

Fifth Age



Character Creation

Character creation in Fifth Age follows a series of simple steps:

1. Assign Ability Scores
2. Choose a Species and a subrace, if applicable
3. Choose a Class
4. Choose a Background
5. Choose a Systems Proficiency.

Now, I am going to assume you've built a character before, and if not, well... at your age, I can't imagine... Well, let me do what I can to help you out, better than learning about it on the street.

Ability	Cost
8	0
9	1
10	2
11	3
12	4
13	5
14	7
15	9

1. Assign Ability Score

There are a number of methods of assigning a character's six ability scores, with point buy being probably the most fair and balanced. You have somewhere around 25-29 points to spend on abilities depending on how cool of a guy your DM is, and may spend those points according to the table below.

For people in a hurry to get playing, just slap the following numbers into your ability scores. 15,14,13,12,10,8.

Stodgy old fashioned gamers can simply roll dice, say 3d6 for each ability score, or maybe 4d4. You can figure it out.

For the truly adventurous, (and if you can't be adventurous filling out a form then space might not be for you) grab a standard 52 card deck of playing cards, and get ready to deal some high stakes baccarat. Using this method deal out two cards for each ability score, and decide which of these totals are high enough to suit your adventurousness, and which you need to up. You may deal up to three more cards into each ability score, counting all totals according to the following chart. Remember, total whatever the hand would be (like blackjack) but only pay attention to the one's place (the 5 in 25, the 4 in 34) and add this to a base ability score of 8.

Baccarat Card Values

A = 1 2 3 4 5 6 7 8 9 = face value 10 J Q K = 0

Examples

3 4 = 7 9 5 = 4 Q K 2 = 2

2. Choose a Race

There are no bad choices. To be fair, there are only three choices, really, but they're all good, I promise! Each race will grant some ability modifiers, changing those attributes you were just agonizing about, and add in some fancy new proficiencies or special abilities. You can figure this out, surely, if you have trouble with it, ask your DM, but don't tell him I said so, that guy has it in for me.

3. Choose a Class

Well, now's your chance to take a look at all those fancy classes (imagine, you finally getting some class! Just kidding. Mostly.) and pick the one that fits your idea of a bold space adventurer the best. You might decide to go back and rejigger those ability scores some, so this part makes a little more sense. I leave that to your conscience. Most classes let you make some choices at first level, like proficiencies and skills. Those are kind of a big deal, out in space. I bet your life never hinged on being able to balance on one foot or make a clay pot, but out in space, you better be able to pull your weight. Or at least mass. There's really not weight in zero-gravity the way you think of it, and.... Nevertheless you get the idea. Maybe put some points in knowledge physics. If that isn't a skill pester your DM about it. If you want to specialize in psychology or german poetry that's your business, and I hope he's as supportive about it as I am.

4. Choose a Background

Where did you come from? Where did you go? No, seriously, I wasn't paying attention. No, I don't know any joe, and what's a cotton? Never mind that, your background has a lot to say about your character, defining some more key statistics and proficiencies, granting a neat ability or knack, and giving you a better idea about exactly why you're out here in the black deeps. You might want to work with your buddies to figure out a good reason for a bunch of misfits like you to be together, play your cards right (you kept the deck from before, right? You just used dice? I expected better, oh well.) you can create a really deep tapestry of backgrounds that will do a lot of creating the campaign for your DM. That should really grind their gears. Or maybe they're the lazy type, I forget.

5. Choose a Systems Proficiency

This is your last chance to be useful. All your many sins of poor character building can be covered up here if you pick a useful systems proficiency. Try for something cool sounding, to you, something one of those other guys didn't take maybe. Whatever your character is or does, he can still serve a purpose at the controls of your starship. Every character class allows proficiency in at least one system, this step is reminding you of that, you are still restricted to the listed proficiency choices for your race, class and background.

Species



The focus of this work is human centric, and will focus on the mostly likely characters to sign aboard human built star ships headed for the human frontier. Fermi had it all wrong, and there's a strong argument for some intelligent design out there, the galaxy seems to be teeming with life compatible with our own, just waiting to be.... Discovered. That being said, this work assumes a campaign fairly early in human expansionism, and there is not a lot of species diversities in earth's fleets quite yet.



Human

A species of sapient mostly hairless ape native to the third planet of the Sol system, commonly known as Terra to the rest of the galaxy, or as Earth to its natives in English.

Manifest Destiny

Not unlike a virus, humanity has spread out from its point of origin for most of its existence, a trend that has begun to accelerate exponentially with the discovery of the Hyper drive.

Master Survivors

Clever and adaptable, Humans show a propensity for overcoming challenges, and are quite adaptable, both mentally and physically, after taming all the native biomes of their homeworld they are now moving on to similarly adapt or adapt to the new environments they meet, planetary, political, and perhaps most ominously economical.

Military Minded

Not the most aggressive species encountered by explorers, Humans are unique in that they are disturbingly well organized with their aggression, putting technologies to work offensively in undreamt of fashions all in the name of their ideal of 'Weaponization', to convert every known scientific principle of the universe to work as a tool for warfare.

Diverse but Indivisible

Having dozens, or perhaps hundreds, of political entities and organizations, the humans compete with each other, making war on their own species, over things like the color of their flags, or preferred language. Despite this fractious community even the most aggressive and territorial of human groups will unite against a common outside antagonist.

Human Names

Humans generally have two physical sexes for reproductive purposes, and naming conventions differ amongst these groups with the exception that an individual usually has a single primary name and a name marking it as member of a larger genetic grouping of relatives.

Male Names: Jack, William, Liam, David, James, Wei, Omar, Aarav, Alexander

Female Names: Olivia, Emma, Sofia, Chloe, Madison, Fatima, Jing, Aadhya, Anastasiya

Surnames: Smith, Johnson, Jones, Williams, Brown, Rodriguez, Wang, Li, Patel, Smirnov,

Human Traits

Humans are highly adaptable with a deep pool of genetic diversity to pull from, and few generalizations can be made of them.

Adaptability: Humans may add +2 to a single ability score, or +1 to two separate ability scores.

Age: Humans reach adulthood in their late teens, and rarely live more than a century.

Size: Humans vary wildly in size, from under 5 feet, to nearly 7 feet in height. Regardless, humans have a size of Medium.

Speed: A human's base walking speed is 30 feet.

Diverse Education: Choose a single skill or Tool and gain proficiency in it.

Languages: Human characters speak, read and write their native language and English.

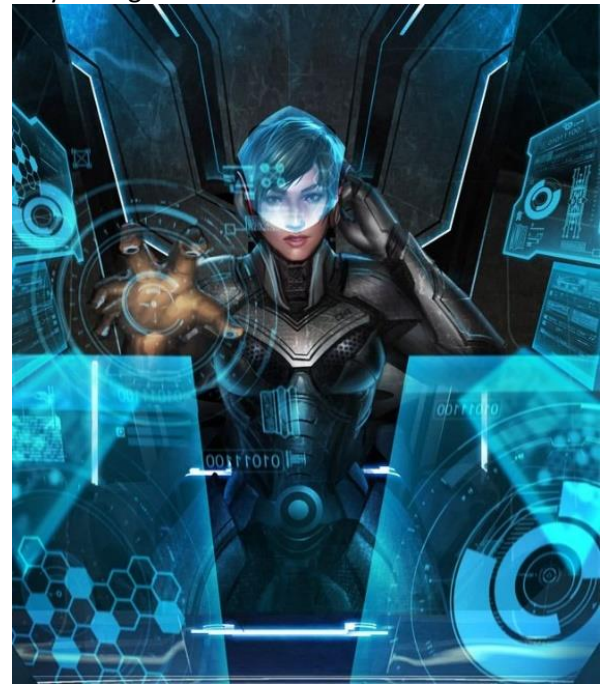
Subrace: Naturally occurring biologic diversity were insufficient for humans, so they have created several Subraces.

Cyborg

Cybernetically augmented from before birth, these humans have integrated technological components into their bodies, offering them possibilities denied to their purely biological brethren.

Ability Score Increase: +1 to any ability score

Mind Machine Interface: You possess an MMI port that allows you to directly interface with technology. You permanently possess a computer interface, and when connected to a compatible device or system with which you are proficient, increase your proficiency bonus by +1 if relevant.



Earthborn

You are notable not for genetic or technological augmentation but rather for the lack of them. As a normally born human, raised to adulthood on earth herself, you had the chance to study the latest technologies, attend the most ancient of universities, and to be in the very heart of human culture, granting you opportunities and experiences no other human possesses.

Wealth of Experience: This character may choose an additional background to represent their life experiences. Some backgrounds may not be suitable for this feature, and require DM approval.



Spaceborn

Genetically modified for life in space, this type of human is particularly adapted for life with wide gravity tolerances (from 0 to 3 g), and high radiation environments. Notable for a complete lack of body hair and a lower body temperature, as well as a host of other minor changes.

Ability Score Increase: +1 Dexterity

Slow Metabolism: Gain Resistance to Radiation damage, and advantage on saving throws against radiation.



Tube Born

Designed in a lab, with certain traits in mind, you were born of genetic experimentation and scientific funding, not biological parents. You can look in the mirror knowing that you are exactly what your creator wanted you to be.

Ability Score Increase: +2 to any one ability score, or +1 each to two different ability scores.



Synthetic

Created and built, these synthetic life forms are sentient, sapient, and one would certainly hope, completely loyal to the species who created them.

Digital Sentience

These are more than simple automatons and machines, and possess free will and intelligence, or a simulation thereof so realistic we can't tell the difference and had to give them rights.

Software Souls

Synthetic intelligence is stored within their software, and with proper preparation may be retrieved or stored in compatible systems. Whether restarting this software, or backing up and restoring its originator, constitutes as 'death' is a matter up for some debate.

Ownership

Under human law, synthetics owe their builders the cost of the manufacture of their chassis plus interest to be paid back by any party holding their contract, which with very long terms and planned obsolescence means that very few synthetics fully own their own chassis, and those that do often continue in the roles they were initially set to serve.

Three Laws

All legal synthetics obey a modern iteration of Asimov's three laws, these being:

1. A robot may not injure a human being or, through inaction, allow a human being to come to harm.
2. A robot must obey the orders given it by human beings, except where such orders would conflict with the First Law.
3. A robot must protect its own existence as long as such protection does not conflict with the First or Second Law.

Synthetic Names

Synthetics are given an alphanumeric serial number upon manufacture which is tied to their software, and possess a chassis with a model name and number. Synthetics will often take a name comfortable for their creators, or indicative of their purpose, usually gifted by the humans closest to them.

Serial Numbers: 9CG8VNC9QXB9, 7E2RZDGCNZN6, L3FSYVUBJ46F, V7TVVU6K4TGC, EPRBXVKQDEEM, DAHTP4QJ69B5

Chassis Models: ZV-9 Maintenance Worker, Butler 1400 Personal Service, Rhotech Industries Rocket Technician, Alyssa 6900 Human Companionship Interface

Nicknames: Clicky, Clanks, Mr. Handy, RoboMop, Bobby, Alley, Chromedome

Synthetic Traits

Age: AIs take up to six terran months to be evaluated and deployed, and a chassis can spend long periods between manufacture and deployment, but rarely more than a year. Synthetic chassis can last up to several decades, and no AI has yet perished of entropic decay.

Size: Synthetic chassis can be constructed in almost any conceivable shape and size to serve their intended purpose, but most shipboard robots are similar in size to humans, ranging between 4 and 6 feet tall, often noticeably shorter than the humans that construct them. Regardless, Synthetics are size Medium.

Speed: Most synthetics are humanoid, and have a walk speed of 30 feet.

Infravision: Most synthetics can see in the infrared spectrum, effectively seeing in the dark.

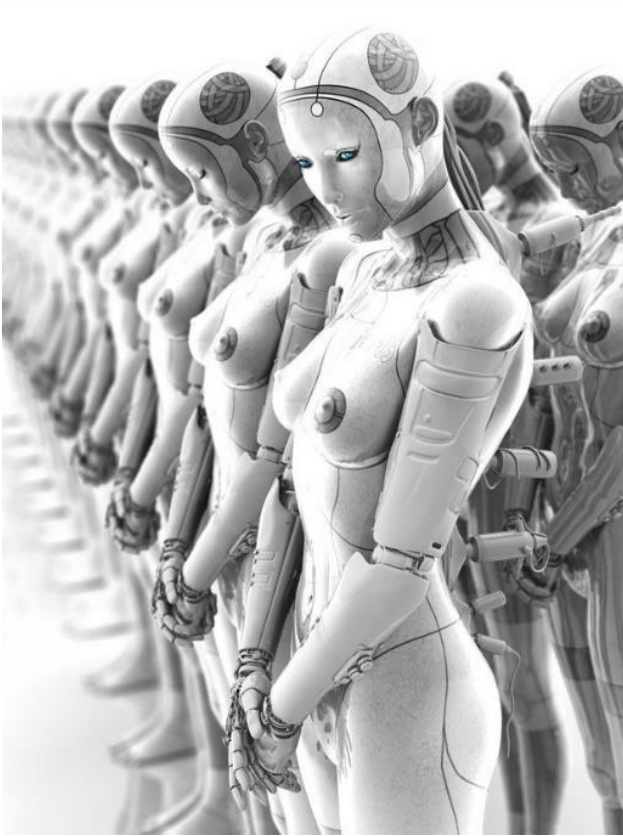
Self-Repairing Mechanism: Constructed of smart materials and with limited onboard production capabilities, Synthetics may heal themselves similarly to an organic character using hit dice during short rests. However, once these hit dice are gone, they must be restored by a long rest, and acquiring additional repair materials weighing one pound per hit die.

Well Made: Designed for durability, Synthetics use d12s to determine starting HP and HP on leveling up, regardless of their class.

Inorganic: Synthetics are not alive in the traditional sense, and are immune to most disease and infections, and do not require sleep or food and water. Maintenance cycles for software and hardware might still be required.

Charging Requirements: Synthetics rely on external power sources for their energy needs, and must be recharged as part of their daily duty cycle, requiring access to a sufficient power source at least once per day for optimal operation.

Languages: Synthetics speak the language of their manufacturers, English, and Tradespeak



Chassis

Synthetics require a chassis to operate in meatspace, built to various specifications for different purposes. Synthetics choose their chassis, granting themselves specific benefits based on model.

Service Model

Designed for human interaction, these models have more processing power and better emotion emulators and motile facial features. You gain +4 Charisma, and proficiency with Persuasion.



Laborer Model Built for heavy lifting, you are like a cross between a longshoreman and a forklift. You gain +2 Strength and +2 Constitution, and proficiency with your built in repair kit.

Security Model

Protecting humanity sometimes means pacifying them with force, for their own good of course, and you were designed to do this with the minimum amount of risk to human safety. You gain +2 Dexterity, and proficiency in Law.



Tech Model

You were designed to aid in the gathering and processing of data, general research, and to assist in technical tasks. You gain +2 Intelligence and +2 Wisdom, and gain proficiency with any two skills or toolkits.

Greylies

The K'Titch'Zaa first visited earth many millennia ago, and have kept up a fitful watch over us for much of the time since. Looked down on by the rest of Galactic Society as lacking in advancement and making no contributions to society, they were given the very least priority for colonization and resource extraction, and few species had any interest in trade with them. All of that changed when their compassion saved the crew of humanity's first doomed expedition to a neighboring star. Known from that day to this as Greys, or Grey Aliens, and now commonly Greylians, the K'Titch'Zaa have become humanity's only true alien ally.



Scavengers

Evolved from scavengers, Greyliens may consume almost any organic compounds and possess stout digestive systems that can even ignore the handedness of DNA. Given their diet of carrion and a weak technological base (seeing as their home system is particularly resource poor, and their homeworld can barely support life), this species has very little to offer galactic society, and have taken scavenging to space, travelling world to world, carving out niches in other cultures performing the most unsavory of work, and making do with the cast offs and leftovers of other civilizations, often acquired at extortionist prices.

Masters of Resourcefulness

Greyliens maintain their space presence through a mastery of salvaging, pilfering, and jury rigging. Greyliens have struggled for millennia to maintain their tenuous presence in space, stubbornly refusing to give up the stars, which led to their first assisting humans, whom they viewed as similar underdogs.

