for intelligent weapon with Computer/0 if total DM is 0 or better, +1 for intelligent weapon with Computer/1 if total DM -2 or better, +2 vs. prone at Personal range.

Attack Penalties: DM -1 for ½ cover, -2 for ¾ cover or -4 for full cover, -1 per full 10 metres target moves, -1 if target dodges as a reaction, -1 or -2 in unfavorable environments, -2 vs. prone target at Medium or greater range, -X where X is target's Melee skill when they parry as a reaction.

After using a weapon, subtract (Weapon's Heft/Recoil-Str DM) from your initiative. Add 1 to Recoil if firing an automatic weapon in burst mode or add half the Auto rating if firing full auto.

Leadership: Make a Leadership check and add the Effect to any one allied character's initiative.

FREE ACTIONS

Anything that requires very little thought or effort. Only limited by what the referee deems logical.

EXTENDED ACTIONS

Multi-round actions that require full concentration. The only thing you can do during this actions is stop and get back into combat or continue. Each time you take damage roll 8+ with the extended task's skill, with the total damage as a negative DM. Failure means this round doesn't count against the time to finish. Total Effect of -6 or worse means you have to start over.

DELAY

Set your initiative to any number below your true total to act later in the round. If you don't act at all, you get to go first in the next round with initiative equal to the highest initiative in the group, +1.

RAPID FIRE

Firing automatic weapons in Burst mode adds the Auto rating to the damage and uses the Auto rating in rounds.

In full-auto, roll dice equal to the Auto rating, and pair off as you like. Each pair attacks any number of targets within 6 metres of each other. You don't benefit from ranks in your attack skill greater than 1. Auto-fire uses Auto x3 rounds.

RANGE

Range	Distance (metres)
Personal	<1.5
Close	1.5-3
Short	3-12
Medium	12-50
Long	51-250
Very Long	251-500
Distant	501+

INTERSTELLAR TRAVEL

Jumps take place at least 100 diameters distant from any object (140,000,000 km from Sol). The ship travels a number of parsecs equal to it's Jump rating. Transit takes 148+(6D6x6) hours. Each jump follows the same procedure:

Astrogation: Requires Astrogation+Edu (DC +4) 10-60 minutes. Subtract Jump number from the DC. Impossible to jump without plotting a course. Can do this before the jump, and may retry before jumping.

Divert Power: Requires Engineer (jump drive)+Edu (DC +0) 10-60 seconds. Ship requires sufficient power. Effect of this roll adds to the next roll.

SPACECRAFT OPERATIONS

Docking: Pilot+Dex (+2 DM) 1-6 minutes. DM is -2 if either vessel unpowered.

Boarding: Requires flying up to and matching position and speed with victim at -2 DM. May attach airlocks, boarding tubes or use battledress marines.

Atmospheric Flight: For streamlined ships, no penalty and may use either Pilot or Flyer (winged). Standard ships use Pilot at -2. Distributed ships must roll Pilot every minute at -4 or take 2D6 damage.

Landing: As atmospheric flight. Normally takes 10-60 seconds. Landing at a Starport is +2 DM. Most ships have landing gear, and can land on bare ground with +0 to -4 DM. Non-distributed ships can land on water.

Damaged Systems: Jury-rig from spare parts. Roll Mechanic, Engineer (appropriate) or Science (appropriate) and take 1-6 hours. It takes 1 ton of spare parts (Cr. 10,000 per ton) to complete the "repair", and this amount is reduced by 20% per point of Effect over 0, to a minimum of 0 tons. Jury-rigging lasts 1D6 hours before you need to make a real repair.

Destroyed Systems: Requires Cr. 2D6x10% and can't be fixed with spare parts. Must acquire the parts at an appropriate TL facility or high-class spaceport.

Damaged Hull: Requires a Mechanic check, 1 to 6 hours and 1 ton of spare parts.

Damaged Structure: Requires a shipyard. It takes 1-6 weeks and Cr. 500,000 per point of structure.

Jump!: Roll 2D6, add Effect of Divert Power, -2 per Jump drive hit, -2 for unrefined fuel, -8 if still in the 100-diameter limit. Result of 0 or less is a mis-jump, 8+ is a success. 0-8 is an inaccurate jump that results in minor inconvenience.

