SPACE PATROL!

TECHNICAL MANUAL

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Action Edition

INTRODUCTION

This booklet contains the statistics for the weaponry, armor, and tools for use in Space Patrol! Certain common elements will appear in most lists, most notably, Development Index (DI), Inventory Code, and Equipment Bonus. Notice that there are no prices listed since Space Patrol is not a game with a focus on treasure, money or spending in general. How many times does Buck Rogers, Flash Gordon or James Kirk reach for his wallet?

Development Index
Economies in the 25th century are rated by a 1-10 Scale called the Development Index:
DI-1 Primitive: people live in hunter-gatherer bands using stone tools.
DI-2 Pre-Industrial: people live in farming communities and cities. They use metal tools, but do not have mass production. Equivalent to Earth from 4000 BC to 1800 AD.
DI-3 Basic Industrial: population is more urbanized with mass production, railroads, telegraphy. Equivalent to Earth 19th century.
DI-4 Developed Industrial: massive urbanization, aircraft, automobiles, rocketry. Equivalent to Earth 20th century.
DI-5 Advanced Industrial: sophisticated computers, advanced, reusable rocketry, in-system space travel. Equivalent to Earth 21st century.
DI-6 Early Warp Space Drive 1, Anti-matter power. 22nd century equivalent.
DI-7 NEL Standard: Space Drive 2, 25th century, developed worlds of the NEL
DI-8 NEL Advanced: Space Drive 3, 25th century, best progress on Earth
DI-9 Ultra-Tech: Space Drive 4+, cutting edge of Earth secret research and some alien worlds
DI-10 Ancient Relic: super weird stuff, found in ancient ruins of immense antiquity.

Inventory Codes
Each combatant can wear 1 suit of armor, carry 1 code M, 1 code S and 4 code D items. A code H weapon replaces the M and one of the D slots. The remaining codes are vehicle mounted items: LV, MV and A.
Code M: main personal weapon; **Code S**: sidearm; **Code D**: Device; **Code H:** heavy weapon; **Code LV**: light vehicle weapon; **Code MV**: major vehicle weapon; **Code A**: Artillery piece. Space weapons do not have a code.
Note that Codes M, S and H include sufficient reloads of ammunition for most situations.

Equipment Bonus
The equipment bonus is the amount added by a character when attempting a task which has this equipment listed in its description. So if the task reads *DT 12; Medicine; Med Kit*; the Med Kit's equipment bonus is added to the task roll. If a character could get an equipment bonus from two different items, he receives the higher of the two and does not combine them.

SECTION 1: WEAPONS

Reading the Weapons Tables

 The various weaponry available are arranged in a series of tables based on which Asset is used to make attack rolls.   Here, however are some examples for explanation purposes.

Weapon	#Att.	Max Hits	Range	Damage	Equip. Bonus	Magazine	Inventory	DI
Musket	1	1	10/20/40	2/1/0	0	1-SL	M	2
Shotgun-Pump	1	4	12/24/48	1/0/0	4/2/1	8	M	4
Laser Pistol	1	3	30/60/90	5/4/2	2/2/1	20	S	8
Pulse Carbine	2	10	40/80/120	7/6/3	4/4/2	10	M	7
Auto-Laser	4	30	50/100/150	8/7/4	5/4/3	4	H	7
Lt. Plasma Gun	1	3	50/100/150	30/28/14	0	PP	LV	8

 # Att.: the number of separate attack rolls that can be made with the weapon in a single turn. The attacks can be against the same target or any target within 3" of the first.
Max Hits: the total maximum number of hits that can be scored with the weapon in a single turn, combining all the regular hits and special success. For most weapons, this is the number of individual bullets, laser bolts etc., discharged each turn, for shotguns and some Armor Piercing shells it represents the numerous smaller pellets or AP design.
Range: the number of inches for Effective/Long/Extreme Ranges for the weapon. Some missiles and artillery pieces range is listed in km. Space weapons are rated in space hexes.
Damage: the bonus added to the damage roll at Effective/Long/Extreme Ranges. Note that a damage rating of 0 does not mean it does no damage, but rather it adds nothing to the roll. A damage rating of X means it does no normal damage, but usually substitutes a special effect.
Equip. Bonus: the equipment bonus added to attack rolls at Effective/Long/Extreme Ranges
Magazine: the number of turns of firing before the weapon needs to be reloaded. Note that suppression and point-defense actions count as 2 turns each. Sometimes this reflects the number of bullets in the gun (Musket, Shotgun). Sometimes it represents the number divided by the shots delivered per turn. An auto laser has a magazine of 4, representing 120 bolts divided by 30 per turn. If the magazine has the code **SL**, it means slow-loading which requires both a Move and Action to reload. Code **PP** means as long as the vehicle the weapon is mounted in has a working power plant (i.e., the vehicle is not wrecked) the weapon does not run out of ammunition.
Inventory: whether the weapon counts as a Main Weapon (M), Sidearm (S), Heavy Weapon (H), Light Vehicle mounted (LV), etc. for inventory purposes. Space Weapons replace Inventory with "Slots" (each spacecraft has 1 available slot per 1000m3 of hull).
Burst Area Hits: some explosive weapons have a burst area (usually given in the format like 2x2, meaning 2 inches by 2 inches). The shooter (or thrower) makes an attack roll normally, but whatever target is hit will take the Contact Damage listed for the weapon, and all other combatants in the burst area, centered on the Contact Hit will take the Burst Damage, without need for a further attack roll. Weapons with a Burst Area attack do not get multiple hits from Special Success even on the Contact hit.
Hand-to-Hand Weapons all have a 1 for number of attacks, replace "Range" with "Reach" and replace "Magazine" with "Hands" (whether the weapon is used in 1 hand or 2, those using a 2-handed weapon may not use a shield or riot shield).

