Savage Futures

Generic Sci-Fi Settings and Tech Levels for Savage Worlds

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Introduction

This is for the GM that likes to "roll their own" setting, or take an existing setting and "tweak" it. The idea here is that the GM decides the trappings, so what's presented are the effects or results. This is also not meant to provide exact guidelines, but approximate values for the GM to use as a starting point. It is meant to be used in conjunction with some other SW science-fiction setting, unless you want to create *everything* from scratch.

My personal favorite sources are, not because of their specific settings but because of the overall game system resources they offer, the SW Sci-Fi Companion (SFC), Savage Space, and Slipstream (in no order). SFC is the only one that as of this writing was written after SWD, but if you're on a really tight budget, Savage Space is free. (*I am not affiliated with any product mentioned, and have only seen the Player's Guide to Slipstream*.)

Future Tech Levels (FTL)

I like to have some variety in my future tech. Not every race may have the same level of tech, or the same kind of tech. But neither did I want to have a dozen different tech levels, with excessive details about each one. So what I've done is create just 4 "future tech levels", with FTL 1 being just beyond today's tech, and FTL 4 being the limit of what's probably useable in a game by PC's. You can certainly go beyond what's described here, but I would suggest that that kind of tech be reserved either for the "don't-get-involved-with-other-races" types of aliens (described below) or "long-lost-alien-race tech". That will be called "FTL 5+". See page 4 for details.

For comparison, Slipstream is FTL 1 with some FTL 2 tech, while SFC is solidly placed in FTL 2-3, with what it calls "Ultra Tech" being FTL 4. Savage Space is generally FTL 1 to 2, with a few items being FTL 3.

Note there's no mention of kinds of power sources at all – it's assumed that power sources keep up with equipment needs, and that "replacing the batteries" is a nominal cost that doesn't happen too often (except with ranged energy weapons, where a new "clip" is really a new energy pack).

The State of the Galaxy

First off, how many races are there?

- Are humans the only race (so far)? With time, each colony on a different planet could have evolved to fit that planet. For example, on a high-G world, characters may start out with a Strength of d6 or even d8. And something in the air, water, etc. could have brought out various Arcane Backgrounds (see below).
- Are there few races or many races? How powerful are they in terms of their technology and number of colony planets? If there are many races, perhaps only a few of them are "major players".

How are they organized?

- Each race has its own area of space, and they do not co-operate with each other. Each race may have treaties with other races on non-aggression, extradition, etc. or not.
    - Colony planets may eventually want to withdraw from the home planet and self-govern, possibly creating a civil war.
- There's a Federation/Alliance/Council/etc. of different races that generally co-operate, but each race rules its own area however they wish.
- There's an Empire of multiple races, that all recognize the central government. The Empire could be benevolent or malevolent.
- There may be a "core" of organized planets, with an "independent" group (rebels, separatists, rim worlds, etc.) of planets that does not recognize the core as their ruler. These independent planets are usually more physically distant from the core ones. Keep in mind, either side could be benevolent or malevolent!

Of course, you can have multiple combinations of the above! And "colonies" or "separatists" may be an FTL lower than their home or core planets.

Inter-racial relations :

- Every known race belongs to the one central government. Disputes are settled diplomatically, and enforced.

- There are several large, powerful factions (single races or groups of races).
- Some factions may be competing with others for whatever reasons (territory, resources, conquest, enslavement, etc.). If the races are different enough (oxygen-breathers vs. methane-breathers, carbon-based vs. silicon-based, etc.), there may be no competition.
- Some races may have a non-interference policy, others may believe all other races are inferior and should be conquered, etc.
- Some races may be very removed and mysterious, and do not interact with the other factions very much. They may be at a higher FTL than the other races, and might show up at key moments to offer advice or temporary assistance.

Creating the races :
- Use any race and/or race-building system you like : SWD, SFC, and Slipstream have many example races, and have race-generating systems.
- Any race or colony planet could have any kind of AB you wish. Mutations, planetary biology, technology, etc. could all create the effects of any SWD AB.

Zero-G

Nobody likes to deal with zero-G, but control of gravity itself doesn't appear until FTL 3. Or you can just ignore it regardless of FTL (assume magnetic boots, spinning ships, etc. and forget about it).

Different gravities : if your setting does not define them, for simplicity assume there are "Zero-G", "Low-G", "Earth-G", and "High-G" environments. For every one step from your native gravity (the "delta-G"), you take a –1 to all physical Trait rolls. For all other aspects, figure that the disadvantages cancel any benefits.