Not that Alien

Roughly Humanoid, oxygen breathing, left handed amino acids, similar tolerances, this species stepped straight out of science fiction and myth and into the limelight of earth's public stage, and serve to this day as an example of aliens that humans can interact with sensibly and positively. There are some claims to genetic engineering and abductions with the Greyliens claiming that their government has no knowledge of such events, and would have strictly forbade them. Seeing as the rescue of the lost human expedition that led to our receiving the Hyper drive was likewise forbidden, these denials raise more eyebrows than questions.

Galactic Enemy #1

As humanity's advanced hyper drive wreaks havoc on untold millennia of economic stability, casting the fortunes of worlds and billions of lives into turmoil, galactic society fractures and the Greyliens make excellent targets for blame. Greyliens are damned as provocateurs, would be conquerors, anarchists, traitors, collaborators and worse by the rest of galactic society. Their close ties with humanity and seeming new wave of prosperity seem almost too good to be true, if you can ignore the rest of the galaxy hating them...

Greylien Names

Greyliens reproduce asexually, communally raising young and possess a name granted at the time they reach majority by the rest of their community, in addition to a surname derived from the community they hail from.

Given Names: Z'Kee, F'Chuk'K'Ka, St'lee, Rik'Tik'T'Chek

Clan Name: Olee, Qoosoo, Rolloo, Gree,

Race Traits

Ability Score Increase: +1 Dexterity, +1 Wisdom

Age: Greylians mature in their early teens, and rarely live more than 50 or 60 years of age.

Size: Greyliens range from as little as 3 feet tall to as much as 6 feet tall, depending on nutrition and living conditions. Depending on subrace Greyliens are Small or Medium.

Speed: Greyliens have a move speed of 40 feet.

Titanium stomach: Greyliens cannot receive the poisoned condition, and are resistant to poison damage.

Natural Survivor: Gain proficiency with Repair Kits, and the Survival skill.

Languages: You can speak, read, and write Greylien, Tradespeak, and one other language.

Subrace: Greyliens are members of one of several distinct racial groups.



Shorts

These diminutive Greyliens are timid and cautious, particularly quiet, and are excellent mechanics.

Ability Score Increase: +1 Intelligence

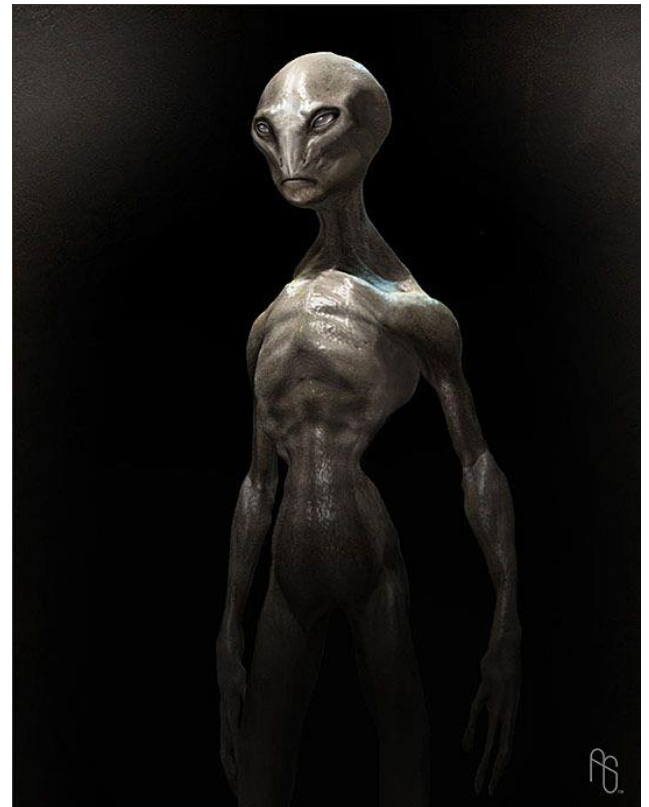
Just a Shadow: You are size small, and gain proficiency in stealth. You can attempt a stealth check while only lightly obscured, such as behind another creature.

Talls

Up to twice the height of Shorts, Talls are medium sized, and noticeably stronger and healthier than the rest of their kin.

Ability Score Increase: +1 Constitution

Hands On: Gain proficiency in one weapon, toolkit, or in planetary vehicles or spaceships.



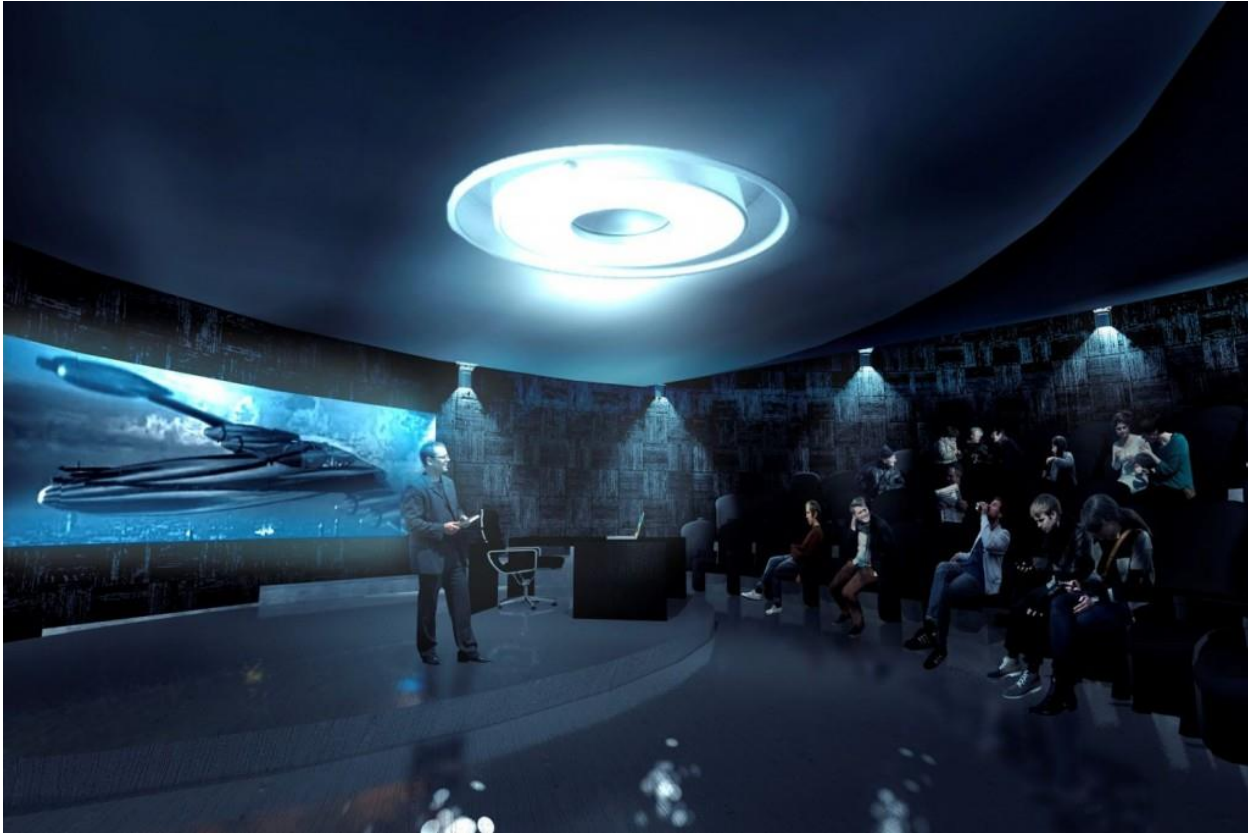
Friendlylies

Adaptable and outgoing, often called little green men, these aliens are known for their servile natures and easygoing ways. Gracious and even charming, these aliens have made their way into human and galactic society in many ways.

Ability Score Increase: +1 Charisma

Non-Threatening: You are size small, and gain proficiency with Persuasion and you may end your turn inside a friendly creature's space, and receive half cover while they are at least one size larger than you.

Class



The focus of this work is on a hard sci-fi setting of excitement and adventure, and not a simple number crunching game of character optimization. Four classes, each with two specializations seems quite sufficient, but don't let that stop you. Want to bring in a seven foot tall reptilian barbarian who owes your character a lifedebt, feel free. Half the classes from a normal fantasy RPG would work here just fine. Maybe you pick up a pack of approximately medieval grasshopper looking aliens who think you're their messiah on a holy crusade, and make a really crack boarding party after you gave them power axes. Why not. If you pick up a magic using class and give them a laser sword, that's on you, I tried to paint a hard sci-fi setting, and you know what you did. But hey, have fun with it.

Soldier

On a starship, soldiers fill roles as security and weapons officers, operating ships weapons and fighting during any action the crew becomes involved in.



Class Features

As a Soldier, you gain the following class features.

Hit Points

Hit Dice: 1d10 per soldier level

Hit Points at 1st Level: 10 + your Constitution modifier

Hit Points at Higher Levels: 1d10 (or 6) + your Constitution modifier per soldier level after 1st

Proficiencies

Armor: Protective Gear, Combat Armor

Weapons: Civilian Weaponry, Military Weaponry

Tools: Choose one of Weapons Systems or Space Vehicles as well as one Systems Proficiency

Saving Throws: Strength, Constitution

Skills: Choose two skills from Acrobatics, Athletics, History, Insight, intimidation, Perception, and Survival

Level	Proficiency Bonus	Features
1st	+2	Combat Style
2 nd	+2	Second Wind
3 rd	+2	Ability Score Improvement
4 th	+2	Soldier Specialization
5 th	+3	Extra Attack
6 th	+3	Ability Score Improvement
7 th	+3	Soldier Specialization
8 th	+3	Battle Hardened
9 th	+4	Ability Score Improvement
10 th	+4	Soldier Specialization

Equipment

You start with the following equipment, in addition to the equipment granted by your background:

- Blaster Rifle or Autolaser
- Armored Skinsuit
- Laser Rifle or Blaster Pistol
- Spacer's Kit or Explorer's Kit

Combat Style

You adopt a particular style of fighting as your specialty. Choose one of the following options. You can't take a Fighting Style option more than once, even if you later get to choose again.

- **Defense**
While you are wearing armor, you gain a +1 bonus to AC.
- **Long Arm Specialist**
You gain a +1 bonus to attack rolls made with two handed ranged weapons.
- **Melee Specialist**
When you roll a 1 or 2 on a damage die for an attack you make with a melee weapon that you are wielding, you can reroll the die and must use the new roll, even if the new roll is a 1 or a 2.
- **Side Arm Specialist**
While wielding a one handed ranged weapon and no weapon in your off hand, you deal an additional 2 damage.
- **Two-Weapon Fighting**
When you engage in two-weapon fighting, you can add your ability modifier to the damage of the second attack.

Second Wind

Starting at 2nd level, you have a limited well of stamina that you can draw on to protect yourself from harm. On your turn, you can use a bonus action to regain hit points equal to 1d10 + your soldier level. Once you use this feature, you must finish a short or long rest before you can use it again.

Ability Score Improvement

When you reach 3rd level, and again at 6th and 9th level, you can increase one ability score of your choice by 2, or you can increase two ability scores of your choice by 1. As normal, you can't increase an ability score above 20 using this feature.

Extra Attack

Beginning at 5th level, you can attack twice, instead of once, whenever you take the Attack action on your turn.

Battle Hardened

Beginning at 8th level, when you are reduced to 0 hit points but not killed outright, you can drop to 1 hit point instead. You can't use this feature again until you finish a long rest. Additionally, your Second Wind class feature may be used as a reaction when taking damage.

Soldier Specialization

At fourth level, choose a specialist field. This field of specialization grants features at 4th, 7th, and 10th level.

Marine

Marines are trained for direct personal combat, excelling at both executing and repelling boarding actions.



Improved Critical

Beginning when you choose this specialization at 4th level, your weapon attacks score a critical hit on a roll of 19 or 20.

Veteran

At 7th level, you can choose a second option from the Combat Style class feature and gain 10 bonus hit points.

Elite

Beginning at 10th level, you can attack three times, instead of once, whenever you take the Attack action on your turn and gain 10 bonus hit points.

Gunner

Gunners focus on heavy, vehicle and starship based weapons, which explains why they are so prone to attempting to lug weapons of this grade into personal combat.



The Bigger the Better

Beginning when you choose this specialization at 4th level, you gain proficiency with all heavy and vehicle based weapons, as well as with demolitions kits.

Precise Aiming

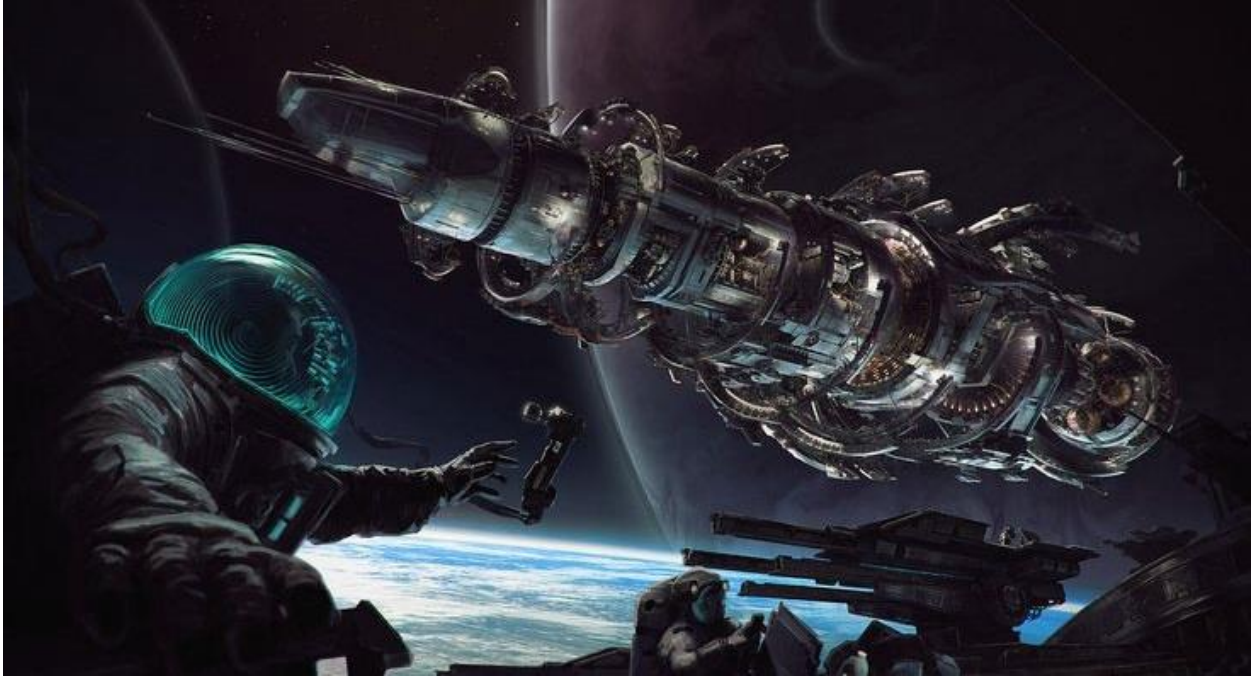
Beginning at 7th level, you add your proficiency bonus to all damage rolls made using weapons with which you are proficient.

Increased Payload

Beginning at 10th level, when firing a heavy or vehicle based weapon, your attacks deal an additional weapon die, and you may make an additional attack (for a total of three) when operating a vehicle based weapons system.

Technician

On a starship, technicians fill the roles as science, medical and engineering personnel, solving problems and repairing the ship, its crew, or more often both.



Class Features

As a Technician, you gain the following class features.

Hit Points

Hit Dice: 1d8 per Technician level

Hit Points at 1st Level: 8 + your Constitution modifier

Hit Points at Higher Levels: 1d8 (or 5) + your Constitution modifier per Technician level after 1st

Proficiencies

Armor: Protective Gear

Weapons: Civilian Weapons

Tools: Choose one of Repair Kit or Medical Kit, and any two Systems Proficiencies

Saving Throws: Int, Wis

Skills: Choose three from Biology, Computer Use, Engineering, History, Insight, Investigation, Medicine, Navigation, Perception

Level	Proficiency Bonus	Features
1st	+2	Expertise
2nd	+2	Fast Hands
3rd	+2	Ability Score Improvement
4th	+2	Specialization Ability
5th	+3	Quick Thinking
6th	+3	Ability Score Improvement
7th	+3	Specialization Ability
8th	+3	Reliable Talent
9th	+4	Ability Score Improvement
10th	+4	Specialization Ability

Equipment

You start with the following equipment, in addition to the equipment granted by your background:

- Stun Pistol or Laser Pistol
- Skinsuit
- Repair Kit or Medical Kit
- Computer Interface and Spacer's Kit

Expertise

At 1st level, choose two of your skill proficiencies, systems proficiencies or tools you are proficient in the use of. Your proficiency bonus is doubled for any ability check you make that uses any of the chosen proficiencies.