1.1—FIREARMS:

These weapons use the Firearms Asset

Weapon	#Att.	Max Hits	Range	Damage	Equip. Bonus	Magazine	Inventory	DI
Musket	1	1	10/20/40	2/1/0	0	1-SL	M	2
Blunderbuss	1	4	5/10/20	1/0/0	2/1/0	1-SL	M	2
B.P. Pistol	1	1	5/10/20	1/0/0	0	1-SL	S	2
Rifled Musket	1	1	15/30/60	2/1/1	0	1-SL	M	2
Carbine	1	3	30/60/120	2/1/0	0	4	M	3
Rifle	1	3	30/60/120	3/2/2	0	4	M	3
Assault Rifle	2	10	24/48/96	3/2/2	2/1/0	3	M	4
Shotgun-d.b.	1	4	12/24/48	1/0/0	4/2/1	2	M	3
Shotgun-sawed	1	4	6/12/24	1/0/0	4/2/0	2	S	3
Shotgun-Pump	1	4	12/24/48	1/0/0	4/2/1	8	M	4
Auto-Shotgun	2	10	12/24/48	1/0/0	6/4/2	2	M	4
SMG	2	10	12/24/48	2/1/0	4/3/1	3	M	4
Revolver	1	1	12/24/48	1/0/0	0	6	S	3
Pistol, Semi-A	1	3	12/24/48	1/0/0	0	12	S	4
Pistol, Heavy	1	1	15/30/60	2/1/0	0	8	S	4
Pistol, Hold out	1	1	5/10/20	0/0/0	0	5	D	3

1.2—ENERGY WEAPONS

These weapons use the Energy Weapons Asset

Weapon	#Att.	Max Hits	Range	Damage	Equip. Bonus	Magazine	Inventory	DI
Mining Laser	1	1	20/40/80	6/5/2	0	25	M	6
Laser Pistol	1	3	30/60/120	5/4/2	2/2/1	20	S	8
Pulse Carbine	2	10	40/80/160	7/6/3	4/4/2	10	M	7
Laser Rifle	1	3	50/100/200	10/8/4	2/2/1	30	M	6
Maser Pistol	1	3	10/20/30	8/8/8	0	10	S	8
Shock Carbine	4	30	30/60/90	X	3/2/1	3	M	6
Emper Carbine	1	3	40/80/120	X	0	20	M	7
Sonic Pistol	1	3	20/40/60	1/1/1	0	20	S	7
Sonic Carbine	2	10	30/60/90	2/2/2	2/2/2	10	M	6
Plasma Pistol	1	3	40/80/120	10/8/4	0	10	S	9
Plasma Rifle	1	3	60/120/180	10/16/8	0	20	M	9
Disintegrator	1	3	100/200/300	40/30/15	0	30	S	10

Shock Carbine: has no effect on targets in Hard Suit or EVA suit or non-living things. All other living targets must roll *DT 12; Vigor; None,* for each hit or be knocked unconscious for 10 minutes. Consciousness can be restored by a Med-Kit.
Emper Carbine: has no effect on living beings but will disable any robot, drone or computer it hits.
Sonic Weapons: ignore all personal armor, but cannot be used in vacuum.

1.3—ROCKET GUNS:

These weapons use the Rocket Gun Asset

Weapon	#Att.	Max Hits*	Range	Equip. Bonus	Magazine	Inventory	DI
Anti-tank Rocket Launcher	1	3	24/48/96	0	1	H	4
Grenade Launcher	1	3	15/30/45	0	3	M	4
Disposable Rocket Launcher	1	3	24/48/96	0	1	D	5
Rocket Rifle	1	3	40/80/160	0	12	M	6
Rocket Pistol	1	3	24/48/96	0	12	S	7

*Max Hits 3 apply only to AP ammunition, coming from their armor piercing design, not from multiple bullets.   HE and Fragmentation ammo types are Max Hit 1.

ROCKET GUN AMMUNITION

WEAPON	Armor Piercing	High Explosive	Fragmentation
AT-Rocket Launcher	DMG: 28	----	---
Grenade Launcher	DMG: 15	Contact DMG 7, Burst 2x2, Burst DMG: 2	Burst: 4x4, Burst DMG: 0
Disposable Rocket Launcher	DMG: 36	---	---
Rocket Rifle	DMG: 17	Contact DMG 10, Burst 2x2 Burst DMG: 3	--
Rocket Pistol	DMG: 12	Contact DMG: 7, Burst 2x2, Burst DMG: 2;	--