MIS JUMPS

All sorts of badness. Anything from death, to mutations, ending up in an alternate universe, or just the standard destination of 1D6x1D6 parsecs in a random direction.

Refueling: Available at almost any spaceport for Cr. 500 per ton, or Cr. 100 for unrefined fuel. Streamlined ships have fuel scoops that can synthesize fuel from a bodies of water or from skimming inside a gas giant. Skimming takes 1-6 hours and requires a Pilot check. Skimmed fuel is unrefined but any ship equipped with a refinery can process it.

OPERATIONAL COSTS

Mortgage: Total ship cost after ship shares/240 per month (40 years)

Life Support: 2k/state room (3k/double occupancy) 100 per low berth

Fuel: 500/ton of refined, 100/ton of unrefined

Maintenance: 1/12 list price x 0.001 per month

Pilot Salary: 6,000

Navigator Salary: 5,000

Engineer Salary: 4,000

Steward Salary: 2,000

Medic Salary: 4,000

Gunner Salary: 2,000

Marine Salary: 2,000
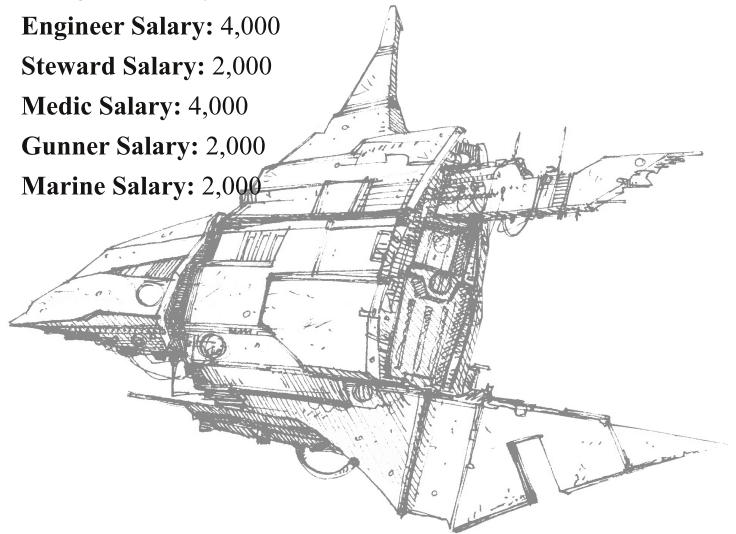
SPACE COMBAT

Figure out range from the range table; random encounters start at Very Long by default. Determine Initiative by rolling 2D6, +1 for the ship with the highest thrust. The captain or fleet commander of each side may add Tactics Effect.

CREW POSITIONS

Captain: Commands the ship. Rolls Tactics and Leadership to enhance Initiative.

Pilot: One per ship. Flies and carries out manoeuvres. May be automated by Intellect program and Expert Pilot software.

Gunners: One per turret or bay. Fires weapons or sandcasters. Can be automated or assisted by Fire Control software.

Sensor Operators: Lock on targets and perform electronic warfare.

Engineers: Tend the drives. Can be automated by repair drones and an Intellect program with Expert Engineer (J-drive or M-drive).

Damage Control: Fixes damage throughout the ship. Can be automated by repair drones.

Marines: Repel or participate in boarding actions.

MANOEUVRE PHASE

Pilot allocates Thrust to adjust or maintain combat range. Leftover Thrust is saved for manoeuvres in the next phase.

COMBAT PHASE

Pilot uses 1 Thrust to either **dock with a ship** with a Pilot roll, with -2 DM if ship tries to avoid or makes a Pilot roll to **line up a shot** to assist gunners, as a task chain, and saves leftover Thrust to use for defensive reactions.

Gunner may **fire any beam weapons** in turret or bay once per turn. Roll relevant Gunnery skill with the appropriate Range DM.

Gunners may **launch missiles** with appropriate Gunnery skill. Missiles close distance at Thrust 5. Point defense and other reactions apply on the turn they would hit. On the "hit" turn, consult the Missile Table to see what you need to roll for a hit. Regular missiles vanish if they miss, **smart missiles** attack every turn until they are destroyed, jammed or otherwise stopped.

Marines may board when docked or cross space in battle dress or small craft. They are vulnerable to point defense and sandcasters (8D6 damage to people).