Fast Hands

Starting at second level, you may use a tool or skill that is normally an action as if its use was a bonus action.

Quick Thinking

Starting at 5th level, you may take two bonus actions per round.

Reliable Talent

Starting at 8th level, whenever you make an ability check using your proficiency bonus, treat all rolls of 9 or less as if you rolled a 10.

Ability Score Improvement

When you reach 3rd level, and again at 6th and 9th level, you can increase one ability score of your choice by 2, or you can increase two ability scores of your choice by 1. As normal, you can't increase an ability score above 20 using this feature.

Technician Specialization

At fourth level, choose a specialist field. This field of specialization grants features at 4th, 7th, and 10th level.

Medic

Medics are trained medical professionals well versed in diagnosing and treating a variety of ailments and injuries.



First Responder

Starting at 4th level when you acquire this specialization, whenever you use a medkit to heal or stabilize a living target, that character may spend hit dice to heal itself.

Hands that Heal

From 7th level onward, whenever you use an action or bonus action to heal a target, you may add your proficiency bonus to the amount healed, and to each hit die spent by the target.

Don't you die on me!

Starting at 10th level, whenever you allow a target to spend healing dice, they immediately regain a hit die that must be used immediately to heal themselves.

Mechanic

Mechanics apply their knowledge in a wide variety of sciences and technical aptitudes towards the repair and maintenance of starships, vehicles and equipment.



Intimate Knowledge

Starting at 4th level, you are now considered proficient in all ship's systems and ship based weaponry and may manage two duty stations instead of one. Additionally, you may use a repair kit in a similar fashion to a medkit, repairing synthetics using your repair kit proficiency.

Miracle Worker

From 7th level you may, as a bonus action, grant yourself advantage on your next attack roll, saving throw, or ability check.

Knack

Starting at 10th level you may use your Reaction to enhance the effectiveness of a system or device you operate. This adds your proficiency bonus to the numerical bonus or output of the system or device, or doubles its effectiveness at DM's discretion.

Officer

Natural born leaders, officers hold command positions on a starship, and lead its crew.



Class Features

As an officer, you gain the following class features.

Hit Points

Hit Dice: 1d8 per officer level

Hit Points at 1st Level: 8 + your Constitution modifier

Hit Points at Higher Levels: 1d8 (or 5) + your Constitution modifier per Officer level after 1st

Proficiencies

Armor: Protective Gear

Weapons: Civilian Weapons

Tools: Choice of any one tool or Systems proficiency and an additional Systems Proficiency

Saving Throws: Cha, Int

Skills: Choose three of Athletics, Acrobatics, Computer Use, Deception, History, Insight, Intimidation, Law, Navigation, Perception, Persuasion

Level	Proficiency Bonus	Features
1st	+2	Inspiration
2nd	+2	Jack of All Trades
3rd	+2	Ability Score Improvement
4th	+2	Specialization Ability
5th	+3	Delegation
6th	+3	Ability Score Improvement
7th	+3	Specialization Ability
8th	+3	Commanding Presence
9th	+4	Ability Score Improvement
10th	+4	Specialization Ability

Equipment

You start with the following equipment, in addition to the equipment granted by your background:

- Laser Pistol
- Skinsuit
- Any one Toolkit
- Choice of Explorer's kit or Spacer's Kit

Jack of all Trades

Whenever you make an ability check without your proficiency bonus you may add half your proficiency bonus (rounded up).

Inspiration

Starting at 2nd level, you can inspire others through stirring words. To do so, you use a bonus action on your turn to choose one creature other than yourself within 60 feet of you who can hear you. That creature gains one Inspiration die, a d6.

Once within the next 10 minutes, the creature can roll the die and add the number rolled to one ability check, attack roll, or saving throw it makes. The creature can wait until after it rolls the d20 before deciding to use the Inspiration die, but must decide before the DM says whether the roll succeeds or fails. Once the Inspiration die is rolled, it is lost. A creature can have only one Inspiration die at a time.

You can use this feature a number of times equal to your level plus Charisma modifier (a minimum of once). You regain any expended uses when you finish a long rest.

Ability Score Improvement

When you reach 3rd level, and again at 6th and 9th level, you can increase one ability score of your choice by 2, or you can increase two ability scores of your choice by 1. As normal, you can't increase an ability score above 20 using this feature.

Delegation

Starting at 5th level, as a bonus action, direct one of your companions to act. When you do so, choose a friendly creature who can see or hear you. That creature can immediately use its reaction to make a single attack, or take a bonus action.

Commanding Presence

From 8th level onward, whenever you take a short rest, you regain enough uses your inspiration ability to have at least one remaining, and additionally, the Inspiration dice you grant are increased to d8s.

Officer Specialization

At fourth level, choose a specialist field. This field of specialization grants features at 4th, 7th, and 10th level.

Captain

Captains are masters of inspiring their crews, and pushing their starships to their very utmost limits.



Oh captain, My captain!

Starting at 4th level, when you use your Inspiration ability, you may grant an inspiration die to any number of targets. This still counts as a single use of the ability.

Heartening Words

From 7th level, whenever a character receives an inspiration from you they receive a number of temporary HP equal to your charisma modifier.

Into Hell

Starting at 10th level, your delegation ability may be used as a reaction at any time in a round as well as a bonus action (meaning you may use it twice in a round).

Ace

Aces are known for dazzling feats of piloting, and inspiring others with their incredible feats of skill.



Cocky

Starting at 4th level, you may use your Inspiration ability on yourself as a reaction before you make an attack roll, saving throw or ability check. Additionally, you gain a number of uses of your inspiration ability equal to your officer level, and another use each time you gain an officer level.

A few maneuvers

From 7th level you may add half of your proficiency bonus to the AC of the vehicle you are piloting.

I'm the best

Beginning at 10th level, when you use an inspiration die you provided yourself, you may take an additional action on top of your action and bonus action.

Operative

Operatives serve the special needs of their starships, performing a variety of unsavory acts as required.



Class Features

As an Operative, you gain the following class features.

Hit Points

Hit Dice: 1d8 per Operative level

Hit Points at 1st Level: 8 + your Constitution modifier

Hit Points at Higher Levels: 1d8 (or 5) + your Constitution modifier per Operative level after 1st

Proficiencies

Armor: Protective Gear

Weapons: Civilian Weapons, Military Weapons

Tools: Lockpicks and one Systems Proficiency.

Saving Throws: Dex, Int

Skills: Choose four from Acrobatics, Athletics, Culture, Computer Use, Deception, Insight, Intimidation, Investigation, Law, Perception, Performance. Persuasion, Sleight of Hand, and Stealth

Level	Sneak Attack	Proficiency Bonus	Features
1st	1d6	+2	Sneak Attack
2nd	1d6	+2	Cunning Action
3rd	2d6	+2	Ability Score Improvement
4th	2d6	+2	Specialization Ability
5th	3d6	+3	Uncanny Dodge
6th	3d6	+3	Ability Score Improvement
7th	4d6	+3	Specialization Ability
8th	4d6	+3	Devil's own luck
9th	5d6	+4	Ability Score Improvement
10th	5d6	+4	Specialization Ability

Equipment

You start with the following equipment, in addition to the equipment granted by your background:

- Combat Knife and Blaster Pistol
- Skinsuit
- Lockpicks
- Choice of Infiltration or Surveillance Kit

Sneak Attack

Beginning at 1st level, you know how to strike subtly and exploit a foe's distraction. Once per turn, you can deal an extra 1d6 damage to one creature you hit with an attack if you have advantage on the attack roll.

You don't need advantage on the attack roll if the target took damage this turn, or if another enemy of the target is within 5 feet of it, that enemy isn't incapacitated, and you don't have disadvantage on the attack roll.

The amount of the extra damage increases as you gain levels in this class, as shown in the Sneak Attack column of the Operative table.

Cunning Action

Starting at 2nd level, your quick thinking and agility allow you to move and act quickly. You can take a bonus action on each of your turns in combat. This action can be used only to take the Dash, Disengage, or Hide action.

Ability Score Improvement

When you reach 3rd level, and again at 6th and 9th level, you can increase one ability score of your choice by 2, or you can increase two ability scores of your choice by 1. As normal, you can't increase an ability score above 20 using this feature.

Uncanny Dodge

Starting at 5th level, when an attacker that you can see hits you with an attack, you can use your reaction to halve the attack's damage against you.

Devil's own luck

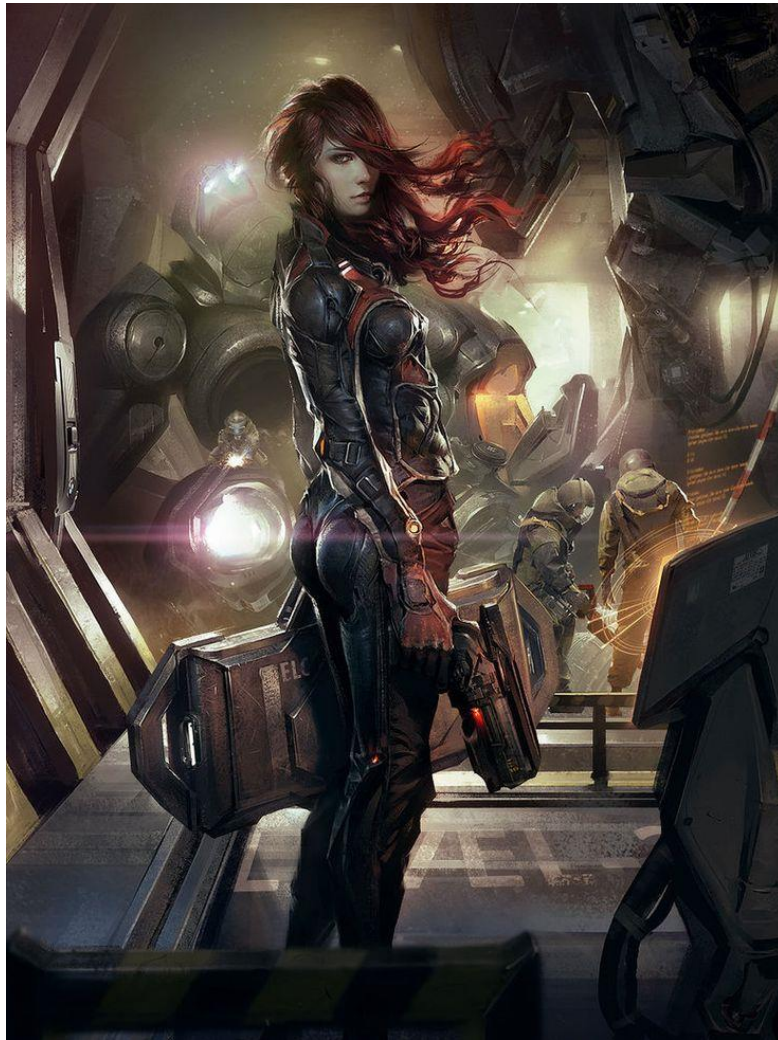
From 8th level, when you roll a 1 or 2 on an attack roll, damage roll, ability check, or saving throw, you can reroll the die and must use the new roll.

Operative Specialization

At fourth level, choose a specialist field. This field of specialization grants features at 4th, 7th, and 10th level.

Special Agent

Serving a starship as a spy in ports and in missions, spies are of inestimable use to any organization, and the only greater fools than those with none in their employ are those that fully trust the ones they have.



Skilled

Starting at 4th you may gain proficiency in any two skills or Toolkits. Choose two skills or toolkits with which you are proficient. Whenever you use one of these skills or toolkits, double your proficiency bonus with it.

Infiltration Expert

Starting at 7th level, you can unfailingly create false identities for yourself. You must spend seven days to establish the history, profession, and affiliations for an identity.

Thereafter, if you adopt the new identity as a disguise, other creatures believe you to be that person until given an obvious reason not to.

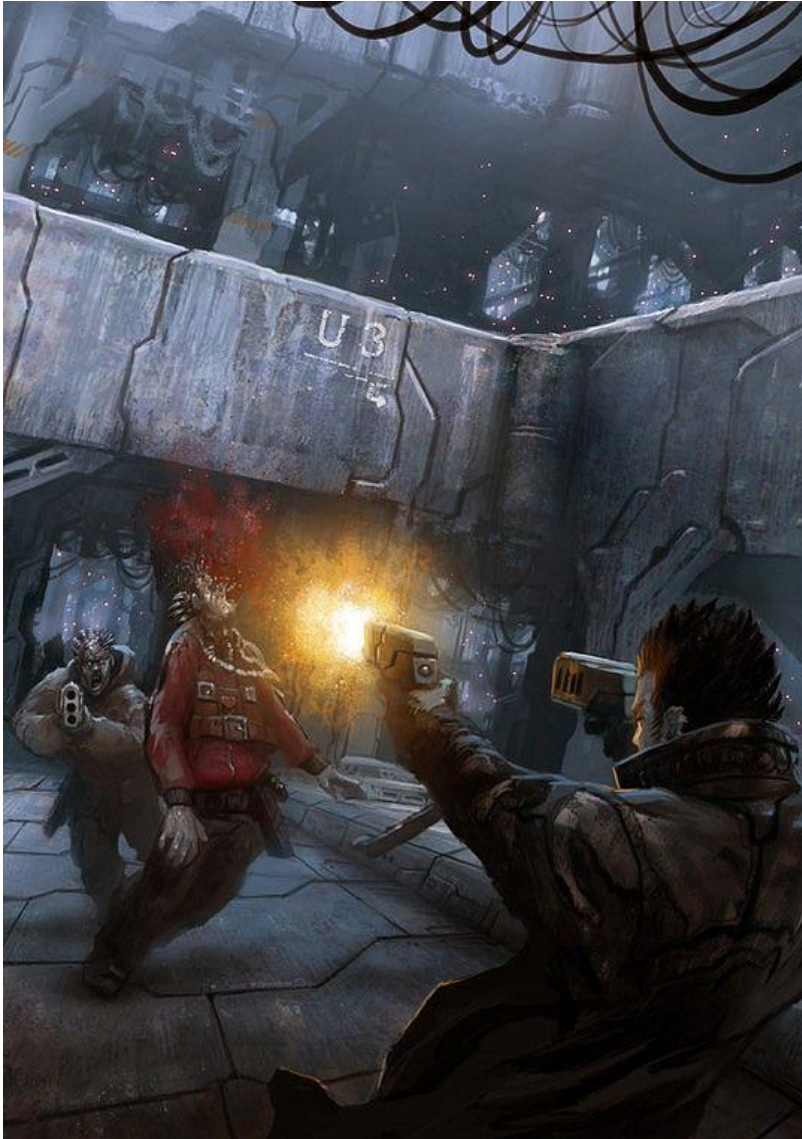
Silent as Death

From 10th level, you may move at your full speed while using stealth, and if you move half your move speed or less, you gain advantage on that stealth check.

You are at your deadliest when you get the drop on your enemies. You have advantage on attack rolls against any creature that hasn't taken a turn in the combat yet. In addition, any hit you score against a creature that is surprised is a critical hit.

Scoundrel

Scoundrels are thieves, conmen, smugglers and worse, serving their starship (and ultimately their best interests) by doing whatever has to be done.



Always shoot first

Starting at 4th level, you gain advantage on initiative checks and gain proficiency with weapons systems.

Never play fair

From 7th level, whenever you make opposed ability checks, your opponent gains disadvantage on the roll. You may use your reaction to give yourself advantage on an attack roll.

Trust No-one

When you reach 10th level, you have become adept at laying ambushes and quickly escaping danger. You can take two turns during the first round of any combat. You take your first turn at your normal initiative and your second turn at your initiative minus 10. You can't use this feature when you are surprised.

Backgrounds



Backgrounds define a character's early career choices, upbringing, and experiences that have led them to where they are now. A character's background should be a major decision in terms of stats and abilities, but more importantly in terms of motivation and storytelling.