DMG: short for damage. Contact DMG: the damage to the target directly hit by the rocket or grenade.
Burst: the area the round's explosion inflicts burst damage (the DMG after Burst area).
Grenade launchers may also launch rounds equal to Smoke and Incendiary hand grenades (see below)
Anti-tank Rocket Launchers and Disposable Rocket Launchers are meant to be targeted at ground vehicles and bunkers, they cannot be used against flying targets and receive a disadvantage on attack roll against individual beings.
High-Explosive grenades and rockets have a 50% chance of destroying destructible cover on a contact hit. Also, all persons in burst area are knocked down.
Roll deviation (see Indirect Fire and Deviation in the *PG*) for all HE and Fragmentation rounds on a miss.
Note on Max Hits: armor piercing shells can get up to 3 hits, depending on the Special Successes rolled. High Explosive shells do 1 hit at Contact DMG value to the target directly hit and also 1 hit to each target in the Burst Area at the Burst DMG without further rolls. Fragmentation shells do 1 hit to all targets in the Burst Area at the Burst DMG. There are no extra hits for special success for HE or Fragmentation ammunition.

1.4—HAND GRENADES:

Use the Athletics Asset for throwing. All Hand Grenades are Magazine 1. There are no extra hits for special success rolls for any hand grenade.

Weapon	#Att.	Range	Contact Damage	Burst Area	Burst Damage	Inventory	DI
Grenado	1	5/10/20	2	2x2	0	D	3
Smoke	1	5/10/20	X	3x3	X	D	4
Concussion	1	5/10/20	3	2x2	1	D	4
Fragmentation	1	5/10/20	0	4x4	0	D	4
HE	1	5/10/20	7	2x2	1	D	4
Incendiary	1	5/10/20	1	2x2	1	D	4
Flash Bang	1	5/10/20	X	2x2	X	D	5
Sonic	1	5/10/20	1	4x4	1	D	7
Thermal	1	5/10/20	12	3x3	4	D	8
Anti-Matter	1	5/10/20	40	4x4	10	D	10

Smoke grenades will shroud area with smoke for next 3 enemy turns
Incendiary: will set ablaze any flammable items in the burst, burns down in 2d4 turns, sets off explosives.
Flash Bang and Concussion: DT16 Will check to avoid getting a stun marker
Sonic: ignores any personal armor, but does not work in vacuum
Thermal: immediately destroys any flammable objects in burst
HE 50% chance to destroy destructible cover on contact hit. Also knocks down people in burst area.
Roll deviation for any missed grenade.

1.5—ARCHERY:

These weapons use the Archery Asset

Weapon	#Att.	Max Hits	Range	Damage	Equip. Bonus	Magazine	Inventory	DI
Short Bow	1	3	12/24/36	0/0/0	0	6	M	1
Long Bow	1	3	15/30/45	1/0/0	0	6	M	2
Sling	1	1	10/20/30	0/0/0	0	1	S	1
Heavy Crossbow	1	1	15/30/45	2/1/0	0	1-SL	M	2
Light Crossbow	1	1	15/30/45	0/0/0	0	1-SL	M	2
Repeating Xbow	1	1	15/30/45	0/0/0	0	10	M	2

1.6—HEAVY WEAPONS:

These weapons use the Heavy Weapons Asset. Those with the H inventory code are man-portable, but use up the M slot and 1 D slot, and cannot be fired on a turn where the shooter has moved.

Weapon	#Att.	Max Hits	Range	Damage	Equip. Bonus	Magazine	Inventory	DI
Heavy Auto Rifle	2	10	30/60/120	3/2/2	3/2/1	2	H	4
Lt. Machine Gun	2	10	35/70/140	3/2/2	4/2/1	10	LV	4
Md. Machine Gun	8	100	40/80/160	3/2/2	4/3/2	4	LV	4
Hv Machine Gun	4	30	50/100/200	6/5/3	3/2/1	4	LV	4
Gatling Gun	16	300	40/80/160	3/2/2	7/5/3	8	LV	4
Auto-Cannon	4	30	50/100/200	14/10/5	3/2/1	7	LV	5
Auto Laser	4	30	50/100/200	8/7/4	5/4/3	4	H	7
Laser MG	8	100	50/100/200	8/7/4	6/4/4	PP	LV	7
Rapid-Pulse Laser	16	300	50/100/200	7/6/3	7/5/4	PP	LV	7
Rail Rifle	2	10	50/100/200	11/10/5	3/2/1	8	H	7
Rail MG	16	300	50/100/200	20/18/9	8/6/3	30	LV	7
Lt. Plasma Gun	1	3	50/100/200	30/28/14	0	PP	LV	8

1.7—MAJOR VEHICLE WEAPONS:

These weapons use the Artillery Asset

Weapon	#Att.	Max Hits	Range	Damage	Equip. Bonus	Magazine	Inventory	DI
Light Cannon	1	1	50/100/200	15/13/6	0	1	MV	3
Heavy Cannon	1	1	75/150/300	36/18/9	0	1	MV	4
Naval Cannon	1	1	100/200/400	53/26/13	0	12	MV	4
Rail Cannon	2	10	100/200/400	50/25/13	2/1/1	6	MV	5
Beam Laser Cannon	1	3	150/300/600	70/35/18	0	PP	MV	6
Pulse Laser Cannon	4	30	100/200/400	60/30/15	4/3/2	PP	MV	7
Plasma Cannon	1	3	150/300/600	80/40/20	0	PP	MV	8

Light, Heavy and Naval Cannons: instead of the AP shells listed on the chart, these weapons can instead be loaded with HE shells with have a burst equal to 4" area for light, 6" area for Heavy and 8" area for Naval. The HE shells have a penetration of 2 in the burst. Those same guns can fire indirectly at 3km for a light cannon, 6km for a heavy and 20km for a Naval gun. Note that Naval guns can only be mounted in fixed ground positions and on large military water craft. Any of these weapons destroy destructible cover on a contact hit.