When in zero-G, if you roll a 1 on a physical Trait die, you lose control of your movements and start tumbling. Every round, roll a d6 for distance moved in inches, and a d6 for direction (up/down/left/right/forward/back). Hitting an obstacle bounces you in the other direction. Either treat as Shaken, and recover as for Shaken at –2, or make a Free Agility roll (with the appropriate delta-G penalty) to recover (GM decides).

Languages

Dealing with multiple languages can be complicated. If your races have been interacting with each other for a long time, there can be a "common" language, or each race can have a language translator ear-bud that translates all known alien races, etc. And you can always use the SWD "multiple languages" option as well.

Faster-than-light communications

Communications speeds can make a big difference in star-spanning wars, where intel and troop commands may take some time to arrive. It also allows pirates and criminals to get far from the scene of the crime before anyone even knows a crime has been committed.

If you wish to track the speed of "hyperwave", "tachyon", "subspace", "ultrawave", etc. communications, consider them as travelling 100 times faster in the "hyperspace" table (see "Space Travel", below) for your current FTL (even if you use "hyperjumps" for space travel). So a message would take 3-4 hours to cross all of "known space" at FTL 3 (2 weeks ÷ 100).

Or, Keep It Short and Simple (*my version of KISS*) and just make it instantaneous, allowing real-time communications between all parts of outer space that the campaign is in.

Future Tech Levels

Modern tech is considered “FTL 0”.
The GM should remove any technology within a FTL, or assign it to only one race, as they see fit.

FTL	Commonly available
1	Within-solar-system space travel Faster-than-light communications Humanoid robots (run 18 hours), d4 max Attributes (butlers, delivery, etc.) AI : very good voice comprehension (limited to complex database searches) Holographic 3-D recording and projections (video, unrealistic) Body implants (comms, transmit or record audio/video [not connected to ears/eyes], etc.) Integrated bionic limb replacement (better than human normal; compartments, weapons, etc.) Trait-enhancing meds (+FTL to Trait or Fatigue for 10 minutes, –1 Fatigue for 1 hour) Cloning (limbs and organs only, identical to original) Hypno-learning (learn any Knowledge skill in 8 hours while asleep, 24 hour retention) Suspended animation (“freeze” ships for colonization, preserve until cures found, etc.)
2	Faster-than-light space travel to nearby stars Humanoid robots (run 4 days), d6 max Attributes (can repair other machines) Better AI : understand slang and idioms, make abstract “connections” between data Realistic holographic projections (video, Notice-2 to spot at a distance) Integrated bionic organ replacement (eye, ear, etc., better than human normal; transmit/record) Neural induction helmet : computer interface (*2 speed, +2 skills), immersive realities, etc. Automedic “bed” (heal Wounds in 8 hours); diagnose & treat disease, poison, etc.; not surgery Cloning (entire bodies) Station-to-station teleportation (on-planet only, people & cargo) Energized hull plating increases Armor for ships Hover plates/cars (not anti-gravity)
3	Humanoid robots (run 1 week), d8 max Attributes Self-programming computers that have full voice comprehension (but no initiative) Dynamic holographic self-projection (invisibility, alter image, etc.; Notice-2 close-up) Brainjack : as above for NI helmet, requires a cable; control equipment/vehicles with a jack “Wound patches” (heals 1 Wound immediately); repair broken bones in minutes, etc. Meds give you any reasonable Edge (Nerves of Steel) for 10 minutes, –1 Fatigue for 1 hour Accelerated growth control of cloned bodies Orbital-distance teleportation (station at one end, people & cargo); may be blocked by shields Artificial gravity Anti-matter missiles (anti-matter cannot be teleported) Force fields (ships’ shields/screens, personal space-suit, etc.) Tractor/repellor beams Cloaking (for ships, undetectable by other ships in that FTL, but detectable by the next FTL)
4	Humanoid robots (run 1 month), d10 max Attributes “True human” AI-like programs – understands emotions, takes initiative, be creative, etc. Holographic immersive realities Braincomp : AI with database; personality overlays, download skills, etc.; uses wireless comms Anti-gravity (thrustless lift-offs from planets) Replicators (teleporters reconfigure material on-demand) Molecular disintegration (stopped by force shields) Phase shifting : invisibility, pass thru matter, immunity to physical attacks, etc. (short duration)

FTL 5+
Terraforming, weather control, living ships, tissue regeneration, temporal stasis fields, zero-point (unlimited) energy, planetary shields/cloaks, partial/total mindwipes, mind recording and transfer, etc. etc.

Advancing in FTLs

In the next FTL, most things get better (faster, powerful, etc.), smaller, cheaper, and/or more reliable. If you have races with different FTLs, you can take the resources described in your setting, and improve them for a higher-FTL race or weaken them for a lower-FTL race.