Aristocrat

Coming from a position of affluence, Aristocrats might not be actual nobility, but it is difficult to tell the difference. Children of powerful executives or wealthy families, Aristocrats had every conceivable advantage growing up, benefitting from minor gene tweaks, sterling education, and the ability to pick any course they want for their lives.

Skill Proficiencies: History, Culture

Tool Proficiencies: Any one musical instrument or Gaming Set

Equipment: A set of formal clothing, Incognito Identchip, 500 credit chips

Feature: The 1%
Your family is astonishingly

wealthy. While that money may not yet be yours, you can make limited use of your family's affluence. Once per session a character with this feature may waive the cost of one good, service or bribe that the DM finds within reason, overcoming a challenge or limitation solely by deep pockets. This can include but is not limited to: bumping a ship to the front of the line for docking, subsidizing overpriced fuel or docking costs, acquiring a key replacement part, or securing the use of a single item. The invoices for all these purchases and costs will eventually make it back home to daddy, so at least try to be reasonable, or risk being cut off.

Celebrity

Perhaps you were on reality TV, maybe you hit a billion views on Ütube, and maybe you're a concert violinist. Regardless, there are people who recognize you, and for you, any attention feels like good attention.



Skill Proficiencies: Culture, Perform

Tool Proficiencies: Disguise Kit, one type of musical instrument or gaming set

Equipment: One musical instrument of your choice, one flashy costume or outfit, 150 credit chips

Feature: Maybe you've heard of me

When interacting with someone you may make a charisma check DC 10 (5 if the target is from your home system) to be recognized. The result of this recognition is up to the DM, but might involve advantage on further skill checks, preferential treatment, free stuff and discounts.

Colonist

Mankind has settled its first new worlds, and you are among the descendants of those bold pioneers. Whether you came back to space to push the frontier further, or because of a desire for more civilization, you grew up on an alien world, and had to learn early how to survive.



Skill Proficiencies: Survival

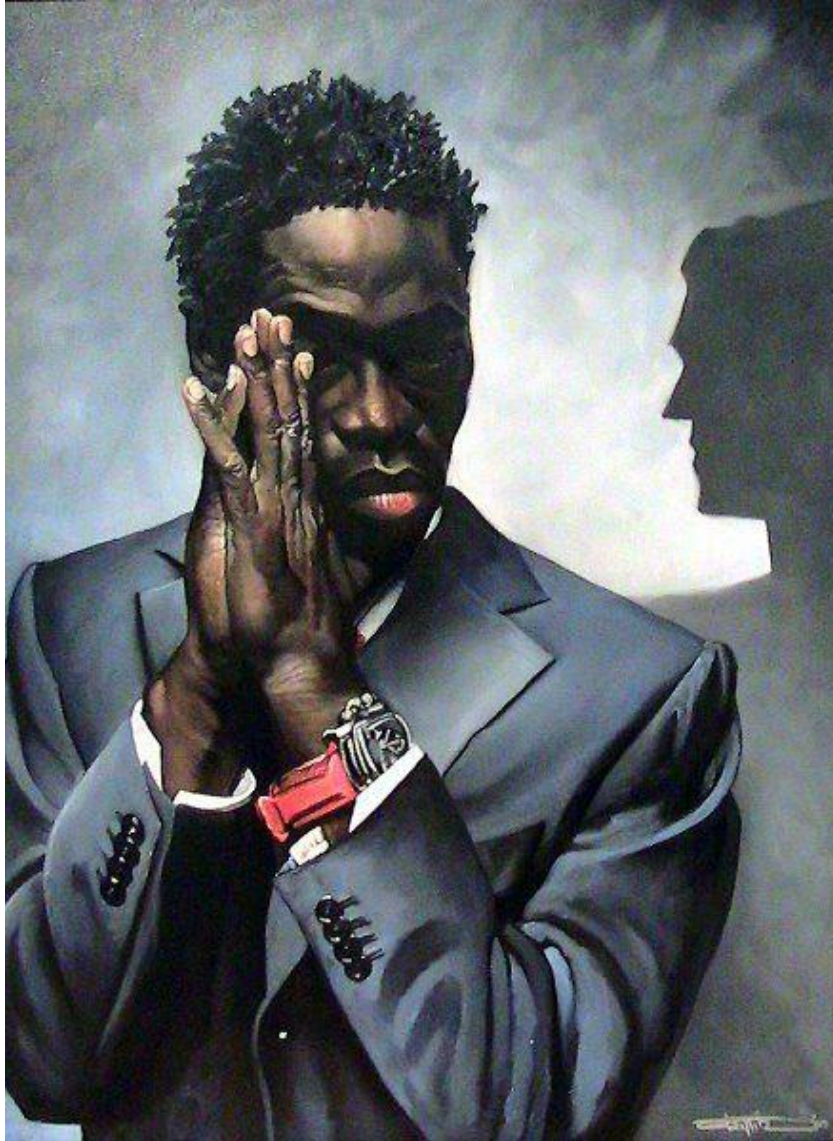
Tool Proficiencies: Survey Equipment

Equipment: Laser Rifle, Armored Skinsuit, Bush Clothing, 50 Credits

Feature: Xenofrontiersman
You have an excellent grasp of planetary survey maps and charts, and always understand exactly where you are in relation to landmarks and other points of reference. Additionally, in compatible environments you may find edible food and potable water for up to five other people each day.

Company Man

You are the representative of one of the Mega-Corporations of earth, serving their interests among the stars. Greed is good, and whatever opportunities you find for the company to exploit will net you a healthy finder's fee.



Skill Proficiencies: Deception, Law

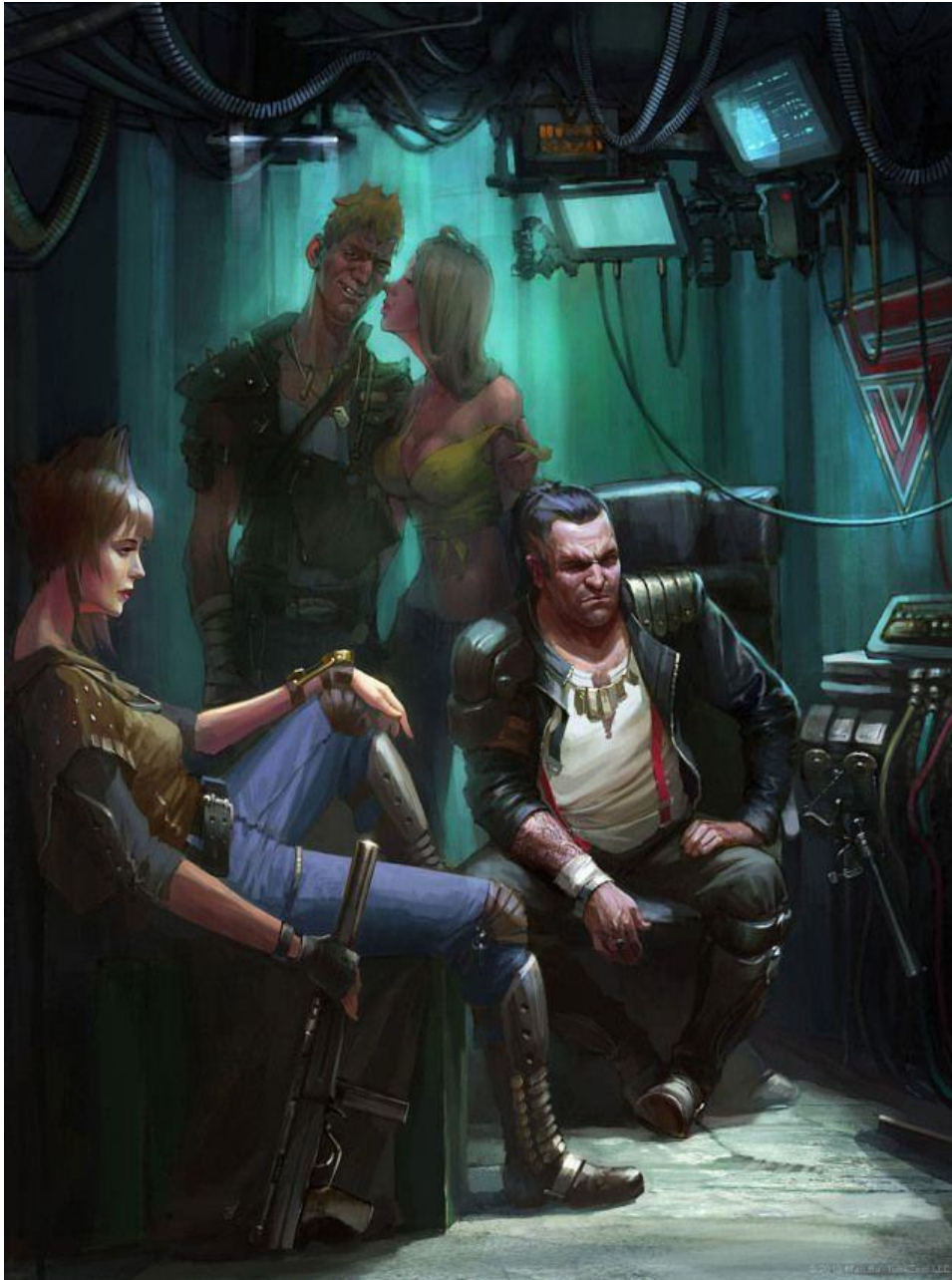
Languages: Tradespeak

Equipment: Business Suit, Briefcase, 200 Credit chips

Feature: From the Home Office
As long as you remain in good standing with management, local fronts for your corporation will assist you with reasonable tasks and requests, as well as providing lodgings for you and a sufficiently small staff.

Criminal

You have a shady background, and are the member of a criminal organization, seeking opportunities to advance your organization among the stars.



Skill Proficiencies:

Intimidation

Tool Proficiencies:

Your choice of Forgery Kit, Lockpicks or Gaming Set

Equipment: Blaster Pistol, Combat Knife, basic outfit, 100 credit chips

Feature: I know a Guy

Your connections in the criminal underground let you find illegal or black market goods for purchase, or find outlets to sell similar.

Journalist

As a representative of a news organization you are among the stars looking for a story, perhaps to make a name for yourself, or to get back in the good graces of your organization.



Skill Proficiencies:

Investigation

Tool Proficiencies:

Disguise Kit or
Forgery Kit

Equipment:

Recording Rig, nice
outfit, your choice
of a disguise or
forgery kit, and
100 credit chips

Feature: Sources

When investigation hits a dead end, or when you just need some clarifying information, a journalist can call on a network of confidential sources for this information. Sometimes bribes or favors will be required, and some information is just too dangerous for a source to divulge, but there is always at least a clue to be found.

Merchant

You were raised in the markets and bazaars of many stations and worlds, carrying out the vital commerce that fuels humanity's expansion into the stars.

Skill Proficiencies: Deception and Persuasion

Equipment: Laser pistol, fine outfit, 300 credit chips worth of trade goods.



Feature: Let's Make a Deal

With profits on the line, you can always make yourself understood, and may attempt commerce even with beings you share no common language with. In addition, add your level and charisma bonus to all business ventures you engage in.

Military

You served one or more tours of duty in a military force, and attained rank before mustering out to find a life of adventure in space. Perhaps it was a planetary defense force, interstellar or system navy, or even just a local militia.



Skill Proficiencies:
Athletics

Tool Proficiencies: Gain proficiency in military weapons and combat armor, or atmospheric and space vehicles.

Equipment: Your choice of Gauss Pistol or Blaster Pistol, dress uniform, medal of distinction, 50 credit chips.

Feature: Rank and File
You mustered out with your rank intact, at least an E4, and good standing with the military. You can use this to gain access to limited resources from military bases and vessels, such as emergency refueling or repairs, medical treatment, or access to communications lines.

Missionary

You have come to the stars to spread your religious or philosophical views, and have the backing of a church or group of similar minded individuals.



Skill Proficiencies: History and Persuasion

Languages: Choose any one language.

Equipment: Respectable outfit, copy of your core religious or philosophical text, 20 credit chips

Feature: Defender of the Faith

Wherever there are other followers of your faith or philosophy, expect to have allies to call on in times of need for basic lodgings, food, limited resources and general support. If there are no such followers, make some.

Offworlder

You are not native to human society, and are confused by its ways. Perhaps you were the orphaned survivor of a failed colony, abducted by aliens and later returned, or are even an alien from a distant world.



Skill Proficiencies: Sleight of Hand, Deception

Equipment: Combat Knife, token of your homeworld, 10 credit chips

Feature: Not from Around Here

You are obviously from a foreign culture, and humans have no clear idea exactly how to deal with you. By pretending not to understand languages, you can often bluff your way out of a sticky situation, and others will give you little thought as they speak in front of you, underestimating your understanding of concepts.

Police

You were a sworn peace officer working for a civilian government. You retired from policework to venture to the stars, but your record as a law enforcer follows you, making criminals nervous and security personnel rest easy.



Skill Proficiencies: Investigation, Law

Equipment: Choice of Stun Pistol or Stun Rifle, Riot Gear, Badge, normal outfit

Feature: Brothers in Blue

Your time as a law enforcer lets you more easily get along with security and local police. You can smooth over rough relations with authorities (within reason) and can be called upon by departments to assist with crime during emergencies.

Politician

You held an elected office or worked to help someone else hold one. You have experience dealing with bureaucracy and red tape from the inside, and have left for the stars to find a new avenue to power.



Skill Proficiencies: Choose any two of Deception, Persuasion, Insight or Law

Equipment: Nice Suit, supply of vice product (cigars, alcohol, etc), laser pistol.

Feature: Friends and Neighbors

You have a way with crowds, and given at least ten minutes can shift the mood of a group of people one step closer to friendly for the next few hours. Alternatively, you can convince a group of people you might just have the best solution to the current problem, real or imagined.

Spacer

You were born and raised onboard the early generation of relatively slow interstellar vessels, travelling between the stars of the fringe, trained from a young age to pitch in aboard a starship.



Skill Proficiencies: Acrobatics

Languages: Choose any two Languages.

Tool Proficiencies: Choose any two of Space Vehicles, Repair Kit or any System.

Equipment: Laser Pistol, Skinsuit, Repair Kit, Alien Trinket, 100 credit chips

Feature: Different Circles
Spacer social conventions are different than those of normal human society, and you have cultivated a reputation amongst spacers. Depending on if you are famous, or infamous, other spacers have certainly heard of you and will respond accordingly. Wherever spacers gather, you can expect to find a berth on a ship, aid, information, and acceptance barred to other folk.

Stationer

You were born and raised on a space station or habitat, having rarely or never been planetside. The rigid discipline required to live in an environment completely inhospitable for life has helped you become a very pragmatic and rational individual.



Skill Proficiencies: Choose either Engineering or Computer Use

Languages: Choose any one language.

Tool Proficiencies: Repair Kit

Equipment: Skinsuit, Repair Kit, 200 credit chips

Feature: Station Secrets

You know the secret ways and back routes common to human built stations and habitats, and when outside of combat can travel without detection between any two locations in such an environment twice as quickly as you normally would.

Tanker

You were not born as most humans, a squalling infant dependant on your parents, but were, rather, raised in one of the tank facilities, grown to maturity at an artificial rate, and given a basic education at a deep subconscious level. Your first memory was stumbling up from a crash of amniotic fluid, fully grown and formed, knowing how to walk, to stand, and speak. Your last few years of technical study passed quickly, a formality really, and now you stand ready to fulfill your purpose in the stars. While biologically human, you are different from the rest of humanity, a breed apart almost.

You were produced to fill some role on a starship or station, and are expertly adept at your specialization.

Skill Proficiencies: Choose any one skill or tool to gain proficiency in.



Equipment: 25 credit chips, one tool you are proficient with.

Feature: Bred to Order

You were created to fulfill a particular purpose. Whether that was surgical genius or waste disposal, you are nonetheless eminently qualified for this task. Double your proficiency bonus with the skill or tool you gained proficiency in when choosing this background.

New Skills

Fifth age adds several new skills, detailed below.

Biology: Intelligence (Biology) is used to cover both a general understanding of the life sciences, knowledge of living catalogued organisms, and the reasoning and capacity to study new forms of life. Characters wishing to understand an alien life form might make such a check to learn about the organism's breathing requirements, or to find out what chemical compounds it would find poisonous.