Plasma Cannon: in addition to the direct hit, plasma cannons also inflict explosive damage in a 6" x6" burst for 20 penetration.

Crew: in a DI-4 tank or motorized gun, most weapons needs a gunner and a loader. In a higher DI vehicle, only a gunner is needed. A carriage mounted light cannon needs a crew of 4 and heavy cannon needs a crew of 6.   Naval Cannons need a crew of 12 per turret of up to 3 guns.

1.8—FIELD ARTILLERY:

These weapons use the Artillery Asset

Weapon	DI	Crew	Range	ROF	Burst	HE DMG	AP DMG
Lt. Mortar	3	3	1.5km	3	2x2	2	15
Heavy Mortar	4	9	4.5km	2	5x5	3	20
Howitzer	4	8	11km	2	3x3	5	25
Heavy Howitzer	4	12	12km	1	9x9	7	40
MRL	4	10	12km	10	5x5	5	28
Lt. Mass Driver	6	8	20km	10	12x12	8	40
Heavy Mass Driver	6	12	24km	10	20x20	12	50

These are weapons that are used only for indirect fire, as directed by an observer using Fire Direction Asset.

Crew is for a towed or fixed version of the weapon, one that is purpose built in a vehicle has a crew of 2. Each weapon can shoot either an HE round, which is intended to burst attack over an area, or an AP round which is meant to crack a single armored target.

ROF field artillery firing multiple HE shells makes a single attack roll but increases its burst area by 0.5 inches per ROF over 1. So a Light Mortar could shoot 3 HE shells as a single attack with a 3x3" area.

Burst is the area of a bursting HE shell, e.g. a single Lt. Mortar HE shell has an area of 2"x2"

HE DMG is the penetration to all targets in the burst area of the HE.

AP DMG is the contact penetration for a AP shell that strikes a target (no burst to AP rounds).

Mass Drivers require a power plant for operation.

MRL: stands for Multiple Rocket Launcher

HE rounds have a 50% chance of destroying destructible cover on a contact hit.

All these weapons, except the Lt. Mortar are considered major weapons if mounted in a vehicle.

1.9—TACTICAL MISSILES:

These weapons use the Missiles Asset. Those with the H inventory code are man-portable, but use up the M slot and 1 D slot, and cannot be fired on a turn where the shooter has moved.

Weapon	#Att.	Max Hits	Range (km not inch)	Damage	Equip. Bonus	Inventory	DI
MP Anti-Tank	1	3	1/2/3 km	40	0	H	4
MP Anti-Air	1	3	10/20/30km	20	4	H	4
Vehicle Anti-Tank	1	3	3/6/10 km	50	0	LV	4
Vehicle Anti-Air	1	3	30/60/100km	30	6	LV	4
Adv. Anti-Tank	1	3	5/10/15km	60	0	LV	6
Adv. Anti-Air	1	3	50/100/200km	40	8	LV	6
Ultra Tactical	1	3	100/200/500km	70	12	LV	8

Anti-tank missiles cannot be aimed at flying vehicles.

Anti-aircraft missiles can only be aimed at flying vehicles.

The Max Hits for missiles are a result of the armor-piercing effects of their construction, not from multiple missiles launched at once.

1.10—EXPLOSIVES AND BOMBS

All except Black Powder Charge count as HE for knockdown; these use the Explosives Asset. A charge must be placed in the desired location and set with a Detonator (*DT8, Explosives; Security Quadracorder*)

Charge	DI	Inventory	Contact DMG	Burst Area	Burst DMG
Black Powder Charge	3	D	12	2x2	1
Small Alpha Charge	4	D	30	2x2	1
Medium Alpha Charge	4	D	39	2x2	1
Large Alpha Charge	4	H	44	2x2	4
Very Large Alpha Charge	4	100kg	48	2x2	8
Small Beta Charge	5	D	31	2x2	1
Medium Beta Charge	5	D	41	2x2	1
Large Beta Charge	5	H	45	2x2	5
Very Large Beta Charge	5	100kg	50	4x4	10
Small Gamma Charge	6	D	39	2x2	1
Medium Gamma Charge	6	D	52	4x4	12
Large Gamma Charge	6	H	59	4x4	19
Very Large Gamma Charge	6	120kg	64	6x6	24
Small Delta Charge	7	D	46	2x2	6
Medium Delta Charge	7	D	51	3x3	11
Large Delta Charge	7	H	59	3x3	19
Small Epsilon Charge	8	D	49	2x2	9
Medium Epsilon Charge	8	D	54	3x3	14
Large Epsilon Charge	8	D	62	4x4	22

DETONATORS

Device	DI	Notes
Time Detonator	3	Simple Countdown to detonation.
Remote Detonator	4	Detonation by direct radio signal by operator
Pressure Detonator	4	Detonation by specific weight
Scanner Detonator	5	Programmable specific conditions detonate, based on scanner reading.