For example : a sensor device that provide telescopic zoom, can see in the dark, and perhaps identify substances and/or provide facial recognition might be large-binocular sized in FTL 0. So by FTL 1 the same functionality could be had with goggles, by FTL 2 it could be sunglasses-sized, and by FTL 3 be contacts that go in the eyes.

A one-person rocket pack that could lift someone against Earth-G would be a large backpack at FTL 0, a shoebox at FTL 1, and boot-sized at FTL 2. By FTL 3, it would be small enough to clip on to your boots.

The Trait-enhancing meds (+FTL to Trait for 10 minutes, –1 Fatigue for 1 hour) available at FTL 1 could either drop the Fatigue at FTL 2, or be half price (raising the bonus to +2*FTL would be way too high a bonus). By FTL 3, they would be both.

The automedic "bed" (heals all Wounds in 8 hours) at FTL 2 would heal all Wounds in 4 hours at FTL 3, or be the size of a large suitcase. By FTL 4, it does both, or could be the size of a briefcase and heal in 4 hours.

At FTL 3+, equipment can **automatically collapse** down into a much smaller size for +4 points. Sensors reduce by 4 sizes, full-body armor reduces to torso-sized, a helmet to finger-sized, a one-handed weapon or shield to bracer-size, etc. It expands on touch or voice command, or by thought with a neural interface.

At FTL 3+, force-field shields become possible. You need to decide if they block only energy (weapons, teleportation, comms) or energy and matter. It's also possible that a higher FTL can completely bypass the shields of a lower one because they use a different technology.

Robots as Characters

According to the FTL table, robots with high enough Attributes and AI to be playable as PC's wouldn't really be available until FTL 4. But you can always have a one-of-a-kind robot that's cutting-edge technology, or made by Weird Science, or just ignore the table. ☺

Medicine

Whether it's drugs, nanobots, gene-splicing, etc. does not matter! They will be called "meds" for convenience.

In FTL 1, there are meds that provide immunity to all diseases (for 1 year), and all poisons (for 1 day). Anti-radiation meds can protect you for 1 day, and be taken up to 1 hour after exposure. A Bleed patch stops Bleeding Out immediately. Many kinds of knock-out meds, poisons, etc. can be delivered as gas grenades or via special bullets.

In FTL 2, death can be slowed down : any character who fails their Incapacitation roll and is injected with "Decel" immediately makes another Vigor roll at +3, minus the number of turns since they failed. On a success, they revive but stay Incapacitated (and Wounded) and roll Incapacitation once per day at +3 until they receive healing. Poisons, knock-out meds, etc. can be genetically keyed to target a specific race.

In FTL 3, death can be suspended : as above, but on a successful revival, there are no more daily rolls. Medibeds have robotic arms and enough AI to perform autonomous surgery. Poisons, knock-out meds, etc. can be genetically keyed to target a specific person.

Skills, Hindrances, Edges

- Lockpicking becomes "Security" (whether you rename it or not is up to you) – it covers setting up and getting around any kind of locks and traps. In any FTL setting, it is Smarts-based.
- Gambling becomes "Deception" (whether you rename it or not) and covers lying, not visibly reacting to bad news, etc. It could even cover impersonations, disguises, and the like. Bluffs are Gambling vs. Notice.

High-tech and space travel requires more skills than a medieval setting. The following Knowledge (Smarts-based) skills are offered for your consideration :

- Ship Ops – any crew member of a space ship must have this skill to use sensors, activate shields, open pod bay doors, do minor repairs anywhere, and all the other normal daily ship operations.
- Astrogation – navigating thru space and/or "hyperspace" requires detailed knowledge to decide how to get to where you want to go, how to avoid running into stars and black holes on the way, etc.
- Communications – how to operate and repair the ship's regular and faster-than-light comms equipment
- Propulsion – how to operate and repair the ship's slower-than-light and faster-than-light engines
- Gunner – how to operate and repair all the ship-vs-ship weapons (use this instead of Shooting during combat)
- Computer Security – how to hack into computers and/or networks, and how to block such hacking
- Planet – the general history and current culture of a race (the GM may treat this like the Multiple Languages option)
- Explosives – how to arm, disarm, and place explosives for maximum effect
- Xenobiology – understanding the biology of a race well enough to heal them. The GM may treat this like the Multiple Languages option, or just ignore it all together (so Healing becomes race-independent).

You may wish to offer starting PC's a few extra character creation points to invest only in these new skills.