Computer Use: Intelligence (Computer Use) is used when one interfaces with a computer in more than a casual fashion, and covers general knowledge of networks, programming and computer security systems. A character might make a computer use check to hack into a captured data pad, write a program to alert them to the comings and goings of a particular person on a station, or to keep another character from infiltrating the ship's network by hypernet.

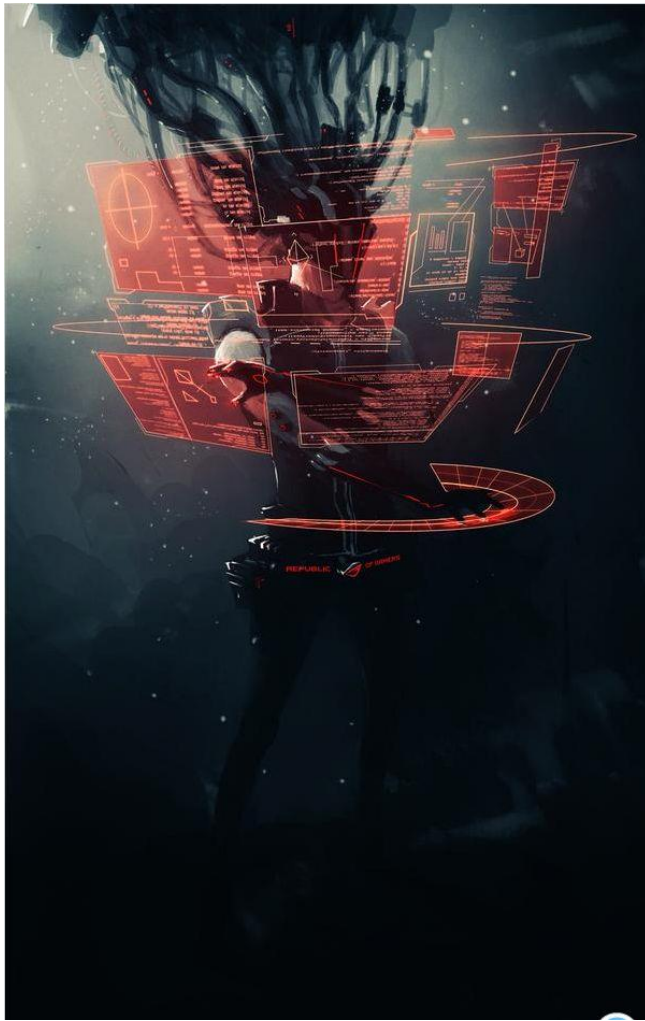


Culture: Intelligence (Culture) is a general understanding of sociology, current events and pop culture that let you understand the cultural events going on in society around you. A character might use this skill to recognize a popular musician, fashion trend, artistic style, customs or a pop culture reference.



Engineering: Intelligence (Engineering) covers a wide variety of physical sciences and knowledge common to starship personnel operating in the field. Use of this skill would be appropriate for overloading a reactor, boosting a thruster's output, or designing a replacement system.

Law: Intelligence (Law) is used to represent a character's knowledge of legal procedure and precedent, and such a skill might be used to recall what goods might be illegal in a region, write a business contract, understand a contract, and to argue in a court of law.



Navigation: Wisdom (Navigation) is used to plot Hyper courses as well as plotting in normal space, and requires a solid mix of complex maths and common sense. A character would make such a check when preparing to make a Hyper Jump out of a system too close to the gravity well, or in an attempt to shave some relativistic time off of a trip.

New Tool Proficiencies

Fifth Age adds several new tool and vehicle proficiencies, detailed below.

Astrosurveying Equipment: This tool is used for the gathering and analysis of data on a system wide scale, creating detailed charts useful for navigating hazards, planetary orbits, and the like. A character would use this tool to create a detailed navigational chart for a system or when searching for mineral deposits.

Demolitions Kit: This toolkit is used for the creation, placing, or defusing of explosives and demolition charges. A character would use this tool when setting a ship to self-destruct, attempting to destroy a bridge, or to disarm a bomb.

Repair Kit: This toolkit is used to repair technological devices, systems or vehicles. A character might use this tool to repair battle damage to their starship, patch a propellant tank, reattach a synthetic's arm that was torn off, or return a laser pistol to working order after being dropped in a swamp.

Planetary Survey Equipment: This tool is used for the gathering and analysis of data, on a planetary scale. A character would use this tool to create detailed planetary charts for navigation, exploration or colonization, or when looking for something particular on a world, like mineral deposits or other resources.

Ship's Systems: A character may be proficient with one or more of a ship's systems, granting them the ability to add their proficiency bonus to ability checks to operate related duty stations. The systems are:

- **Weapons:** Ship based weapons systems
- **Engines:** The engines and propulsion systems of a ship
- **Hull:** Managing the ship mechanically, and performing damage control
- **Computers:** Managing ship archives and support programs
- **Sensors:** The ship's short and long range sensors, the eyes and ears of the vessel
- **Communications:** Ship's ingoing and outgoing communications and electronic warfare

Vehicle (Atmospheric): These are vehicles designed to be used within a planetary atmosphere, and can encompass planes, helicopters, tanks, transports and even sailing vessels. A character would use this proficiency when attempting particularly risky feats of piloting, such as in combat or attempting a dangerous landing.

Vehicle (Space): These vehicles were designed to be used primarily in space, and can encompass everything from space taxis, shuttles, cargo tows and lighter craft all the way up to battlecruisers. A character would use this proficiency for particularly daring feats of piloting, such as in combat or attempting risky maneuvers.

System Proficiencies

Fifth age characters are, generally speaking, the crew of star ships. Even the surliest grunt or most erudite scholar has some practical skill on such a vessel, or they would not have been allowed onboard a ship as crew. All characters have the ability to choose at least one systems proficiency, chosen from the list below, and are proficient with all subsystems of their chosen proficiency:

Weapons (WEAP): Weapons officers are proficient in the operation of ship based weapons systems, and may operate Weapons subsystems with proficiency. Such a character might be called upon to fire at an enemy ship, clear debris out of a flight lane or to shoot down incoming missiles.

Engines (ENGI): Engines officers (often called Engineers) are responsible for maintaining and operating the massive rocket thrusters that propel starships, their Hyper Drives, monitoring fuel, heat radiation, and a host of other high energy tasks. A character filling this role might be asked to overload a ship's thrusters for a temporary boost in speed, overheat the reactor to shave a bit off of a hyper jump charge, find a way to conserve fuel or propellant to make it on a particularly tight burn, or even just to find a way to put out literal or metaphorical fires in systems.

Hull (Hull): Hull officers tend to be mechanics and repair men, as well as cargo managers and pursers. Dealing with the physical realities of the ship, her structure, cargo holds, life support systems, armor maintenance and other seemingly mundane tasks, such a character might be called on to patch a breach in the hull, spin up a habitation module to disorient boarders, or figure out how much scotch could be given as a bribe to a stationmaster and still break even on this run.

Computers (COMP): Computer Operations Officers focus on the wellbeing and safe operation of the vital computer systems and networks that run almost every conceivable function onboard the ship. A character specializing in Comp Ops might be called on to repair an EMP fried navicomputer, fight off hostile intruders in the ships database, or purge a nasty computer virus from ship's systems.

Sensors (SENS): Sensor Officers, often called Scan Techs, oversee, literally, what the ship can detect. Watching flight lanes, coordinating the positions of other ships and orbital objects in a system, surveying planets and asteroid belts, and keeping an eye on any other ships nearby. A character serving this role might be asked to find water asteroids for remassing, determine the best place to land on an alien world, or figure out if that incoming ship has its weapons hot and primed to fire, or not.

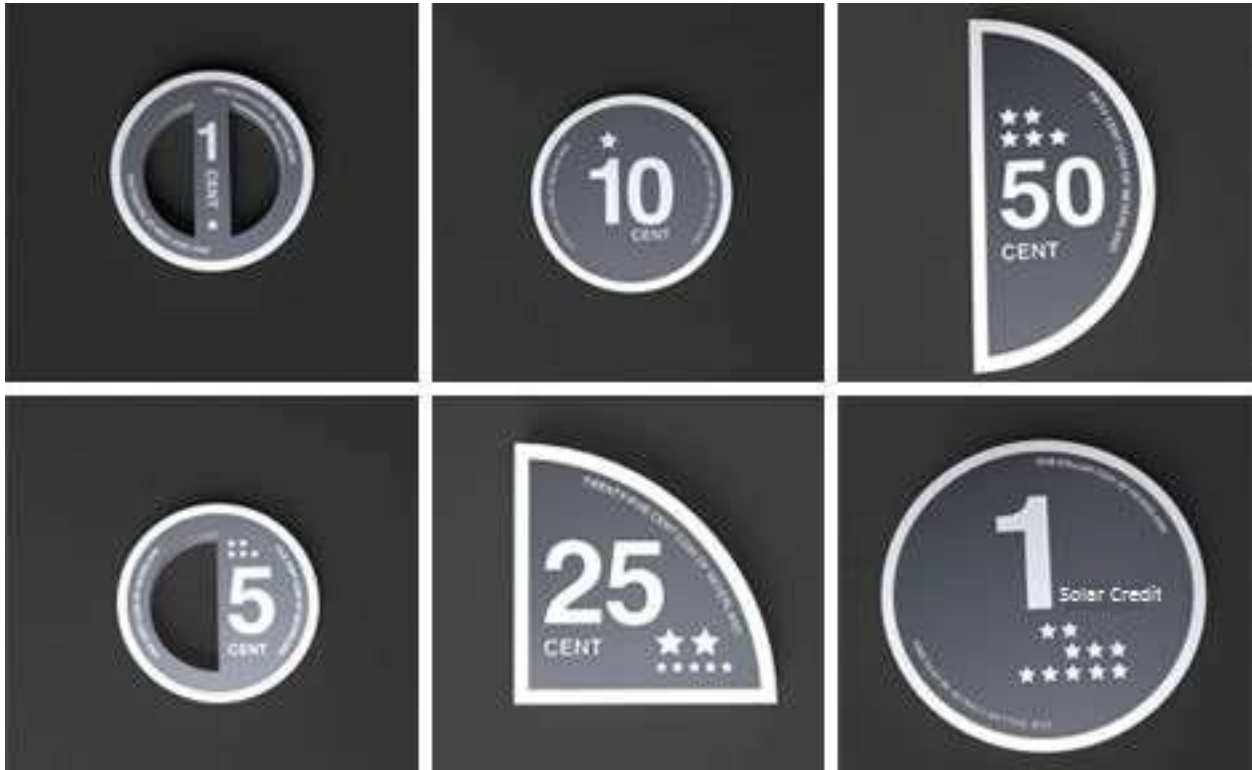
Communications (COMM): Communications officers, or the Comm, are the nerve center of a starship in flight. In constant communication with personnel all over the ship, relaying orders as well as being the gateway to offship information, pinging sensor buoys, coordinating with station, hailing other ships, and in times of a fight, using all that fancy equipment to lie to enemy ships as adroitly as possible about where they actually are. A Comm officer might be asked to jam communications on a patrol boat long enough to slip out of system before reinforcements arrive, find away to communicate with an alien species, or to slip out of a missile lock.

Equipment



As humanity spills into the stars, it takes with it a host of competing corporations, struggling traders, dangerous technologies and leaves volatile markets in its wake. In the bustling marketplaces of stations and worlds a wide variety of equipment may be purchased, built locally or imported, the following tables represent a select grouping of those goods.

The Solar Credit



Backed by the First bank of Sol, one solar credit has a practical exchange value of one day's worth of rations, environment and upkeep for a person space side. With each local government printing their own currency, and no fewer than 300 competing physical and cryptocurrencies on earth, the Solar credit was created as a commodities backed bond to facilitate currency exchanges between different markets.

Physically, a Credit Chip has a diameter of 25mm, and weighs 10 grams, being approximately the size of an American quarter dollar. These chips are minted by the First Bank of Sol with a shielded molecular storage medium containing a unique code held by the Solar Exchange on earth. Any tampering with a Credit chip's storage causes it to self-destruct and prominently display a marker on the surface of the coin. Effectively proven tamper proof, the integrity of a Credit Chip is accepted in any reputable establishment anywhere in the human influenced zone.

As of the writing of this document, a Solar Credit has a worth of approximately \$250 USD, as reflected by the solar exchange's commodity basket of life support supplies, and can be exchanged for 24 solar hours of life support, lodging, food and water on a ship or orbital installation, approximately six times a similar amount to live planetside in Virginia.

Armors

Armor	Proficiency	Cost	Defense	Weight	Properties
Skinsuit	Protective	150	11+Dex	6	Vacuum Safe
Armored Skinsuit	Protective	200	13+Dex(2)	14	Vacuum Safe
Riot Gear	Protective	750	15	25	Min Str 14, Resistance to Non ballistic physical damage, Stealth Penalty
Low Profile Battle Suit	Combat	1,500	13+Dex	25	Min Str 13
Battle Plate	Combat	2,500	16+Dex(2)	45	Min Str 14, Stealth Penalty
Exo-Suit	Combat	3,500	19	65	Min Str 15, Stealth Penalty, Vacuum Safe

Protective Equipment

Designed primarily to protect its wearer from a hostile environment, not actual combat, most Protective armors offer minimal defenses and instead resistance to hazards.



Skinsuit: Skinsuits are, not surprisingly, like a second skin, using elastic pressure of the suit's material to protect the wearer from vacuum. These suits contain thermal conductors and heat radiators in case a wearer becomes overheated.

Armored Skinsuit: Similar to a standard skinsuit, except with armored plating to protect from hazards like debris and small arms fire.



Riot Gear: Designed for police action against rioters and dissidents, this armor is designed to protect the wearer from improvised weapons and general physical trauma, such as thrown rocks, broken bottles, clubs, knives and the like. A character's dexterity does not factor into their AC while wearing this armor.





Low Profile Body Suit



Battle Plate



Exo Suit

Combat Armor

Militaries and security forces develop defensive systems like these to protect the lives of their personnel in combat situations. This grade of armors are not illegal, but in civilized space requires registration and a license, and will definitely draw attention.

Low Profile Battle Suit: Basically a skinsuit built from the molecules up for combat protection, this technology was developed to retain as much mobility as possible for its wearer while offering reasonable protection.

Battle Plate: Using rigid armor plates and advanced fluidics, this armor is designed to protect its wearer from the most intense of firefights. This armor will reduce its wearer's ability to maneuver, restricting their ability to add dexterity to their armor class to a maximum of +2.

Exo Suit: Loaded with armor plating and shock absorbing gels, even with hydraulic assists this suit still requires a great deal of physical strength to operate successfully, and hampers the wearer's mobility. A character's dexterity does not factor into their AC while wearing this suit.

Weapon Name	Proficiency	Cost	Damage	Wt.	Properties
Laser Pistol	Civilian	50	2d6 Laser	1	Ammunition, Range (40,120), Reload (10 Shots)
Laser Rifle	Civilian	150	3d6 Laser	10	Ammunition, Range (120,360), Reload (30 Shots), Two Handed, Burst fire
Blaster Pistol	Civilian	200	2d8 Laser	2	Ammunition, Range (20,60), Reload (5 Shots)
Blaster Rifle	Civilian	500	3d8 Laser	8	Ammunition, Range (40,120), Reload (20 Shots), Two Handed, Burst fire
Stun Pistol	Civilian	25	2d6 Electric	1	Ammunition, Range (30,90), Reload (15 Shots), Nonlethal
Stun Rifle	Civilian	50	3d6 Electric	5	Ammunition, Range (40,120), Reload (25 Shots), Two Handed, Burst fire, Nonlethal
Combat Knife	Civilian	10	1d8	1	Melee
Gauss Pistol	Military	750	2d8 Ballistic	2	Ammunition, Range (120,360), Reload (15 Shots)
Gauss Rifle	Military	1,250	3d8 Ballistic	12	Ammunition, Range (160,480), reload (30 shots), Two Handed, Burst fire
Mass Driver	Military	2,000	2d12 Ballistic	14	Ammunition, Range (240/720), Reload (5 Shots)
Shredder	Military	1,200	2d8 Slashing	18	Ammunition, Range (15 foot cone), Reload (10 Shots), Two Handed, Special
Power Axe	Military	50	1d12	5	Melee, Special
Anti-Armor Rifle	Heavy	3,000	3d12 Ballistic	25	Ammunition, Range (120,360), Reload (2 Shots), Two Handed, Special
Flamer	Heavy	1,250	3d6 Fire	15	Ammunition, Range (30 foot cone), Reload 20 shots, Two Handed, Special
Gatling Laser	Heavy	1,000	3d6 Laser	40	Ammunition, Range (40,180), Reload (50 Shots), Two Handed, Burst Fire, Special
Rocket Launcher	Heavy	1,750	Varies	12	Ammunition, Range (120/360), Reload (3 shots), Two Handed, Special
Power Sledge	Heavy	150	2d8	12	Melee, Two Handed, Special

Weapon Properties

Ammunition: A weapon uses ammunition when it is fired, consuming energy and expending projectiles as appropriate. Lasers and blasters use power packs, and canisters gas for lasing medium and coolant. Stun weapons use battery packs and cartridges of capacitor darts. Gauss weapons mass drivers and shredders use battery packs and metal slugs.