AERIAL BOMBS (HE)

Bomb-Weight	DI	Contact	Burst Area	Burst DMG
50kg	4	24	4x4	4
100kg	4	30	5x5	5
250kg	4	32	6x6	5

1.11—HAND -TO-HAND WEAPONS

Weapon	Max Hits	Reach	DMG	Equip. Bonus	Hands	Invent.	DI	Asset
Unarmed Strike	3	0	-7	0	1	--	1	Martial Arts or Brawl
Rock*	1	0	1	0	1	D	1	Brawling
Club	2	2	1	0	1	M	1	Brawling
Hatchet*	3	1	1	0	1	S	1	Blades
Staff	2	5	1	0	2	M	1	Brawling
Spear, Short*	2	3	1	0	1	M	1	Blades
Spear, Long	2	5	2	1	2	M	1	Blades
Knife/Dagger*	3	1	1	0	1	S/D	1	Blades
Mace	2	2	2	1	1	M	1	Brawling
Sword, Broad	3	3	2	2	1	S	2	Blades
Sword, Long	2	4	3	2	2	M	2	Blades
Battleaxe	1	3	4	2	2	M	2	Blades
Halberd	2	5	3	2	2	M	2	Blades
Pike	1	6	2	2	2	M	2	Blades
Bayonet, fixed	2	4	2	2	2	D	2	Blades
Hand Stunner	1	0	X	0	1	S	4	Brawling
Shock Baton	2	2	1	1	1	S	5	Brawling
Cutting Bar	1	3	15	3	2	M	6	Blades
Vibro-Blade	3	1	10	3	1	S	7	Blades
Power Gauntlets	3	0	9	3	1	D	7	Martial Arts or Brawl
Ultra Stiletto	4	1	3	4	1	S	8	Blades

All hand weapons may make only 1 attack.

*Weapons so marked may be thrown at 5/10/15 ranges, using the Athletics Asset.

Unarmed Strikes damage is a NEGATIVE 7, subtract 7 from the die roll.

Hand Stunner: this weapon is ineffective against targets in a Hard Suit or EVA suit and against robots and vehicles, but other targets will, if hit, need to make a DT 16; Vigor; None; check or get a Stun Marker.

Shock Baton: this weapon has the same restrictions and effects as a hand stunner but also inflicts a damage effect as a club.

Ultra Stiletto: this weapon ignores all personal armor.

1.12—SPACECRAFT WEAPONS:

These weapons use Space Gunnery Asset

Weapon	#Att.	Max Hits	Range	Damage	Equip. Bonus	Magazine	Slots	DI
Rail Gun Turret	8	100	2/4/8	50/25/12	4/3/2	4	1	5
Beam Laser Turret	1	3	8/16/24	70/35/20	0	PP	1	6
Pulse Laser Turret	4	30	5/10/15	60/30/15	4/3/2	PP	1	7
Space Torp Pod	3	9	10/20/30	55/55/55	0	4	1	5
Plasma Turret	1	3	3/6/9	80/80/80	0	PP	1	8
Main Laser Battery	2	10	8/16/24	80/40/20	5/5/5	PP	5	6

- The code PP for Magazine means that the weapon is powered by the ship's power plant and as long as the S-drive is functional, the weapon never runs out of ammunition.
- Vessels of 2000m3 in hull and which have rail gun turrets and/or space torp pods will likely (but see ship description for confirmation) to have an ordinance bay with sufficient ammunition to keep reloading these weapons when their magazines run out.
- A spacecraft has 1 weapon slot for each 1000m3 of hull, but at least 1. Most weapons require 1 slot but a Main Laser Battery requires 5 with a maximum of 1 such battery per 10,000m3 of hull.
- Special Note about Space Torp Pods: a space torp pod can launch up to 3 torps per turn (hence #Att. 3), but it has 3 targets, this means each torp is rolled to hit separately, but because of its anti-armor design, each torp can indeed make up to 3 hits based on Special Successes, up to 9 total hits if all three torps make 3 hits.
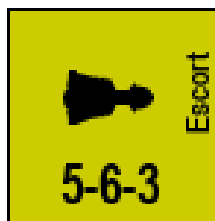
SECTION 2: ARMOR

Armor protective layers of some sort to absorb, deflect or dissipate the destructive penetration value of weaponry. On the personal damage, vehicle damage and spacecraft damage charts, the attack rolls damage dice, adds his weapon's penetration value and subtracts the armor value of the target, as found below, to find the damage result.

Vehicle and Spacecraft Hulls have uniform resistance to all attack forms, while personal armor has 3 different values: Hand, Bullets and Energy. The Hand rating applies to attacks by hand-to-hand weapons, including unarmed strikes and claws, teeth, tentacles, stingers and similar natural attacks by animals and space monsters. The Bullets rating applies to attacks by all firearms, archery weapons, AP and fragmentation attacks. The Energy rating applies to attacks by energy weapons, HE, concussion, fire and radiation attacks.