SPECIAL WEAPONS

Meson Guns: Ignore armor, always roll on the internal damage table and also inflict a radiation hit.

Fusion Guns: Inflict radiation hits plus regular damage. Radiation hit has -DM equal to ship's armour.

Particle Beams: As fusion guns.

Nukes: As fusion guns.

Sandcasters: Primarily for defense. May attack ships with a range of Close, and do 1 damage. Do 8D6 versus marines in battle dress.

REACTIONS

When targeted by a beam weapon, a missile is incoming or marines attempt boarding from space, you may take one reaction per turn for every 4 initiative, round up, to a maximum of 4 at 13 initiative. May reduce initiative for next turn to gain 1 reaction per 2 initiative lost.

Spend 1 Thrust to **dodge enemy fire**. Roll Pilot to impose -2 DM on the attack.

Gunner may engage **point defence versus incoming missiles and boarders**. Roll Gunnery (turrets) against missiles until you miss. Each attack imposes a cumulative -1 DM on the next.

Gunners can **fire sandcasters to intercept beam weapons**. Roll Gunnery (turrets) and reduce the damage of all beams in the attack by 1D6 per sand canister expended if successful.

Commander or gunners may **trigger defensive screens versus incoming nukes, fusion guns or meson guns** with Gunnery (screens). Requires radiation screens for nuke and fusion guns and meson screens for meson guns. Reduces damage by 2D6+operators Gunnery (screens) and negates radiation hits from nukes and fusion guns.

RANGE TABLE

Range	Distance (km)	Thrust to Change	Example
Adjacent	<1	1	Docked
Close	1-10	1	Nearby
Short	10-1,250	2	Same orbital path
Medium	1,250-10k	5	Orbit to surface
Long	10k-25k	10	Near planet
Very Long	25k-50k	25	Within jump distance
Distant	50k+	50	Distant ships

SPACE COMBAT, II

SHIP ACTION PHASE

Damage control may Roll Mechanic+Edu to **repair damaged systems**. Effect 1 repairs 1 hit, 2-5 repairs 2 hits and 6+ repairs 3 hits. Automated systems make 1 or 2 rolls per turn.

The sensor operator may roll Sensors+Edu to **establish a sensor lock**. Sensor locks provide a +1 DM to all rolls made by gunners targeting the enemy ship. They may also roll Sensors+Int for **electronic warfare**. This can jam radio communications or break a sensor lock. Can attempt to stop smart missiles by making the same roll at -2 DM, doing this until you fail. For each success you destroy one smart missile and the next roll gets a cumulative -1 DM.

The captain can **issue orders** or make a Leadership roll to **increase initiative** by the Effect for the next turn.

Any crew member may forego any actions to **move to another position**, where they will be active on the next turn.

DAMAGE

Hits on ships cause damage, either to systems or subtracted from Hull and Structure. When Structure reaches 0, the ship is destroyed. Systems can withstand a number of hits listed in their description. For each hit, subtract Armour from the damage rolled, then consult the Hit Damage table to see what the ship suffers.

See how many hits are done, then roll on the Hit Location table to determine where the weapons strike. Double hits apply two hits to one location, triple hits apply three. Ships of 100 tons or less use the Small Craft section, larger ships roll on the Exterior section until their Hull is depleted, then they switch to the Interior section.
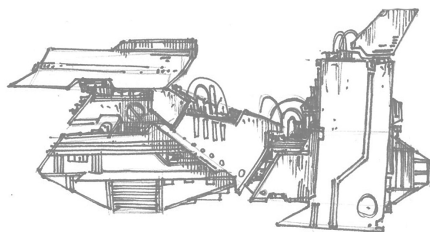
HIT DAMAGE

Damage	Effect
1-4	Single Hit
5-8	2 Single Hits
9-12	Double Hit
13-16	3 Single Hits
17-20	2 Single Hits, 1 Double Hit
21-24	2 Double Hits
25-28	Triple Hit
29-32	Triple Hit, Single Hit
33-36	Triple Hit, Double Hit
37-40	Triple Hit, Double Hit, Single Hit
41-44	2 Triple Hits
Per extra 3 points	Single Hit
Per extra 6 points	Double Hit

SYSTEM DAMAGES

Hull: Reduce Hull by 1 per hit. If 0, reduce Structure instead.