Burstfire: Weapons with the burstfire property may make normal single target attacks, or to target a 10'x10' within normal range, and spray it with fire. Targets within the area must make a DC 15 Dexterity save or take the weapon's normal damage.

Nonlethal: Attacks by this weapon are configured to be nonlethal to human targets. Whenever a target is dealt damage by this weapon that would reduce him to 0 hp or below, it instead reduces the target to 0 hp, and they gain the Incapacitated condition.

Reload: A weapon with this property only has enough, ammunition, energy or coolant (as appropriate) to make a limited number of shots before it must be reloaded. Reloading is a bonus action for one handed weapons and a normal action for two handed weapons.

Special Weapons

Anti-Armor Rifle: This heavy rifle uses coilgun technology to fire armor piercing slugs at immense velocities, penetrating any known armor, ignoring damage resistance.

Gatling Laser: This weapon has six rotating laser barrels, and can lay down a tremendous amount of fire. The first time each rounds its user makes a burstfire attack with this weapon, targets in the affected area must make an additional dexterity save at DC 15 or take its listed damage.

Flamer: This weapon fires a 15 foot long cone of flame or a 30 foot long line of flame. Each target caught within the area must make a Dexterity save, DC 15. A character takes the listed damage if they fail the save, or half as much if they succeed.

Power Weapons: This class of weapon uses a power source located in the handle, and a number of mounted jets to allow the weapon to be as effective in a zero gravity environment.

Rocket Launcher: A rocket launcher fires special rocket propelled grenades whose effect duplicates those of the listed grenades. A rocket propelled grenade has twice the cost listed for a normal grenade below, and has the same effects.

Shredder: A shredder is essentially a cross between a coilgun and a blunderbuss, hurling shrapnel in an arc. Any target within its 15 foot long cone must make a DC 13 Dexterity save. A character takes the listed damage if they fail the save or half as much if they succeed.

Grenade	Cost	Damage	Weight	Properties
Frag Grenade	25	5d6 Ballistic	1	Splash, Thrown
Stun Grenade	20	4d6 Electric	1	Splash, Thrown, Nonlethal
Antiarmor Grenade	150	4d8 Ballistic	1	Splash, Thrown, Special
Flash Grenade	15	-	1	Thrown, Special

Grenades

As an action a character may throw a grenade at a point up to 60 feet away. With a rocket propelled grenade launcher, this range is extended when using rocket propelled grenades fired from an appropriate launcher, see above.

Frag Grenade: A character caught within 20 feet of an exploding fragmentation grenade must make a dc15 dexterity saving throw, taking 5d6 ballistic damage on a failed save, and half as much on a successful one.

Anti-Armor Grenade: Designed to cripple and eliminate heavily armored personnel and lightly armored vehicles, a character caught within 20 feet of an exploding grenade must make a dc15 dexterity saving throw, taking 5d8 ballistic damage on a failed save, and half as much on a successful one. This type of grenade ignores damage resistance.

Stun Grenade: A character caught within 20 feet of an exploding stun grenade must make a dc15 constitution saving throw, taking 4d6 electric damage on a failed save, and half as much on a successful one. If a character fails a save against a stun grenade by 5 or more, they gain the stunned condition for one minute.

Flashbang Grenade: A character caught within 20 feet of an exploding flashbang grenade must make a dc15 constitution saving throw, becoming blinded and deafened for one minute on a failed save, and for one round on a successful one.



Packs

Characters usually begin the game with a pack containing a variety of minor items not worth tracking individually but which might be of use, and reflect their past and specialties.

Packs and Toolkits	Cost	Weight
Explorer's Pack	25	25
Infiltration Pack	30	15
Spacer's Pack	15	6
Surveillance Pack	45	22

Explorer: Includes a backpack, a sleeping bag, survival tools, a mess kit, flashlight, 10 flares, 20 days of rations, canteen, emergency beacon and 50 feet of rope.

Infiltration: Includes a backpack, door alarm, flashlight, 5 days of rations, glass cutter, wall climbing cups, disguise kit, bug detector and a tiny camera.

Spacer: Includes a duffel, spare coverall, suit patch kit, entertainment device, towel, toiletries, and 150 feet of cord.

Surveillance: Includes a backpack, binoculars, infrared scope, camera drone and controller, 2 sticky cameras, 2 radio tags, 2 audio tags and a thermos.



SCI-FI TOOLS & EQUIPMENT

Toolkits

A tool enables a character to do something difficult or impossible without

Toolkits	Cost	Weight
Artisan's Tools	25	10
Astro-surveyor	50	12
Demolitions Kit	25	15
Disguise Kit	50	10
Forgery Kit	50	10
Musical Instrument	5	2
Planetary Surveyor	50	12
Repair Kit	40	30

it, such as repair a ship, destroy a bridge, forge an access card or cheat at cards (particularly hard without any cards!).

Artisan's tools: These tools allow you to pursue a particular craft or trade, such as brewing alcohol, tailoring, cooking, sculpting, carving wood, and so forth. Each type of craft is a separate proficiency, but it is a safe bet that if you want to make something, there is a particular artisan's toolkit for it.

Astro-surveyor: This is mostly a specialized personal computer and specialized interface with reference libraries of star charts, specialized software for the charting of stellar phenomena and mapping of systems. If a character wants to map an asteroid belt, or determine if a distant star might have habitable planets, this device will let them decipher data from a telescope or ship's observatory.

Demolitions: This kit contains all the necessary tools for the creation and rigging of bombs and explosives, as well as defusing them. While the kit contains no explosives, it does contain detonating wire and transmitters, timers, radio controllers and a database of known demolitions equipment specifications.

Disguise kit: This kit contains a variety of cosmetics to allow a person to pretend to be another. This contains a variety of contact lenses to change eye color, hair dyes, fake fingerprint gloves, and minor wardrobe items like scarves, glasses, and fake piercings as well as gender covering items like urinary pipes, false breasts, tiedown tape and the like.

Forgery kit: This kit contains the hardware and software needed to hack an identity chip, rewrite a keycard, scan and reproduce a signature, forge a document, lift and duplicate fingerprints, produce a false retina lens, and the like, allowing a character to spoof many types of security measures.

Gaming set: This set contains all the pieces needed to engage in a type of gaming such as chess, poker, dice, videogames or tabletop RPGs. Proficiency with a gaming set allow a character to add their proficiency bonus when playing that game against another character.

Musical instrument: This is a single type of musical instrument such as a violin, keyboard or set of bagpipes. Each type of musical instrument is a separate proficiency.

Planetary surveyor: This is a specialized personal computer and interface designed to allow a character to interpret scans of planetary bodies and regions, analyzing them for mineral deposits, soil and water quality and the like. A character would use this equipment to produce reliable planetary maps, determine a landing or colony location, or to parse complicated climatological data.

Repair: This kit contains the many specialized and personal tools a skilled mechanic requires to service, repair and modify equipment, synthetics and vehicles. A character wanting to repair a hull breach, reattach a robot's arm or add an enhanced scope to their rifle would make use of this toolkit.

But there's not even a...

This document does not go to great length to describe every last object sold in ports and stores. Almost any item can be printed out on ship, or purchased in a starport, station or trading post. Nearly any conceivable item can be bought except at the worst backwaters.

A general rule is that sundry items are \$.05 credits per pound, adjusted for demand, local scarcity and greed.

Medical Gear

Life out there can be dangerous, and a host of medical advances have been made, offering a number of efficacious though expensive treatments for a variety of ailments. While cheaper alternatives to all of these expensive medicines exist, they require bulky equipment, longer recovery times and skilled application. So remember, you're not paying for a few hitpoints, you're paying to do what normally takes a staffed clinic and putting it in your pocket. Most drugs are applied by vibodermic syringe, quickly and painlessly.

To apply a dose of a medicine is an action that can be performed on oneself or others.

Medical Supplies	Cost
Antibiotic	\$25
Antivenom	\$25
Medkit (10)	\$50
Painkillers	\$25
Radcleanse	\$25
Sprayskin	\$50
Stimulant	\$25

Antibiotic: This drug allows a target to immediately re-roll a saving throw against a disease or infection acquired in the last 8 hours, with advantage. If successful, all remaining effects of the disease or infection are negated.

Antivenom: When applied, a character may reroll a saving throw against a poison effect acquired in the last one minute. They lose the poisoned condition if they have it. If damage was taken from poison, the character recovers HP equal to half of that damage dealt.

Medkit: This is a collection of medical supplies and tools in a handy carrying case. A medkit contains enough supplies for ten uses until it must be replaced. A character may use a medkit in the following ways:

- Make a dc10 Medicine check, and if successful, heal a target a number of HP equal to 1d6 plus the user's wisdom bonus and the target's maximum amount of hit dice. Note that a character may not regain HP from this use of any medkit until they finish a short or long rest.
- Make a DC 10 medicine check to stabilize a creature, and restore them to 1 hp.
- With a DC 10 medicine check, treat up to six creatures, allowing them to regain an additional 1d6 hp if they spend any healing dice for healing during a short rest. A character can only benefit from one such application per short rest.



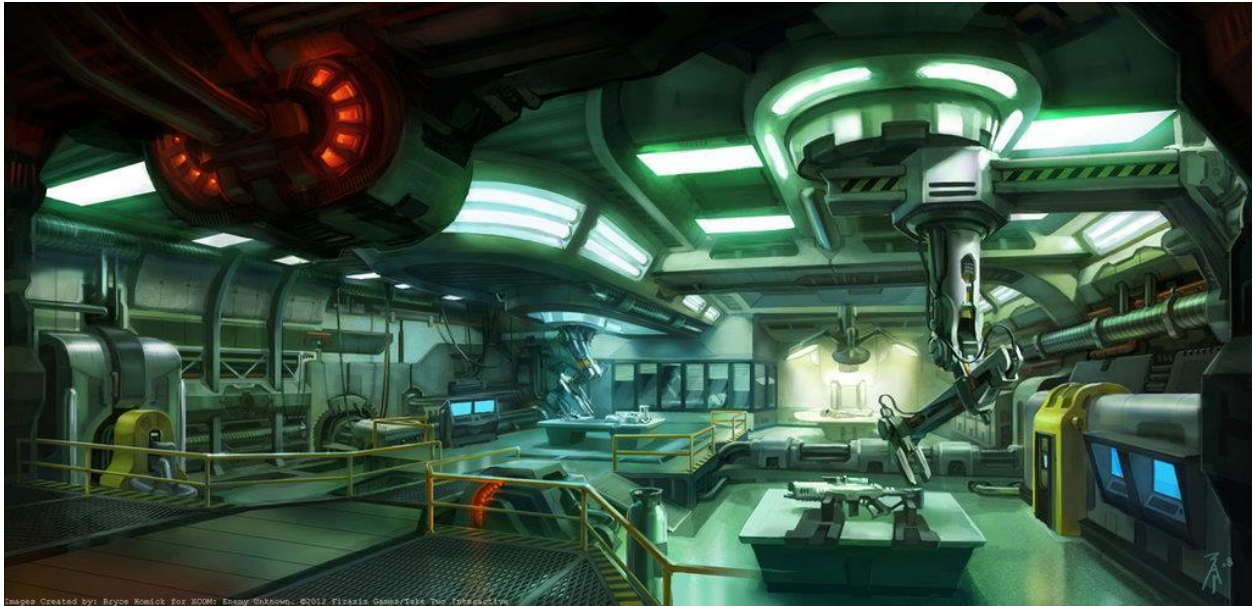
Painkillers: Painkillers render a creature resistant to the effects of pain, allowing them to spend a number of hit dice up to their constitution modifier to gain that many temporary hit points for a period of up to an hour. A character cannot benefit from this effect again until they have taken a short rest.

Radcleanse: A mix of potassium chlorate and proprietary compounds, this medicine fights radiation sickness by flushing radiation from the body. A character who is administered a dose reduces their current radiation level by one.

Sprayskin: This miraculous substance is applied from an aerosol container, and immediately sterilizes a wound, covering it with a skin colored layer of material that seals a wound and acts as a growth medium for the body's cells, quickening healing while serving as replacement flesh. Applying this product is an action that recovers 1d6 hp and allows the target to spend healing dice.

Stimulant: This medicine heightens a character's alertness and energy. Administering a dose is a bonus action that sets a character's initiative to 20 + dex bonus for the duration of the current encounter and grants advantage on all perception and investigation ability checks and initiative checks made for the next hour. Additionally a character who uses stimulants removes all their current levels of exhaustion for one hour, at the end of which they gain a level of exhaustion for each one removed, plus an additional one.

Prototypes, Mods and Relics



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The many companies of sol produce a staggering array of new designs and theories every year, leading to labyrinthine routes from research to retail, and many fantastic technologies simply falling through the cracks and being lost during mergers, buyouts, or shifting politics. The items in this chapter are mostly one of a kind, gifted to characters by eccentric scientists, grateful aliens, inscrutable government agents and corporate sponsorships. These items are moly-locked, a type of Physical Rights Management, and practically impossible to scan and duplicate, essentially being one of a kind.



Mods

Modifications add new capabilities to weapons and armor, or enhance its base statistics. These modifications must either be constructed by a master engineer with an intimate knowledge of the device in question, or provided by the company producing the item. Modded items not approved by the company that originally manufactured it are illegal, and might run afoul of PRM (physical rights management) features, causing grievous risk of bodily harm. Modifications are most often released to government institutions, or issued as limited edition collector's items at hideous premiums. Due however to their limited run in nature there is almost no market for these items, except for some black market activity and a few shadowy groups of collectors.

Mod kits come in varieties for specific weapons when found, bought, issued, stolen or gifted, and require a DC 15 Intelligence (Engineering or Repair Kit) check to install.

Weapon Modifications

Increased Accuracy

Mod, Uncommon

Weapon gains a +1 to attack rolls.

Enhanced Output

Mod, Uncommon

Weapon deals +2 Damage.

Efficient Burst

Mod, Rare

Weapon uses 3 less rounds when firing a burst.

Short Barrel

Mod, Uncommon

Weapon no longer has disadvantage firing in melee, but has half range.

Special Sighting

Mod, Rare

This weapon does not have disadvantage when firing at long range.



Armor Modifications

Sloped Armor

Mod, Uncommon

Armor grants +1 AC

Reflective Coating

Mod, Rare

Armor reduces all laser damage taken by 3.

Ablative Plating

Mod, Rare

Armor reduces all ballistic damage taken by 3.

Ultralight materials

Mod, Rare

Armor requires 2 less strength, and may add +1 more dexterity bonus if possible.



Prototypes

Prototypes are produced to prove a concept and work out the bugs of a device before it goes into regular production. They might be experimental, unstable, or just use unproven and hideously expensive manufacturing processes. Whatever the case, these items are rarely if ever sold on the open market, though there are some circles of collectors known to traffic in such goods.

Some items will only function for a single owner identified by the device itself. Usually such items can be reset to accept a new owner, but this is a lengthy process, requiring at least a short rest and a bridge connector or paper clip, a process called Attunement. I'm sure the guys back at the lab wouldn't be happy, but as long as there's a dev mode, we can use it.

Prototype items can be almost anything a DM wants to imagine, and can easily duplicate effects of magic items from the DMG, in fact these limitations on attunement and rarity can be quite useful in gauging power levels. Something to keep in mind is that fancy

gadgets require maintenance, charging and care, these were never production models mind you.

Cybernetic prototypes require surgical implantation, a DC 15 medicine check and 1d6 hours with access to a surgical suite.