If you decide that you need to represent the sciences in general, Savage Space has lumped them into four categories :

- Life Sciences : biology, botany, ecology, exobiology, genetics, zoology
- Material Sciences : chemistry, computer science, mathematics, physics
- Planetary Sciences : the sciences of how planets work – geology, hydrology, meteorology
- Social Sciences : archeology, economics, law, political science

The names of Hindrances and Edges from some other settings are given for your consideration :

Source	Hindrances
Savage Space	Cyber Intolerance, Debt, Organization Dependent, Space Sickness, Xenophobe
Slipstream	Exotic Atmosphere Breather, Glass Jaw, Homesick, I'm With Him, New Arrival, Psionically Vulnerable, Sheep, Xenophobic
SFC	Cyber Resistant, FTL Sickness, Low-G Worlder, Low Tech, High Tech, Outsider, Zero-G Sickness, Zero-G Worlder

Source	Edges
Savage Space	Bounty Hunter, Captain, Cyber Tolerance, Diplomat, Freelancer, Hacker, Navigator, Neural Wiring, Scavenger, Scoundrel, Shipwright, Smuggler, Spaceborn, Space Explorer
Slipstream	Bring 'em On, Engineer, Explorer, Femme Fatale/Ladykiller, Fence, Guardian, I Have One, Iron Jaw, One Man Crew (&Improved), One of a Kind, Rocketship Gunner, Rocketship Navigator, Scamper, Slugger, Sucker Punch, Trademark Rocketship, True Hero, Spurred On; several Weird Science Edges
SFC	Atmospheric Acclimation, Cyber Tolerant, Cyborg, Geared Up, Gravitic Acclimation, Heavy-G Worlder, Rocket Jock

- Other-G Training (Novice) : each instance of this Edge removes 1 point of physical Trait roll penalties. So someone raised in Earth-G would need to take this Edge twice to remove all penalties in Zero-G.
- Suit Proficiency (Novice) : halves the time needed to put on any "suit" (see Armor), and removes any Trait roll penalties from wearing the suit.

Space Travel

There are two basic types of faster-than-light travel. The first is "hyperspace", "warp drive", "tachyon drive", etc. in which the ship just travels very fast. This will be called "hyperspace" for simplicity.

To keep things simple, typical distances are given rather than specific speeds in the table below. "Known space" refers to the crew's native federation/empire/whatever that the adventure is happening in. Times given are for normal maximum cruising speeds that *don't overstrain the engines*. For example, the GM can decide that the next trip is several "nearest star" distances away, or if the crew has to enter a foreign space, that would be a "known space" or two distance away (depending on where they are starting from).

FTL	Across solar system	Nearest star	Across "known space"	Across galaxy	To next galaxy
1	2 weeks	800 years			
2	10 minutes	2 weeks	6 months	100 years	
3	1 minute	1-2 days	2 weeks	5 years	50 years
4	6 seconds	3 hours	1-2 days	2 weeks	6 months

At the next FTL, the same drive can be fitted in a significantly smaller ship – for example, an FTL 2 drive could be used on a large scout/fighter (6 people) ship at FTL 3. The same drive could be used on a single-person scout/fighter ship at FTL 4.

The GM must also decide whether ships can fight, and whether you can communicate, while in hyperspace.

The other kind is a "hyperjump", "gate", "jumpgate", "transmat", "teleporter", "wormhole", etc. where the ship "jumps" from point A to point B virtually instantaneously. This will be generically called "hyperjump". If the device is mounted in a ship, the distance of <u>each jump</u> is limited by the following table :

FTL	Jump Distance (slow)	Jump Distance (fast)
1	Not available (use above table)	Across solar system
2	Across solar system	Nearest star
3	Nearest star	"Known space"
4	"Known space"	Across galaxy

FTL 5+ would allow travel to anywhere within the galaxy and beyond. The time between jumps (while the ship's energy reserves build back up) determines how "powerful" hyperjumps are compared to hyperspace. The above table assumes that it takes 1-2 <u>days</u> between "<u>slow</u>" jumps, which then makes the ship travel at about the same speed as hyperspace. But if you want a galaxy-spanning adventure, then you need to drop the recharge time to several hours, <u>or</u> use "fast" hyperjumps (doing both would just be silly).

Either hyperspace or hyperjump engines could be mounted in the ships, or they could be an external device that "sends" the ships. If they are external, you need to decide whether :

- It is mounted on the surface of a planet, allowing people and cargo but not large ships
- It is in outer space, allowing only ships
- A corresponding device <u>must</u> be at the destination (so you can only get to certain locations!)

You must also decide who controls access to them, and consider that they must be heavily guarded, as they would be prime targets for pirates, or during wars, etc.