2.1—Spacecraft Hulls

Type	DI-4	DI-5	DI-6	DI-7	DI-8	DI-9	DI-10
Standard	15	35	40	45	50	55	60
Armored	--	45	50	55	60	65	70
Heavily Armored	--	55	60	65	70	75	80

These armor values will be included on each spacecraft's description.

2.2—Vehicle Hulls:

Type	DI-4	DI-5	DI-6	DI-7	DI-8	DI-9	DI-10
Aircraft, Civil	1	5	10	15	20	25	30
Aircraft, Military	5	10	15	20	25	30	35
Aircraft, Assault	10	15	20	25	30	35	40
Watercraft, Light	3	12	17	22	27	32	37
Watercraft, Heavy	6	15	20	25	30	35	40
Watercraft, Battle	48	53	58	63	68	73	78
Ground, Soft	1	5	10	15	20	25	30
Ground, Armored	20	25	30	35	40	45	50
Ground, Heavy Armor	35	40	45	50	55	60	65

These armor values will be included on each vehicle's description.

2.3—PERSONAL ARMOR

LOW TECH ARMOR

TYPE	DI	Hand	Bullets	Energy	Move Penalty	Notes
Hides	0	3	0	0	-1	
Mail	1	5	0	0	-2	
Plate	1	7	1	1	-2	
Shield	1	1	0	1	-1	Low cover vs archery and firearms
Bullet Proof Vest	3	1	5	1	-1	

Hides are a layer of thick animal skins that offer some protection against hand weapons. Mail is a coat of linked rings or scales useful against hand weapons. Plate is a complete suit of steel plates that offers some modest protections against all attack forms. A Shield is a mobile barrier which offers some armor a some cover. A Bullet Proof Vest is a set of thick fibers with a metal backing.

FLIGHT SUITS

TYPE	DI	Hand	Bullets	Energy	Move Penalty
Flight Suit-4	4	1	0	1	-2
Flight Suit-5	5	2	3	3	-1
Flight Suit-6	6	3	5	5	-1
Flight Suit-7	7	4	8	8	-1

Flight suits are designed for aircraft and spacecraft crews to counteract G-forces and the dangers of low-atmospheric pressure. Flight suits come equipped with a built-in communicator, emergency suit patches, and a 5 minute supply of emergency oxygen none of which count as a Device for inventory. Flight Suit-7's issued by the Space Patrol and NEL military also have a Thanatic Acid auto-injector built in (see Medicine section of Patrolman's Guide). Flight suits are a complete sealed suit with a hard helmet. A 1-hour oxygen tank may be attached to the suit, but it counts as a Device for inventory. A flight suit with oxygen will keep you alive in a hulled ship and most NBC attacks, but is not sufficient protection outside a ship in open space.   A Flight Suit 7 is the official duty uniform of the Space Patrol.

EVA SUITS

TYPE	DI	Hand	Bullets	Energy	Move Penalty
EVA-4	4	0	0	4	-4
EVA-5	5	1	1	5	-3
EVA-6	6	3	5	7	-2
EVA-7	7	10	10	10	-1
EVA-8	8	13	13	13	-1

An EVA suit is a complete space suit designed for missions outside the hull of a spacecraft in orbit or deep space. It comes equipped with 2 hours of oxygen, a communicator, and suit patches.   EVA suits issued by the Space Patrol or the NEL military also are equipped with a Thanatic Acid injector. None of the above items count as Devices for Inventory purposes. EVA suits are the only effective armor protection against cosmic ray exposure outside of a ship's hull. When wearing an EVA suit under normal gravity, a DT 12; EVA; None, needs to be rolled every turn or disadvantage applied to any task. See Zero-G and Vacuum Combat for use in those environments. EVA suits are equipped with thrusters that allow movement in Zero-G outside a spacecraft for about 2 hours.

COMBAT ARMOR

TYPE	DI	Hand	Bullets	Energy	Move Penalty
Tac Vest	4	2	5	2	-1
Tac Armor	4	3	7	4	-2
Battle Vest	5	6	8	6	-1
Hard Suit-5	5	9	9	9	-2
Hard Suit-6	6	12	12	12	-2
Hard Suit-7	7	16	16	16	-2
Hard Suit-8	8	20	20	20	-2

Combat Armors are those designed for battle in surface combat.   A *tac vest* is a ballistic fiber vest with metal or ceramic reinforcements. *Tac armor* is similar to the vest but with arm and leg protection and a helmet. A *battle vest* is a more advanced vest made of dura-steel. Finally, a *Hard Suit* is a complete, sealed suit of dura-steel. Hard suits come equipped with a built-in communicator, emergency suit patches, and a 5 minute supply of emergency oxygen none of which count as a Device for inventory. Hard Suits 7 and 8 issued by the Space Patrol and NEL military also have a Thanatic Acid auto-injector built in (see Medicine section of Patrolman's Guide). A 1-hour oxygen tank may be attached to the suit, but it counts as a Device for inventory. A hard suit with oxygen will keep you alive in a hulled ship and protect against most NBC attacks, but is not sufficient protection outside a ship in open space.