Structure: Reduce Structure by 1 per hit. Ship destroyed at 0.

Armour: Reduce Armour by 1 per hit. If 0, reduce Hull instead.

Turret: All attacks gain -2 DM. Second Hit: Disabled. Third Hit: Destroyed. Subsequent Hits: Damage Hull.

Bay: All attacks gain -2 DM. Second Hit: Disabled. Third Hit: Destroyed. Subsequent Hits: Damage Structure.

J-Drive: All Engineering (jump) rolls gain -2 DM. Second Hit: Disabled. Third Hit: Destroyed. Subsequent Hits: Damage Structure.

M-Drive: Reduce Thrust by 1. Second Hit: Reduce Thrust by 50%. Third Hit: Disabled. Subsequent Hits: Damage Hull.

Power Plant: Damaged. Second Hit: Radiation Crew hit. Third Hit: Destroyed, ship disabled. Subsequent Hits: Damage Structure.

Sensors: -2 DM on Sensors checks. Second Hit: Disabled and can't attack beyond Adjacent range. Third Hit: Destroyed. Subsequent Hits: Damage Hull.

Bridge: Normal Crew hit. Second Hit: Disabled, can't take Pilot or Sensors actions or jump and attacks gain -2 DM. Third Hit: Destroyed. Subsequent Hits: Damage Structure.

Fuel: Leak 1d6 tons per hour. Second Hit: Destroy 1d6x10% of fuel. Third Hit: Destroyed. Subsequent Hits: Damage Structure.

Hold: Destroy 1D6x10% cargo. Second Hit: Destroy 1D6x10% cargo. Third Hit: Destroyed. Subsequent Hits: Damage Structure.

Crew: Roll 2D6 on Normal or Radiation section of Crew Damage table, as directed.

SPACE COMBAT, III

QUICK BOARDING

To resolve boarding actions without playing through each round of combat, roll 2D6 for both sides. Apply the following modifiers:

Better Armour: +1
Better Weapons: +1
Better Tactics and Skills: +2
Greater Numbers: +1
No Defending Marines: -2

WEAPON RANGE MODIFIERS

Weapon	Adjacent	Close	Short	Medium	Long	Very Long	Distant
Pulse Laser	-1	-1	+0	-1	-2	-3	X
Beam Laser	-2	-1	-1	+0	-1	-1	-2
Particle Beam	-3	-2	-1	-1	+0	-1	-1
Fusion Gun	-2	-2	-1	+0	-1	-1	-2
Meson Gun	-4	-3	-2	-1	+0	-1	-2
Sandcaster	-2	+0	-2	X	X	X	X

Difference	Attacker Success	Defender Success
1-3	Defender loses free ship action this round. You get +2 DM on next round's boarding roll. Ship suffers one hit.	You get +2 DM to next round's boarding roll. Ship suffers one hit.
4-6	Boarding successful; ship takes 2D6 hits. Take control after another turn of boarding.	Boarders driven off. Must flee or be captured.
7+	Boarding immediately successful.	Boarders captured. May mount counterattack if docked. You get +4 DM on first turn of the attack.

CREW HITS

2D6	Normal Hit	Radiation Hit
2-4	No damage	No damage
5-8	2D6 to one crew	2D6x10 rads to one crew
9-10	4D6 to one crew	4D610 rads to one crew
11	2D6 to all crew	2D6x10 rads to all crew
12	4D6 to all crew	4D6x10 rads to all crew

EXPOSURE

Source	Rads
Minor Reactor Leak	2D6/hour
Major Reactor Leak	2D6/20 minutes
Minor Solar Flare	1D6x100/hour
Major Solar Flare	3D6x100/hour

MISSILES

Gunnery Roll Effect	Missile to-Hit
-6 or worse	11+
-2 to -5	10+
-1	9+
+0	8+
1 to 5	7+
6+	6+

Ways to reduce radiation include:
Vacc Suit: -50 rads
Hazard Suit or Battle Armour: -200 rads
Starship Armour: -500 rads