Note that in any case, the time spent travelling is generally not an issue unless healing, repairs, or some new device, potion, etc. needs to be made. As many people have suggested before, you can ignore <u>all</u> this and assume "the ship travels at the speed of the plot".

Sensors and Communications

Sensors start with one sensor type, 120º field-of-view, cost $100, range of 50 yards; are hand-sized / helmet visor / goggles / small binoculars; they are 100% accurate but only detect presence (not location)

FTL	Max Points	Lifeforms detectable
1	1-3	Any/all (bigger than bacteria & bugs), +1 point
2	4-6	Identify species, edible food, +2 points
3	7-9	Identify by DNA (individuals), +3 points
4	10-12	

For sensors, size is more important than weight : less than –1 is not easily portable. At +3 or higher, the penalty to Notice is Mod–2. Use this table to determine size modifiers →

Mod	Size	Mod	Size
–5	desk	+1	palm (only)
–4	2-drawer file cabinet	+2	credit card
–3	desktop PC	+3	finger-size
–2	mini-desktop PC	+4	thumbprint
–1	notebook, binoculars	+5	thumbnail

Sensor types : audio, visible, nightvision, infrared, electric power, "radio" (including TV/cell/wireless), nuclear radiation, magnetic, atmospheric composition, air pressure (vacuum), any metals, Arcane, a single chemical compound (drugs, explosives, etc.), lifeforms (by FTL, see first table), etc.

Modification Point Costs	
+1 per sensor type (see above list)	+2 for 360º coverage
+FTL to detect lifeforms (see first table)	+2 for AI to analyze the results for you
+1 to halve the size (+4 min for an implant)	+2 to locate within a MBT in open area (unless spy-ray)
+1 to halve the price	+2 to see thru thin materials (clothes, boxes)
+1 to double the range	+3 for wireless neural interface (prereq : FTL 4)
+1 to store the data (built-in memory)	+4 to see thru thick materials (brick/metal walls)
+1 for voice-activated controls	+4 to locate (exact square) in open area (unless spy-ray)
+1 per *2 zoom (telescopic)	–1 to double the size
+1 to add one-way communication (see below)	–1 to double the price
+1 for brainjack connector (prereq : FTL 3+)	–1 to halve the range

For every 4 points in appropriate sensor types, range, coverage, or zoom, add +1 to Notice or one Attack roll.

Sensors that can see thru materials become "spy-rays", because they can observe what people are trying to hide. They of necessity emit some kind of "carrier wave" which can be detected by the other side. The GM should decide whether these kinds of devices even exist (they complicate espionage greatly).

Anti-detection equipment starts at the same size and cost, and consists of 4 basic varieties :

- Detector : merely signals that a spy-ray is present (it detects the carrier and counts as a "sensor type")
- Jammer/Screen/Scrambler (+1) : blocks the carrier, but is obvious and easy to pinpoint; may be illegal (or not, if citizens are allowed their privacy); note that a spy-ray screen is not a force field!
- Veil (+2) : blends wearer into background, –1 to Notice roll (cumulative), probably illegal
- Veneer (+4) : feeds false info to the spy-ray sensor, probably illegal

Communication devices start at the same size and cost, and can reach 20 miles (+1 to double, +5 for orbital). They can be jammed as per above. All communications are encrypted, but messages can always be broken by the next higher FTL's computers (GM's call).

It's possible (GM decision) that the carrier wave (ether, sub-ether, sub-space, ultrawaves, hyperwaves, gravity waves, etc.) used by communicators and spy-rays changes and improves in each FTL, so that (for example) FTL 1 screens do not stop FTL 2 spy-rays, FTL 1 radios cannot receive FTL 2 comms, etc. So each FTL can spy and communicate in secret compared to earlier FTL's (think telegraph vs. FM radio vs. cell phones).

Personal Weapons

The job of the blaster, laser, plasma gun, gyrocket (self-propelled bullets), disruptor, etc. is to do damage.

FTL	Max Damage	Total Points
1	2d6	10-12
2	2d8, 3d6, 2d10	13-15
3	2d12, 3d8	16-18
4	3d10, 3d12	19-21

FTL 1 and 2 weapons do the same amount of damage as modern-tech, but are lighter and have more shots. In addition, all non-projectile weapons ignore projectile armor bonuses (such as for Kevlar).

The base weapon is : one-handed, 2d6 damage, 25 shots, ROF=1, recoils, 3 lb., $250, range=4/8/16
Ammo refills are roughly 1/10 the cost of the weapon, and take a non-Free Action to replace
Damage type must be specified as : projectile, laser, sonic, plasma, etc. (for dealing with armor, below).
Damage can be lethal or non-lethal, your choice.
Note that lasers do not require "leading" and are not affected by gravity, and sonic will not work in a vacuum.