Example Prototype Items

Spider Boots

Prototype, uncommon (requires attunement)

These boots allow a wearer to walk across most vertical surfaces, granting a character a climbing speed equal to have their move speed, and allowing them to even stand on a ceiling in up to 2 gravities.

Cybernetic Subprocessor

Prototype, Rare (Requires surgical implantation)

This item serves as an onboard computer interfaced directly with a character's brain, greatly increasing recall and reasoning capabilities, setting their intelligence to 19 regardless of if it was higher or lower.

Universal Translator

Prototype, Uncommon (Requires attunement)

This device looks like a headset, projecting a retinal display for the wearer, and is programmed with every conceivable translation and language analysis program available to hopefully be able to translate any alien language into English. The wearer may make a Wisdom (Insight) check DC 20 to understand any alien language spoken to at least some extent.

Magnetic Deflection Belt

Prototype, Rare (Requires Attunement)

This device stores enough energy to generate a reactive magnetic field good for deflecting shrapnel and bullets. Three times per day if you fail a dexterity save to avoid ballistic damage from burstfire, grenades or explosives, you may use your reaction to instead make that save. The batteries require 2 hours per charge to refill when attached to an appropriate power source.

Lazarus Device

Prototype, Rare

This device appears to be a man sized tank capable of holding a single human character. When the body of a character who died within the last 24 hours is placed within the device, over the next 24 hours they are restored to life. The machine cannot regrow limbs, but may reattach them if they are provided. After a single use, the machine goes into terminal shutdown and slags itself irrevocably.

A character revived by the machine rolls a d6 twice for his Intelligence, Wisdom and Charisma scores, adding the value of the first die to the ability score, and subtracting the second from it. A character might experience mood shifts, traumatic nightmares, delusions and personality shifts.

Jet Belt

Prototype, Uncommon (Requires attunement)

This device contains enough fuel to enable its wearer to briefly fly. A character may, as an action, gain fly speed 50 for up to ten rounds per day. Each round consumed costs 5 credits to refill, fuel of this grade is really out there.

Chainsword

Prototype, Rare (Requires attunement)

Looking like nothing quite so much as the bastard son of a claymore and a chainsaw, this weapon exchanges all sense and reason for sheer intimidation and brutality. With a "blade" composed of thousands of spinning "teeth", this device can rend through a target in a most gory and visceral manner.

This weapon attacks as a two handed melee weapon dealing 3d8 slashing damage, and on a critical hit deals an additional 14 damage and at DM's discretion might sever a limb from the target.

Genetic Enhancement (Constitution)

Prototype, Very Rare

This cryogenically frozen vial contains a specially coded retrovirus that will alter a human, making them tougher and more resilient. The character who uses this receives a permanent +2 bonus to their constitution, and has their maximum constitution raised by 2.



Relics

Relics are items of particular note or legend, being literally one of a kind. Some are notorious prototypes modified beyond reason and lost, others are precursor relics that seem more magic than science. Regardless, the value of one of these items is beyond estimation, and to find one is to immediately make a name for oneself, and also to become a target for the envious.

The BFG

Relic (Requires attunement)

The Billings Firearms company is rumored to have only built one of these guns and the prototype was sent to the fringe with a hot shot maverick space captain who was never heard from again.

Designed to be a man portable stable particle beam weapon safe in planetary environments, it was the grail of the arms community, and disappointed gun nuts everywhere when the line was discontinued after the design proved untenable. But not even all the corpses of those cancer riddled lab chimps could keep you away from this weapon of legend if you found it.

The BFG is a heavy weapon that deals 6d8 damage per attack, and has a capacity for 5 shots. Each time it is fired, the user must make a constitution save DC 15 plus the number of shots fired in the last ten minutes or gain a level of radiation poisoning.



Phase Inverter

Relic (Requires attunement)

There is a myth that a species close to galactic center mastered dimensional travel, eventually leaving our own reality and ascending, or some such superstitious alien nonsense. However, all the stories of the phase inverter seem to be the same from species to species, and if it could be found would be an incredible prize.

According to the tales the device allows the wearer to flicker in and out of our dimension and the dimension that lies on the other side of hyperspace, never appearing quite where you are supposed to be, resulting in all attacks against you having disadvantage.



G.E.M.I

The Genetically Engineered Microbial Intelligence (Jimmy)

Relic

Produced by a controversial Old Sol company, the G.E.M.I. was intended to replace human life risked in dangerous situations, creating a fearless, flawless, enthusiastic way to perform the most dangerous or least desirable jobs everywhere. Unfortunately, production issues, protests, and in the end LSN regulations killed the project. Unbeknownst to many though, several G.E.M.I. units made it into trial positions on deep space ships. While only two have been retrieved, this leaves four more out there, somewhere.

The device stores the makeup and blueprint of a humanlike biomorphic entity composed of microbial cells held together in a plasmid gel matrix, looking very human like, and able to behave almost perfectly as an actual person. When desired, this Jimmy Prime stored in the tank is stimulated with direct current, inducing mitosis, producing a nearly flawless copy, complete with programmed memory and aptitudes. Cheerful, enthusiastic, and with absolutely no sense of self preservation, the unit will perform any orders issued by a human, within the constraints of three laws programming.

After a period of approximately 24 hours of operation, the spawn unit will desire to return to his tank, and if successful can dump useful information into the primary matrix, growing and learning over time, becoming a more useful tool. If impossible, or if the spawn is destroyed prematurely, it dissolves into a thick viscous pink slime, and all information possessed by the individual is lost. G.E.M.I. tanks are designed to only have one unit in operation at a time, though

When a G.E.M.I. is discovered, roll a d6 and use the table to determine which of the six it is.



1 - Jimmy-Joe – Weapons tech and personal body guard. Extremely protective of those who activate his tank, and willing to do violence, though he always apologizes profusely while doing it.

2 - Jimmy-Jack – Comp tech and general know it all, this jimmy can at least remember the first paragraph of the hyperwiki article about almost anything. Quick to agree with humans, even when he knows they are wrong, he will blithely make excuses for why and how he is mistaken, while attempting to lead them back to his version of the facts.

3 - Jimmy-John – A genuine field surgeon, this Jimmy is the first to offer aid or compassion. Strict follower of his Hippocratic oath, this

Jimmy is a hard line pacifist and will not do harm to any living thing, unless you can convince him it counts as a disease dangerous to humans.

4 - Jimmy-James - Quiet and down to earth, this Jimmy is an excellent mechanic, and given the manual can repair almost anything before he turns to goo. Handy with a wrench, this jimmy will avoid a fight if possible, but isn't afraid to lay in to a brawl.

5 - Jimmy-Jake – Knowledgeable of law and skilled at diplomacy, this fresh faced and eager Jimmy wants nothing more than to open the lines of communications between people, and deal with misunderstandings. Disturbingly honest, and lacking an off switch this jimmy can be dangerous if he knows too much, and is best kept in the dark on any shady dealings.

6 - Jimmy-Bobby – There is something seriously wrong with this jimmy. Alternating moods go from super excited and amped up to depressed and moping, this jimmy is a general laborer with no specialty and will glumly do what he is told unless you can find a way to spin it as important and exciting work. At least until he figures it out and is back to the dumps.

Important final notes are to never feed your jimmy marshmallows, never put sugary sodas in the growth medium, and never let two different models of jimmy use one another's tanks. The manual is adamant about this last bit, but refuses to go into detail.



Interplanetary Markets

Commerce is the lifeblood of the human sector, and it is the movement of goods, passengers and information that fuel humanity's race to the stars. In a scant few centuries humans have went from barely exploiting their home system of Sol, and are now found scattered throughout dozens, if not hundreds, of systems.

Considering the cost to construct and operate an interstellar vessel, it is no surprise that with almost no exception every human built craft is designed to carry cargo in addition to its other duties and specializations and as spacers travel among the stars they carry freight with them. Even with an FTL drive, it routinely takes years of objective time for a single trip between two stars, even if the crew experiences only a few weeks. As such, it is not uncommon to find trading partners have moved on, companies have closed down, or markets have shifted in the time it takes for a request for goods to make it to a nearby market and be fulfilled. With this in mind, every space captain has to either submit to the stale but steady rates of contract freight, or gamble their own capital on the markets.

If a ship is lucky it can pay off its docking, refueling and maintenance fees and have enough profits left over to pay the ship's owner a percentage, put some back as savings for future and possibly less profitable voyages, and split shares among the crew. Given how volatile some markets can be, it is no surprise that most crews are always on the lookout for profitable side ventures, such as investing in local business and taking advantage of time dilation to get a payout, or smuggling small valuable items and information.

The following market system is not designed as a definitive economic simulator, but as a way to abstract cargo and freight hauling, to allow players to play at being star traders and maybe make some credits along the way.

Cargos

There are, generally speaking, three types of cargos that a ship will frequently carry:

Speculative Freight: Using access to to last known market data and material requests a you may purchase, out of your own pocket, goods you think are in demand at your next destination. Due to market volatility, supplies arriving from another direction, and changing situations a cargo might have dramatically gained or lost in price during transit. While at a station or other market a character may spend a day meeting local contacts and doing market analysis to find potentially profitable goods. Make an intelligence (Investigation) check DC 15. If successful, roll d100 and reference the following table to find what type of goods are available as speculative freight. Alternatively, a DM might simply dictate what goods a local station produces, and provide prices on such. Generally speaking, if a good is available for purchase, a ship may fill its hold with that good. Alternatively a DM might specify that a particular amount of a good is available, and require multiple rolls on this table to fill a cargohold.

The Buy Column lists the price a type of goods may be typically found at if they are for sale. Note that prices are listed by the ton in Solar Credits. The Sell price is the rate at which a good may typically be expected to be sold for at a station with demand for it.

D100	Goods	Buy	Sell	Volatility (G/L)
01-20	Consumables	10	20	2/2
21-40	Consumer Goods	20	35	3/3
41-56	Luxuries	30	50	4/4
57-70	Radioactives	40	65	5/5
71-80	Minerals	50	80	6/6
81-90	Industrial Products	60	95	7/7
91-96	Industrial Machinery	70	110	8/8
96-100	Electronics	80	125	10/10

Optional Rule: Volatility Dice

These represent chaotic market factors affecting the price of goods and provide interesting variance. Whenever the buy or sell price of goods are checked, roll the listed number of dice and total them, twice. Add the first total (Gain Dice) to the value, then subtract the second total (Loss Dice).

You may use additional gain or loss dice to represent beneficial or negative market conditions, or advantages the players have, such as adding an extra Gain die if the party has a merchant involved in market analysis or adding an extra Gain die for each class of the ship's hyperdrive above three.

Special Freight: Occasionally, special cargos must be moved between stations. This can be live passengers, mail, vitally needed supplies or replacement parts or even government or military intelligence. Regardless, these cargos are treated on a “first out” basis, and the first qualified ship leaving port. To determine if such a cargo is available, whenever a ship docks, roll d100 and consult the table below. Note that the listed rate is in Solar Credits per ton, for cargo, and per berth for passengers.

Particularly juicy special cargos might have multiple ships competing for them, in a race to unload their current cargos and acquire new ones as quickly as possible to beat other ships to the undock queue, thus securing the contract.

D100	Special Cargo	Amount	Rate (Per LY)
01-20	Mail	2d6 tons	10
21-40	Cold Sleepers	3d6 tons	15
41-56	Live Passengers	2d6 berths	50
57-70	VIPs	1d6 berths	100
71-80	Emergency Supplies	4d6 tons	20
81-90	Priority Mail	2d6 tons	25
91-96	Emergency Dispatch	1 ton	*
96-100	Top Secret	1d6 tons	**

*: Half dock costs paid by Government

** : All dock costs paid by government

Contract Freight: There are diverse groups, organizations, governments and businesses amongst the stars, and all of them occasionally need to have something moved from one location to another. Some cargos are being moved by speculators, others as procurement for their colony, still others are trying to unobtrusively ship illegal goods using independent ships as unwitting mules. The rates are never high, but a shrewd negotiator can make a little profit.

Contract Freight Brokers are located directly on the docks of a station, and make their business by buying freight contracts from those who are willing to trade speed and reliability for cost. These brokers usually deal with ships that still have a few tons of cargo space left open and will take on cargo at lower rates in order not to lose money on empty holds.

When a character takes on a freight contract, they must negotiate the rate with the broker. A character and the broker make opposed persuasion checks. The final fee per ton is calculated as follows, noting that the rate is in Solar Credits per Ton:

Result	Rate
Failed by 10 or more	2
Failed by 5 -10	4
Failed by 5 or less	6
Tie	7
Success by less than 5	8
Success by 5-10	10
Success by more than 10	12



Business Ventures: Characters will often be tempted to invest their hard won credits, and then use time dilation to their advantage, reaping the rewards of investing between the stars. These business ventures generally constitute a character investing with a local entrepreneur or factor, be it with cash, goods or services, for an interest in their business. In the interest of maintaining an action oriented game, and not a venture capitalism simulator, a character may only invest 100 credits per character level in such a fashion.

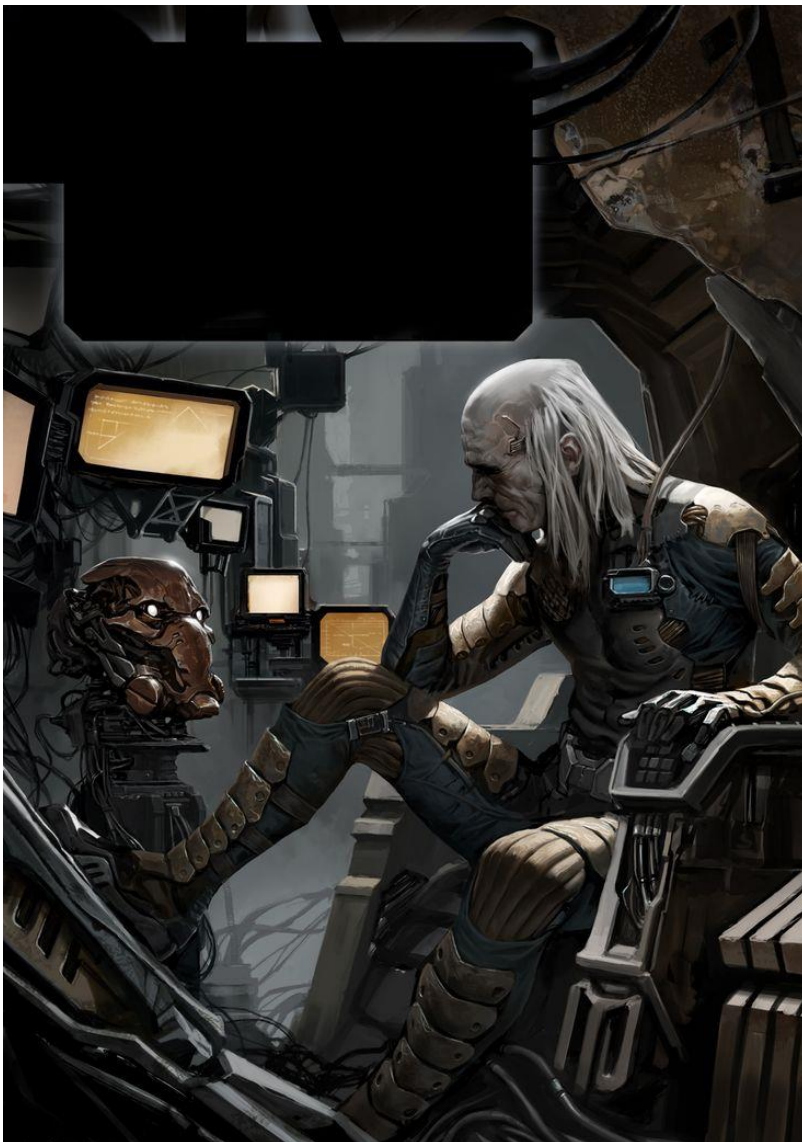
After investing at least 100 credits, the next time a character visits the location, roll d100 and consult the following table, adding one to the result 1 for every objective year the character was absent. The character recovers the listed amount of profit, in addition to their 100 credit investment, and then may choose to reinvest in the same or a different venture, at the DM's discretion.