SPECIAL ARMOR

TYPE	DI	Hand	Bullets	Energy	Move Penalty	Notes
Riot Shield	4	3	3	1	-1	Low cover vs archery and firearms
Hazard Suit	4	1	1	3	-5	Protects against NBC
Stealth Suit	6	3	3	3	0	Stealth Device +6 Equipment Bonus to Stealth
Static Orb	7	22	13	0	0	Produces an electromagnetic field
Invisibility Suit	9	6	6	6	0	3 minutes of invisibility per hour
Field Orb	10	30	30	30	0	Personal force field, 10 minutes per day

- A Riot Shield is a barrier of bullet-resistance plastic that offers some armor and some cover.
- A Hazard Suit is a bulky suit with a 1-hour oxygen supply that protects against fire and most NBC attacks.
- A Stealth Suit gives chameleon camouflage and so a +6 equipment bonus to stealth tasks.
- Static Orbs are used by some alien species for personal protection on lower DI worlds. They produce an electromagnetic field that is excellent at keeping hand-to-hand attacks at bay and good at bullet deflection, but is not effective against energy weapons; it counts as a Device not Armor for inventory.
- An Invisibility Suit gives the user 3 minutes of complete invisibility but then requires 1 hour to restore charge.
- A Field Orb is an ancient artifact that protects a force field with level 30 armor for 10 minutes per day (can be shut on and off until 10 total minutes are used up); it counts as a Device not a suit of armor for inventory.
- Note that Field Orbs and Static Orbs do not combine armor values with any suit of armor worn. Instead, the higher value of the orb and suit is used for each attack.

SECTION 3: DEVICES

All items in this section are Inventory Code D, except "Stealth Suit" and ones that are included in an armor suit (see above).

3.1—QUADRACORDERS

Type	DI	Equipment Bonus	Asset	Notes
Knowledge	7	+2	Any 1 knowledge area	Must choose knowledge when acquired
Tactical	7	+2	Tactics, Fire Direction	
Forensics	7	+2	Forensics	
Security	7	+2	Intrusion, Explosives	
Environment	7	+2	Survival, Tracking	
Adv. Knowledge	8	+3	Any 1 knowledge area	Must choose knowledge when acquired
Adv. Tactical	8	+3	Tactics, Fire Direction	
Adv. Forensics	8	+3	Forensics	
Adv. Security	8	+3	Intrusion, Explosives	
Adv. Environment	8	+3	Survival, Tracking	

A quadracorder is a portable electronic device developed by the NEL. All types of Quadracorders have 4 basic functions: scan objects, analyze objects, record scans and audio/video inputs by the operator, and suggest possible outcomes. These functions, however (apart from recording) are limited to the subject the device is programmed for. The scanning range is only about 150m (100"). Additional types exist, including the Medical Quadracorder, which is part of DI-7 and 8 Med kits. Note that the equipment bonus of quadracorders do not combine with other equipment bonuses, take the higher.

3.2—COMBAT AIDS

Type	DI	Equip Bonus	Notes
Telescopic Sight	3	+2	Adds to Steady Aimed shots with a Rifle (firearm)
Laser Sight	5	+2	Adds to Steady Aimed shots with any Code M or S weapon with # Attacks=1
Electronic Sight	6	+3	Adds to Steady Aimed shots with any Code M or S weapon with # Attacks=1
Personal Target Display	8	+4	Replaces any weapon's Equip bonus, Only applies when user is moving
Shock Vest	5	--	When worn under other armor adds +2 armor vs Hand and Bullets, but additional -1 move

3.3—RECON AND FIRE DIRECTION AIDS

ITEM	DI	Asset	Eq Bonus	Notes
Binoculars	3	Recon, FD	+1	Daylight only
IR Viewer	4	Recon	+1	Night only
Electronic Viewer	5	Recon, FD	+2	Day and Night
Motion Scanner	6	Recon/Scanner	+3	Day and Night, Detects moving people and vehicles
Tactical Quadracorder	7	Tactics, FD	+2	Day and Night
Adv Tactical Quadra.	8	Tactics, FD	+3	Day and Night

3.4—HAND SCANNERS

ITEM	DI	Asset	Eq Bonus	Notes
Radar Gun	4	Scanner/Recon	+1	Detects moving metal vehicles within 100"
Sonic Locator	5	Scanner/Recon	+1	Detects metal vehicles within 200"
Motion Scanner	6	Scanner/Recon	+2	Detects moving vehicles or beings within 200"
Quantum Scanner	7	Scanner/Recon	+3	Detects any vehicles or beings within 300"
Quadracorder Scanner	7	Scanner	+2	Detects items based on type of Quad
Adv. Quadracorder Scanner	8	Scanner	+3	Detect items based on type of Quad

Space Judge will set the DT based on circumstance. Successful scan will add Equipment Bonus to Recon attempt as well, if Recon is listed.