DAMAGE LOCATIONS

2D6	Small Craft	Exterior	Interior
2	Hull	Hull	Crew
3	P-Plant	Sensors	J-Drive
4	M-Drive	M-Drive	P-Plant
5	Fuel	Fuel	Bay
6	Hull	Hull	Structure
7	Armour	Armour	Hold
8	Hull	Hull	Structure
9	Turret	Turret	Bay
10	Hold	M-Drive	J-Drive
11	P-Plant	Sensors	P-Plant
12	Bridge	Hull	Bay

RADIATION HITS

Exposure	Immediate Effects	Cumulative Effects
<50 Rads	None	None
51-150	Nausea, -1DM to all rolls until treated 1D6 damage	None
151-300	2D6 burn damage	-1 End permanently
301-500	4D6 burn damage, hair loss	-2 End permanently
501-800	6D6 burn damage, sterility	-3 End permanently
800+	8D6 burn damage, internal bleeding	-4 End permanently
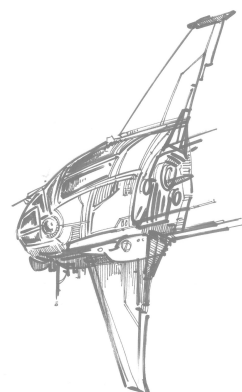
EQUIPMENT, I

Armour subtracts protection from any damage done. Any armour with a skill requirement imposes a -2 DM on all actions per missing level (including 0). HEV, vacc suits, combat armour and battle dress all protect against the vacuum of space, with basic life support for six hours. Battle dress and HEV subtract their TL from any damage done by environmental factors.

Battle Dress 1 adds +4 to your Str and Dex, and includes Computer/2 running Expert Tactics (military)/2. Battle Dress 2 upgrades the Str bonus to +6 and the Computer to 3. The second weight listed for battle dress shows the relative weight upon the wearer.

Ablative armour's rating lowers by 1 every time it's hit by a laser.

ARMOUR

Name	Protection	TL	Skill	Cost	Weight (Kg)
Leather	1	1	X	50	1
Mesh	2	6	X	150	2
Ballistic Cloth	3	7	X	250	2
Advanced Cloth	5	10	X	500	1
Flak	4	7	X	100	2
Advanced Flak	6	8	X	300	2
Vacc Suit 1	4	8	Vacc Suit 1	7,000	24
Vacc Suit 2	6	12	Vacc Suit 0	10,000	12
Vacc Suit 3	8	14	Vacc Suit 0	13,000	4
HEV 1	6	8	Vacc Suit 2	12,000	36
HEV 2	7	9	Vacc Suit 2	16,000	27
HEV 3	8	12	Vacc Suit 1	18,000	18
HEV 4	9	13	Vacc Suit 1	20,000	12
HEV 5	10	14	Vacc Suit 1	150,000	6
Ablative	1(6 vs laser)	9	X	75	2
Reflective	0(10 vs laser)	10	X	1,500	1
Combat Armour 1	12	11	Vacc Suit 0	200,000	18
Combat Armour 2	14	12	Vacc Suit 0	300,000	10
Combat Armour 3	16	14	Vacc Suit 0	600,000	6
Battle Dress 1	16	13	Battle Dress 1	2,000,000	26(6.5 powered)
Battle Dress 2	18	14	Battle Dress 1	3,500,000	12(3 powered)

SLUGTHROWERS

Name	Damage	Auto	Recoil	Magazine	TL	Cost	Ammo Cost	Weight
Antique Pistol	3D6-6	No	-1	1	3	100	5	1
Revolver	3D6-3	No	0	6	5	150	5	1
Autopistol	3D6-3	No	0	15	6	200	10	0.5
Snub Pistol	3D6-3	No	-	6	8	150	10	-
Body Pistol	3D6-3	No	-1	6	8	500	20	-
Gauss Pistol	3D6	4	-1	40	13	500	20	0.5
Antique Rifle	3D6-3	No	-1	1	3	100	10	6
Rifle	3D6	No	0	20	5	200	10	5
Auto Rifle	3D6	4	1	20	6	1,000	10	5
Assault Rifle	3D6	4	1	30	7	500	15	4
Accelerator	3D6	No	-	15	9	900	30	2
ACR	3D6	6	0	40	10	1,000	15	3
Gauss Rifle	4D6	4	0	80	12	1,500	40	4
Shotgun	4D6	No	2	6	4	200	10	4

The ACR includes IR vision, a rangefinder, 5x zoom and low-light amplification. Antique weapons gain -1 DM to make any attacks, unless exceptionally built. It takes three minor actions and a successful roll of the skill you use to fire them to reload.