Weapon Modification Point Costs	
+1 to double #shots +1 to halve the price +1 per 2 lbs. lighter +2, +3, +4 to multiply range by *2, *3, *4 (etc.) +1 per fixed +1 damage +1 if silent (laser, or silencer added, etc.) +1 per AP +1 to have a lethal/non-lethal switch +1 for "concealable" (prereq : 1 lb; –2 to Notice) +2 per damage die type above d6 +2 per +1 Shooting (laser, or sight added, etc.) +2 if ROF = 3	+3 if ROF = 4 +3 if it's a Heavy weapon +4 for no recoil (laser, sonic, gyrocket) +4 for 3 dice damage +4 if it can double-tap, 3RB, etc. +4 for cone, SBT +8 for MBT, LBT –1 to halve #shots –1 to double the price –1 per 2 lbs. heavier –2 for 2d4 damage –2 if two-handed –4 if must be "mounted" (cannot carry)

You can take your setting's weapons and determine their FTL and split them up accordingly (note that disintegrators are automatically FTL 4 or higher), or create your own weapons for the FTL your PC's will be spending most of their time in. Rule of thumb : if you have to push the price over $1000, or the weight over 20 lb. to make it fit in your FTL, it's probably too powerful!

It would be a very good idea to have some ranged weapons at each FTL that do non-lethal damage, for in-ship combats. Altho the hull could be considered "Heavy" so that regular weapons don't damage it, there is still plenty of critical equipment and conduits just behind walls, bulkheads, ceilings, or even out in the open that could be damaged by ranged weapon fire. You never want lethal-damage weapon fire inside a ship!

Put whatever kind of trapping you want (force fields, monomolecular edges, vibroblades, etc.) on ordinary melee weapons (knives, swords, whips, etc.) to add damage . Start with the same base weapon above and modify as needed using the table (as appropriate), but subtract 2 for turning it into a melee weapon. Damage starts at d6+STR and follows the table from there for the weapon's die only.

Personal Armor

You can *call* it whatever you like – Super Kevlar, Weave, Durasteel, Ceramisteel, Reflect, Sonashield, Force Field, Plasma Shield, etc., but its job is to stop damage.

FTL	Min-Max General Armor	Max Points (realistic)	Max Points (pulpy)
1	0-4	1-3	1-4
2	2-7	4-6	5-8
3	4-11	7-9	9-12
4	8-16	10-12	13-16

The minimum armor values are based on the typical weapon damages for that FTL – all available armors should provide at least that much protection to avoid excessive wounding.

Using the "realistic" column means that personal force shield armors that cover the entire body cannot appear until FTL 4. If you think personal force shields are cool, and want them at FTL 3, use the "pulpy" column.

Base armor : adds 1 to general Toughness, covers only the torso, weighs 3 lb., and costs $250
("general" means it stops all kinds of damage equally well)

Armor Modification Point Costs	
+1 to halve the price	–1 to double the price
+1 per 2 lbs. lighter	–1 per 2 lbs. heavier
+1 per +1 general Toughness	–1 per –1 general Toughness
+1 per +2 Toughness vs. a specific weapon damage	–2 for only covering the head (for building separate helmets)
+1 for "negates 2 AP" (prereq : vs. specific weapon damage)	
+1 for "no gaps" (prereq : covers arms, legs, head)	
+1 for covering arms or legs	
+2 per +1 general Parry (force field "deflectors", FTL 3+)	
+2 per +2 Parry vs. any specific weapon damage (FTL 3+)	
+2 per +1 "Heavy" armor (general)	
+2 for no penalties to sleep in the armor	
+2 for un-noticeable/inconspicuous (when covered by clothing)	
+3 for covering the head (integrated but removable helmet)	

You can take your setting's armors and determine their FTL and split them up accordingly, or create your own armors for the FTL your PC's will be spending most of their time in. Rule of thumb : if you have to push the price over $1000, or the weight over 15 lb. to make it fit in your FTL, it's probably too powerful!

- Specific weapon damages can include : projectile, laser, blaster, plasma, sonic, Arcane, etc.
- At lower FTLs, consider several low "general" Armors, each with an Armor bonus by damage type.
- At higher FTLs, consider providing some extra Parry. With the damages involved, it's far better to not be hit!
- You can make armor specialized for only one kind of damage by removing any general Armor bonus.
- A **"force screen"** is high general Armor (+4 or more), no gaps (+6), and must be low weight (1-3 lb.), so high points (10+). Note that force fields are not available until FTL 3 in any case.
- For simplicity, make the "negates AP" value greater than or equal to the largest AP of all available weapons.