3.5—STEALTH, FORENSICS AND DISGUISE AIDS

ITEM	DI	Asset	Eq Bonus	Notes
Camouflage, Basic	0	Stealth	+1	Twig in hat
Camouflage, Extensive	0	Stealth	+2	-2 to movement rate; double bonus if wearer doesn't move
Smoke Grenade	4	Stealth	+4	3 turns, Smoke also gives disadvantage to shooting
Stealth Suit	6	Stealth	+6	Counts as Armor, not Device
Forensics Kit	4	Forensics	+1	Finger print+sample kit
Forensics Quadracorder	7	Forensics	+2	See quadracorders
Adv. Forensics Quadr.	8	Forensics	+3	See quadracorders
Make-up kit	3	Disguise	+1	Also great for date night
Disguise Kit, Basic	4	Disguise	+2	Hugo recommended
Disguise Kit, Advanced	6	Disguise	+3	Better selection of mustaches
Chameleon Hood	9	Disguise	+8	Perfect face mimic, with voice disguise

3.6—MED KITS AND OTHER MED DEVICES

ITEM	DI	Asset	Eq Bonus	Notes
Med Kit-3	3	Medicine	-1	Minimum for battlefield medicine
Med Kit-4	4	Medicine	0	
Med Kit-5	5	Medicine	+1	
Med Kit-6	6	Medicine	+2	
Med Kit-7	7	Medicine	+3	Includes Medical Quadracorder
Med Kit-8	8	Medicine	+4	Includes Advanced Medical Quadracorder
Thanatic Acid Injector (1-use)	7	--	--	Preserves body for revival
Krangor Injector (1-use)	6	--	--	Immediately removes Unc., MM and SM then for 8-turns, ignore Wound Marker penalties, but become unconscious at the end.
Blitz Injector (1-use)	5	--	--	4-turns, extra action per turn, +4" move, but get a Wound Marker at end
Space Bear (1 use)	5	--	--	Heals 1 Wound Marker, but 1 in 20 cumulative chance per day of blindness

3.7—INTRUSION

ITEM	DI	Asset	Eq Bonus	Notes
Sledge Hammer	1	Intrusion/Athletics	+3	Break down door (1 person)
Small Battering Ram	1	Intrusion/Athletics	+6	Break down door (2 people)
Hammer and chisels	1	Intrusion	0	Minimum to open a physical lock
Lock Picks	2	Intrusion	+1	For physical locks
Electronic Ram	5	Intrusion	+1	Minimum to open electronic locks
Advanced Electronic Ram	7	Intrusion	+3	For electronic locks
Hand Jammer	6	Intrusion	+2	For jamming security cameras and detectors 10"
Advanced Hand Jammer	8	Intrusion	+4	For jamming security cameras and detectors 20"

3.8—UTILITY

ITEM	DI	Notes
Torch	1	Mitigates darkness depending on circumstances
Flashlight	4	Mitigates darkness depending on circumstances
Night Vision Goggles	5	Eliminates darkness penalties for wearer
Radiance Orb	7	Floats off ground, bright light in 100" radius
Ox tank	4	1 hour of air for flight, hard or EVA suit
Handcuffs	3	Set of 4 in a handy carry-pouch, with key!

3.9—PSI DEVICES

ITEM	DI	Asset	Eq Bonus	Notes
Psi-Amp-6	6	Any Psi	+1	Bonus for any Psi Asset
Psi-Amp-7	7	Any Psi	+2	Bonus for any Psi Asset
Psi-Amp-8	8	Any Psi	+3	Bonus for any Psi Asset
Psi-Amp-9	9	Any Psi	+4	Bonus for any Psi Asset
Psi-Amp-10	10	Any Psi	+5	Bonus for any Psi Asset
Psi Helmet-7	7	--	--	Disadvantage to Psi attempts against anyone wearing helmet
Psi-Helmet-8	8	--	--	2 Disadvantages to Psi attempts against anyone wearing helmet
Psi-Shield	10	--	-	Wearer is immune to any Psi attempts

3.10—TOOL KITS

ITEM	DI	Asset	Eq Bonus	Notes
Mech Kit-3	3	Mechanics	+0	Minimum to use Mechanics Asset
Mech Kit-6	6	Mechanics, Space Drives	+2	Minimum to repair Space Drives
Mech Kit-8	8	Mechanics, Space Drives	+4	
Elect Kit-4	4	Electronics, Computers	+0	Minimum to repair electronic devices
Elect Kit-6	6	Electronics, Computers	+2	
Elect Kit-8	8	Electronics, Computers	+4	
LS Kit-5	5	Life Support	+1	Minimum to repair Life Support systems
LS Kit-7	7	Life Support	+3	

3.11—FLYING BELTS

ITEM	DI	Asset	Eq Bonus	Notes
Parachute	3	None	+0	Allows safe descent from aircraft in regular atmosphere
Crappy Jet Pack	4	Flying Belt	+0	Allows flight for 2 combat turns at 30 inches a turn, then no fuel left
Flying Belt	6	Flying Belt	+0	Allows safe descent from aircraft and leaps of up to 40 inches, has a 2 hour duration.
Nav Helmet	6	Flying Belt	+2	Added to flying belt, allows free flight of 40 inches; Replaces helmet on Flight Suit, EVA suit or Hard armor
Advanced Flying Belt	9	Flying Belt	+3	Allows free flight without Nav helmet, 50 inch move, 5 hours

3.12—Hand Communicators

ITEM	DI	Range	Eq Bonus	Notes
Portable Radio	4	6km	+0	
Sat Phone	5	12km	+0	Can network with an orbiting spacecraft or satellite
Communicator-6	6	24km	+1	Can network with an orbiting spacecraft or satellite
Communicator-7	7	48km	+2	Can network with an orbiting spacecraft or satellite
Communicator-8	8	100km	+3	Can network with an orbiting spacecraft or satellite