Assault rifles fire as Assault weapons on the Range Modifiers table. Body pistols are easy to conceal and impose -4 DM to find them when searched. Revolvers and Rifles take 2 minor actions to reload. Shotguns do half damage against Armour but dodging as a reaction has no effect. If they fire slugs, treat them as rifles.

EQUIPMENT, II

MELEE WEAPONS

Name	Damage	Heft	TL	Cost	Weight
Unarmed	1D6	-	-	-	-
Improvised	2D6-2	1	-	-	2
Club	2D6	0	1	-	1
Dagger	1D6+2	-	1	10	-
Shield	1D6	-	1	50	3
Staff	2D6	1	1	-	2
Blade	2D6	-	2	50	0.5
Broadsword	4D6	2	2	100	3
Cutlass	2D6+4	-1	2	300	1
Rapier	1D6+4	-2	3	300	0.5
Stun Stick	1D6	-	8	100	0.5

Blades and daggers attack as small blades. Daggers may be thrown and add +4 to any damage you do in a grapple.

Shields add +1 to Melee (unarmed) and rapiers add +1 to Melee (blade) to parry.

Stunsticks do 2D6 additional stun damage. Must roll End with a negative DM equal to the stun damage, after applying armour. If you fail the End roll, you fall unconscious.

WEAPON OPTIONS

Grenade Launcher (TL 8): Acts as a RAM launcher. Holds 1 grenade. Must fire singly. Takes 4 minor actions to reload. Cr. 1,000.

Gyrostabiler (TL 9): Reduce recoil by 1. Cr. 300.

Intelligent Weapon (TL 11): Adds Computer/0. Cr. 1,000. At TL 13 adds Computer/1 for Cr. 5,000.

Laser Sight (TL 8): Adds +1 to any aimed shot. Cr. 100. TL 10 version removes the visible dot. Cr. 200.

Secure Weapon (TL 10): User have some sort of ID. Cr. 100.

Silencer (TL 8): Gives any weapon with Auto 4 or less -4 DM to hear. Cr. 250.

WEAPON RANGE MODIFIERS

Name	Personal	Close	Short	Medium	Long	Very Long	Distant
Unarmed	+0	-1	X	X	X	X	X
Small Blade	+0	-1	X	X	X	X	X
Large Blade	-1	+0	X	X	X	X	X
Bludgeon	-1	+0	X	X	X	X	X
Thrown	X	+0	-1	-2	X	X	X
Pistol	-1	+0	+0	-2	-4	X	X
Rifle	-3	-1	+0	+0	+0	-2	-4
Shotgun	-2	+0	-1	-2	-3	X	X
Assault	-1	+0	+0	+0	-2	-4	-6
Rocket	-4	-2	-1	+0	+0	-2	-4

ENERGY WEAPONS

Name	Damage	Auto	Recoil	Magazine	TL	Cost	"Ammo"	Weight
Laser Pistol 1	3D6	No	-	100	9	2,000	1,000	3
Laser Pistol 2	3D6+3	No	-	100	11	3,000	3,500	3
Stunner 1	2D6	No	-	100	8	500	200	0.5
Stunner 2	2D6+3	No	-	100	10	750	200	0.5
Stunner 3	3D6	No	-	100	12	1,000	200	0.5
Laser Carbine 1	4D6	No	-	50	9	2,500	1,000	4
Laser Carbine 2	4D6+3	No	-	50	11	4,000	3,000	3
Laser Rifle 1	5D6	No	-	100	9	3,500	1,500	8
Laser Rifle 2	5D6+3	No	-	100	11	8,000	3,500	5
Plasma Rifle	6D6	No	-1	X	16	100,000	X	6

Laser carbines fire as assault weapons, rather than rifles. Plasma rifles feature reactors that cause them to never run out of energy. Stunners only do stun damage. After being hit, the target makes an End roll with a negative DM equal to the damage done, after applying armour. If it fails, the target falls unconscious, if it succeeds, the target suffers no damage.

Energy weapons can plug into a ship's power supply to recharge in 8 hours. You can keep extra packs on hand to switch out in the heat of combat. It takes 2 minor actions to swap power packs.