Suits

A space suit, environmental suit, hazmat suit, etc. starts by providing "no gap" coverage (+6 points) and filtering the air, but –1 if it's not meant to provide Armor (so +5 base).

Non-force-field suits take 5 minutes to put on or take off, with airtight suits (having life support) taking 10 minutes, and either one imposes a –2 penalty to Agility and all its related skills.

Suit Modification Point Costs	
+1 military-grade air filter (toxic gasses, radiation, bacteria, viruses, etc.) +1 to double life support time (see below) +1 to protect against ±50ºF / 25ºC of ambient temperature +1 for "chameleon" ability (–1 to Notice), each sensor type separately +1 for waste-management +1 for zero-G thrusters : 6" speed per time this is taken +2 provides life support for 6 hours +2 heater (for outer space) +2 for Low-G flight : 6" speed per time this is taken +3 for Earth-G flight : 6" speed per time this is taken +4 for High-G flight : 6" speed per time this is taken +4 for small puncture self-sealing in one turn (prereq : FTL 3+)	–1 to halve support time

Combat Suits

Combat suits, battle armors, powered armors, exoskeletons, etc. have rigid structures with servo motors and a built-in power source, and are hermetically sealed with life support, and cost +6 points to start with. The trade-off is that you cannot increase weight to offset the point cost, you can only increase the price!

The base combat suit starts as base armor, runs 6 hours, has 2 weapons mounts and no –2 Agility penalty

- Use the Armor table for armor, cost, etc. and use the Suit table to add other features not already included
- An "exoskeleton" does not provide any armor or life support, but still requires total coverage, and is +6

Combat Suit Modification Point Costs	
+1 per +1 bonus to punching damage +1 for built-in automedic : +2 to recover from Shaken +2 for automedic : d10 Healing every 8 turns (halved per time taken) +2 per extra Strength die above user's Strength +2 for +1 Pace	–2 for –1 Pace

Full combat suits are not very practical at FTL 1 : a +4 Armor, +1 Strength die suit would cost a minimum of $128,000. But a +1 Strength die exoskeleton would only cost $8000. By FTL 2, the same combat suit would cost only $16,000. Powerful combat suits will only be affordable by governments and mega-corps in any FTL.

Note : by this system, all of the SFC's Power Armors are FTL 4, and Pulpy (all their armor is Heavy armor!). You can build more realistic suits for your FTL using this system.

Combining Armor, Weapons, and Sensors

Suits and helmets can have Armor and sensors. Armor is added by adding its points to the points of the wearable item. Sensors and comms are built using their table, and their cost (not points) is added to the cost of the wearable item. Enough sensors can provide bonuses to the user's Attack rolls. Weapons for combat suits are handled as for sensors – build the weapon from its table (or take it from your setting), then add its cost.

Examples

A range of allowable points is given for each FTL for when you're categorizing an existing setting's items by FTL. But when creating your own items, you want to use the max point value for that FTL as your target.

To create your own items, calculate the total point cost of the item you wish to have. If the point cost is too high for your FTL, you have to reduce it by increasing the cost and/or increasing the weight (except for combat suits) until it is acceptable. **It is price and weight that keep a powerful item from being infeasible at too low an FTL!**

This system is not meant to define rigid boundaries between FTL's (which ultimately only differ by 1 point). It's meant to provide guidelines for the GM to make decisions, based on their concepts of how things should work within the setting, guided by their experience. Got an armor from a setting that's 4 points, but it feels more like an FTL 1 item for $250 rather than $500? Make it so! It's up to the GM to "choose wisely".

Reducing the point cost by one can double the cost. For example, a 4 point reduction is noted as "*2^4", which gives you the cost multiplier of 16. If you're not math inclined, count 1 2 4 8 16 32 64… on your fingers, one finger per point reduced, to determine the cost multiplier.

When converting an existing setting's items, round! $200 or $300 for a weapon is close enough to $250 that it costs no points either way. A range of 15/30/60 is approximately 4 times the base range of 4/8/16, so +4.

Sensors

Most futuristic military helmets would be fitted with at least 2-way(+2) orbital(+5) comms, infrared(+1) and night vision(+1) = +9 points. To be HUD-sized, the total points must within the allowed range for that FTL.

So at FTL 1 with +3 points max, 6 points must be accounted for in doubling the cost. That's $100 * 2^6, or $6400. That's way too much, so we need to separate out the comms (+7) into a separate hand-held unit the size of a walkie-talkie(–1), with 3 points going towards cost, so $100 * 2^3 = $800. That leaves the IR and night vision (+2) in the helmet, now plus an additional sensor or feature (remember, +3 max), for $100.

The helmet itself costs $250 with 1 point of Armor to start with. It can have 3 Armor total (+2 points for 2 general Armor, –2 for helmet-sized) for free. So satcomms for $800, helmet for $350.

By FTL 2 (+6 points max) all the sensors would cost $100 * 2^3 = $800, so they can be built-in, $1050 total. By FTL 3 it can have another point or three of Armor, more sensors, 360º field-of-view, or telescopic zoom, etc. and still be reasonably priced.

A 2-way(+2) orbital(+5) comms the size of a badge(+3) is +10 points. At FTL 1 (max +3) that would cost $100 * 2^7 = $12,800 (impractical), at FTL 2 (max +6) it would be $100 * 2^4 = $1600 (expensive but doable), and FTL 3 (max +9) it would cost only $200 with no other features.

A five mile(–2), one-way(+1), omni-directional(+2) "bug" the size of a thumbnail(+5) would be +6 points. At FTL 1 (max +3), that's $100 * 2^3 = $800. If its range was only one mile, that would drop the cost to $200.

Weapons

The SFC's gyrocket (gyroget) pistol does 3d6 damage(+4) with range 12/24/48(+3), is a Heavy weapon(+3) that has 10 shots(–1), weighs 3 lb(+0), and costs $400(–1), for a total of 8 points. This is weak for a weapon whose damage makes it FTL 2 (min +13). Add no recoil(+4, my personal opinion) and AP 1 or 2(+1-2) and it becomes a solid FTL 2 weapon. **Note that when balancing a setting's item, you don't have to max it out, just it get within range.**

The SFC's laser pistol does 2d6 damage(+0) with range 15/30/60(+4) and AP 2(+2), has 50 shots(+1) and no recoil(+4), can Double-Tap(+4), weighs 2 lb(+0.5) and costs $250(+0) for a total of 15-16 points, making it a FTL 2 weapon. If you want it to be available at FTL 1 (+10-12), just remove the Double-Tap and maybe AP 2.

The SFC's SMG blaster does 2d6+2 damage(+0,+2) with range12/24/48(+3) and AP 2(+2), ROF=3(+2) with 100 shots(+2), can Double-Tap(+4) but is 2-handed(–2), weighs 1 lb(+1) and costs $300(+0), making it an FTL 2 weapon at +14 points.

Armor

Savage Space's Padded armor provides +2 general Toughness(+2), covers arms and legs(+4), weighs 8 lb(–2.5) and costs $300(+0), for a total of 3-4 points, making it a good FTL 1 armor.

Savage Space's force shield armor (Personal Shield Generator) provides +10 general Toughness(+10) and full coverage(+6) while weighing 4 lb(–0.5). A price is not listed, but at 15-16 points, at least 4 points must be removed to make it available at even FTL 4 (max +12 realistic). So it must cost $250 * 2^4 = $4000. Pricey, but doable. Drop it to +8 general Toughness (the minimum recommended for FTL 4), and it costs $1000.

Suits

A typical space suit would be a base suit(+5), life support(+2), heater(+2), thrusters(+2), waste(+1) for a total of +12 for 6 hours. In FTL 1 (max +3), 9 points must be distributed between weight and cost. Putting 2 points towards cost makes it $250 *2 *2 = $1000, leaving 7 points towards weight (2 lb/point), for a total of 17 lb.

The same suit using an FTL 3 (max +9) "force field" must keep the weight low, so putting all 3 points towards cost would be $2000. The extra cost is worth the "always available" and "instant on" features of a force field. Adding a sensor that would detect a vacuum and automatically turn on the suit would add only another $100.

Combat suits

A base(+6) suit with +4 Armor(+4) and +1 Strength die(+2) would be +12 points. At FTL 1 (+3 max), it would cost $250 * 2^9 = $128,000. But a +1 Strength die(+2) exoskeleton would be +8 points, and only cost $250 * 2^5 = $8000.

By FTL 2 (+6 max), the same combat suit would cost only $250 * 2^6 = $16,000.

Smart weapons

By FTL 3, a small(+4) sensor could identify the DNA of the user(+3) for a total of +7. At 7-9 points for the FTL, it only adds $100 to the cost of the gun. Such a gun would not fire for anyone not authorized to use it.

Or at FTL 4, a gun with a small(+4) sensor that has a wireless neural interface(+3) could only be used by someone with a braincomp and the right password.