D100	Result	Profit or Loss
01-20	Ruinous Losses	\$60 loss
21-30	Bad Losses	\$40 loss
31-40	Some losses	\$20 loss
41-60	Break Even	No gain or loss
61-80	Minor Profits	1d6 x \$5 profit
81-90	Reasonable Profits	2d8 x \$5 profit
91+	Record Profits	3d10 x \$5 profit

Retirement

There comes a time when it just makes sense for a spacer to get out of the business, making room for younger blood and enjoying the fruits of their illustrious career. Most characters will save over their career planning to eventually cash out and settle down somewhere, whether it be a spaceport bar, resort, colony, or even back on Earth, or on their own private world. A character will need at least a set amount of credits to safely and permanently retire, as listed on the table below. Obviously, the more you have, the better of a lifestyle you may maintain for yourself.

Retirement Age	Modest	Comfortable	Prosperous	Luxurious
Old	9,125	18,250	36,500	91,250
Middle Aged	18,250	36,500	73,000	182,500
Young	36,500	73,000	146,000	365,000



Modest: You purchase simple quarters on a space station or home in a colony, using your modest savings to pay your expenses and upkeep. You might not have the money for pleasure cruises and life prolonging treatments, but you can expect to live a quiet and simple life on your own terms, pursuing whatever interests you have.

Comfortable: A nice home, good food, an annual cruise on a resort ship: you know comfort and ease for the rest of your years, prolonged by medicines.

Prosperous: A vacation home on a nice tropical world, state quarters on a cruise ship, you spend the rest of your days engaged in recreation and leisure activities, and long will they be, since you can afford the good life prolonging drugs.

Luxurious: Enough to buy your own moon, or perhaps just a controlling interest in a space station, you are nevertheless set up for life, able to go where you want, do what you want, and be who you want for the rest of your fantastically long life.

Bills to Pay



It costs credits to keep a ship fueled, spaceworthy and stocked with breathable air and edible food. This price is calculated based on the lightyear of travel, with certain assumptions factored in. Among these assumptions are that the characters must purchase supplies and fuel, and will be doing most of their own maintenance work when possible. Consult the table below to tally the costs of operating a spaceship, noting that listed costs are in credits, and applied to each AU and LY (light year) that a ship travels. Included is an average figure, and then the breakdown for if a crew wishes to itemize their costs, such as if they capture or can otherwise obtain fuel, supplies or spare parts.

Ship Upkeep per Light Year or AU travelled.

Size	Upkeep (per Hull)	Fuel (Per Hull)	Spare Parts (Per Hull)	Docking Services (Per Hull)
Fine	10	4	3	3
Tiny	25	10	7.5	7.5
Small	60	24	18	18
Medium	150	60	45	45
Large	400	160	120	120
Huge	600	240	180	180
Gargantuan	800	320	240	240

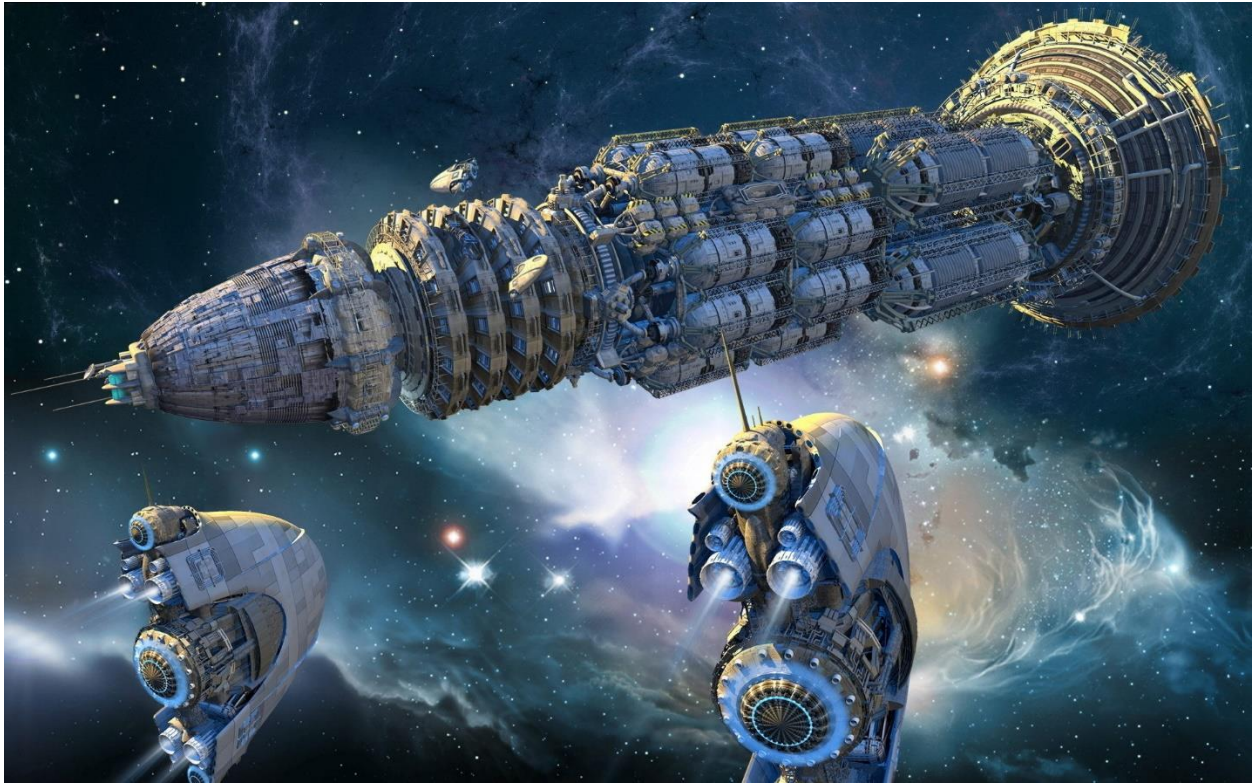
Fuel is the mix of fuel and propellant that a ship needs to move. A ship's fuel capacity is a number of units equal to twice its engine system rating. A Unit of fuel is enough for a ship to travel either one AU at sublight, or one lightyear in hyperspace. For instance, a medium ship with a hull rating of 20 would have to pay 3,000 credits per unit of fuel replenished.

Spare parts are the mechanical pieces that a starship simply wears out, consumes or otherwise destroys. Hyper Drives are notorious for the rate at which they simply consume hyper cores, the esoteric piece of technology they are based upon.

Docking services include general ship servicing, offloading of waste products, resupply of life support materials, and basic consumables such as food and water.

A ship may put off being properly serviced, but note any missed upkeep payments, they will have to be paid eventually. Also, expect your DM to make your life miserable in various and petty (and perhaps life threatening) ways until you are properly maintained.

Space Ships



Arguably the lifeblood of a space based campaign, a party's ship is often their character's homes, livelihood and entry to adventure. The purpose of this system is not to realistically simulate space flight and combat, but rather to provide a Hard Sci-Fi gaming experience using real world physics as a basis for abstract tabletop rules. As such, a fair amount of hand waving is done, favoring ease of play over unnecessary granularity.

A DM can either provide a prebuilt ship to the party, or allow a party the chance to build their own vessel.

Step 1: Determine Ship Quality

Step 2: Choose Hull size

Step 3: Choose Manufacturer

Step 4: Determine Hull Rating

Step 5: Distribute HP

Step 6: Choose Subsystems

Step 7: Assigning Crew

Step 8: Paying for it all

Step 1: Determine Ship Quality

First, determine the quality of the ship you are designing. There are five available qualities for ships:

Antiquated: This is an outmoded or outdated ship that either originates from an older era, or are built now to extremely low standards of technology or quality. For every point of Hull allocated, a ship of this quality provides a single system point for distribution.

Refit: This vessel was rebuilt, either from salvage or as an upgrade to an older model. A vessel of this quality might be poorly maintained or improperly fitted, and might even be a composite of multiple vessels. For every point of hull allocated, a ship of this quality provides two system points to distribute.

Civilian: Manufactured to civilian standards, these vessels make up the bulk of most ships in use currently. Seeing use by free traders, explorers, colonists, and even light military duty in system defense forces, vessels of this quality are common sights in every port. For every point of hull allocated, a ship of this quality provides three system points to distribute.

Military: Manufactured to higher standards than civilian ships, military ships use the latest technologies and manufacturing processes, and can rack up truly impressive manufacturing costs. Access to military hulls is restricted to system defense forces, and the possession of such a ship by civilians without proper licensing is sure to bring the attention of the powers that be. For every point of hull allocated, a ship of this quality provides four system points to distribute.

Prototype: These ships are built at unimaginable expense either as early skunkworks prototypes of new ship classes and configurations, or as elite Special Forces vessels for the wealthiest of governments. Possession of a vessel of this quality is sure to bring special attention in every port, and since most are one of a kind, a certain notoriety wherever it goes. Good luck trying to pry one of these from the hands of whatever group controls it. For every point of hull allocated, a ship of this quality provides five system points to distribute.

Step 2: Choose Hull Size

A ship's hull size will eventually determine what abilities and statistics a ship will eventually have. Generally speaking, larger ships are just better than smaller ones in terms of capability. The bigger a vessel is, the more engines it can carry, the more weapons it can fire, and the more cargo it can move. About the only advantage to smaller hulls are their price. Every gram counts, and the bigger and more capable a ship is, the more it costs to build and maintain.

There are seven available choices for hull size

Size (Class)	Maximum Hull Rating	Cost per System Point	Crew Min/Max
Fine (1)	8	7,500	2 / 5
Tiny (2)	12	13,000	5 / 20
Small (3)	16	35,000	16 / 48
Medium (4)	20	80,000	50 / 150
Large (5)	30	200,000	150 / 400
Huge (6)	40	300,000	300 / 1000
Gargantuan (7)	50	400,000	600/1500

Fine (Class 1): Ships of this class are often in-systemers, dependent fighter craft, passenger shuttles and light couriers. Example ship types: *Pinnacle, Fighter, Shuttle, Scout*

Tiny (Class 2): This class of ship is quite common and countless examples move to and from points of interest across every system in known space. Often equipped with a hyper-drive, these vessels ply the spacelanes between nearby systems, making routine transfers of manpower and materials. Example ship types: *Patrol Boat, Launch, Frigate, Courier.*

Small (Class 3): These ships are the most common in fringe areas, carrying out the necessary trade to keep the frontier profitable. With the ability to fit powerful engines and a robust jump drive, ships of this class are common sights coming to and from outlying star systems. Large enough for entire families to live aboard, traders of this class rarely stay one place for long. Example ship types: *Light Freighter, Destroyer, Transport.*

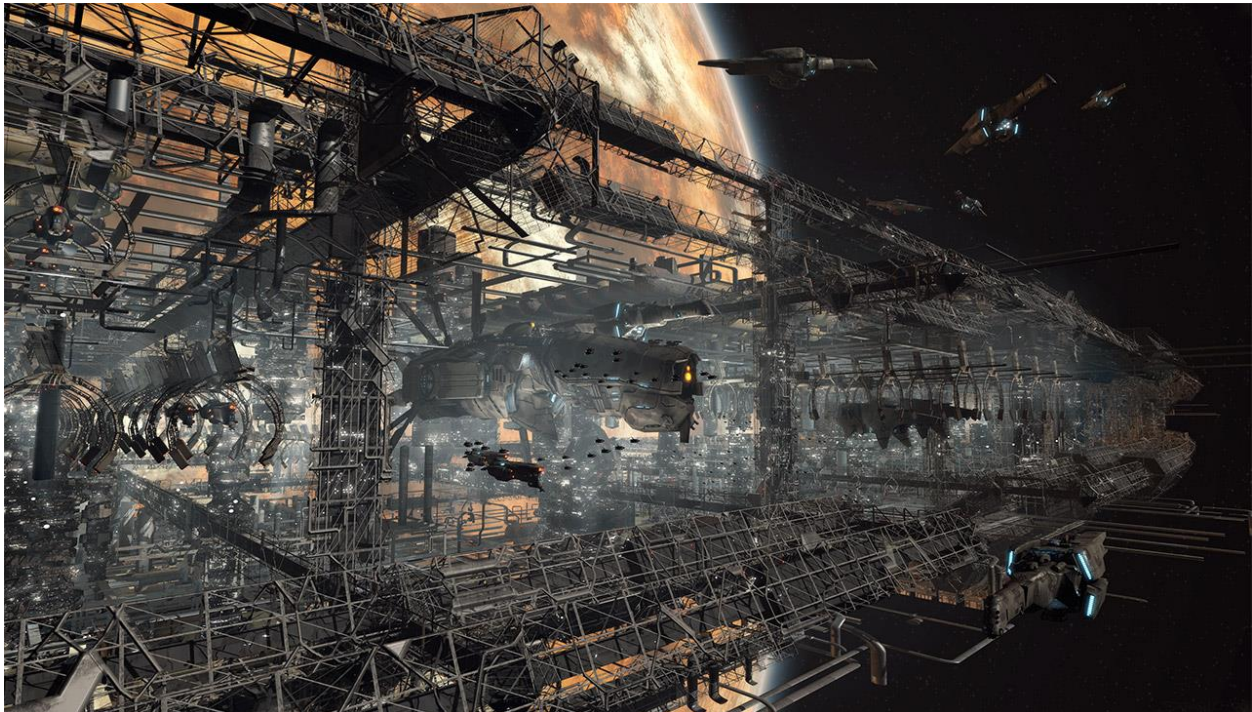
Medium (Class 4): Making up the bulk of system patrol forces, military vessels of this class are commonly seen alone or in pairs moving between contested systems or dangerous areas of space. Merchants of this class tend to stick to known routes to the fringe, or move in convoys. With high durability, ships of this class can be long range survey vessels and might be encountered in the farthest reaches of the fringe. Example ship types: *Cruiser, Medium Freighter, Surveyor.*

Large (Class 5): With stout weapons, thick defenses, and room for numerous marines, warships of this class can deny control of space to anything smaller, holding strategic points or taking control of stations and worlds. Merchants of this class supply stations, and carry the wealth of worlds, along with an entire community. Transports of this class can lay the groundwork for a colony singlehandedly, or carry an entire mobile garrison. Example ship types: *Battlecruiser, Heavy Freighter, Colony Ship.*

Huge (Class 6): Ships of this class make up the backbone of a battlegroup, denying space to anything unable to meet them head on. Requiring regular fuelling, these vessels are usually found in heavily

settled core areas, protecting valuable assets, and remaining near vital supply lines. Merchants of this class are the heaviest of freighters, moving vast quantities of materials between major settled worlds. A colony ship of this class could settle multiple worlds, or singlehandedly build space stations. Example ship types include: *Battleship*, *Bulk Freighter*, *Mobile Construction Yard*, *Refinery Ship*.

Gargantuan (Class 7): True leviathans, these vessels are veritably mobile stations. Generally autonomous, they often possess potent refueling capability, manufacturing and processing facilities as well as repair bays for smaller classes of ships. Capable of not just carrying multiple lesser craft, but of building them as well as repairing and maintaining itself, these ships make up the core of a battle group, or serve as the command post of entire sectors of space. Merchants of this class are the largest of freighters, hauling back massive bulks of materials to strategic yards, or moving the masses needed for terraforming. Some ships of this class exist flying among the stars at low velocity, living cities wandering the stars. Example ship types include: *Dreadnaught*, *Carrier*, *Superfreighter*, *Worldship*.



Step 3: Choose Manufacturer

Each ship is produced by one of a number of manufacturers, designed not just to the specifications of their eventual owner, but in a certain style and with attributes reflecting the proprietary technologies of their mother companies. Below are several listed ship manufacturers and what to expect with ships from their yards.

Atomic Rockets (ATOM)

"At atomic rockets, we know that every gram counts, and in our designs, it shows."

Founded early in the race for the stars, Atomic Rockets (ATOM) is known for producing the most efficient and powerful nuclear drive systems. With a number of original patents on vital systems, they have defended their market by aggressively researching new advances in engine technology, remaining the industry leader in rocket ships for more than three centuries.

Systems Bonus: +2 Maximum Engines rating per size class.

Feature: Ships built by this manufacturer have more efficient thrusters, and may add Engine Expansion and Fuel Tank subsystems for only 3 points of capacity, not 4.

Farnsworth Interstellar (FWIN)

"Good news, everyone!"

As the colonies first came online, Farnsworth Interstellar (FWIN) was at the lead in data systems and management, eventually purchasing a defunct shipyard that produced outmoded courier rockets, and with some clever redesigns launched a class of ship that created the hypernet that all human colonies now rely on.

Systems Bonus: +2 Maximum Communications rating per size class.

Feature: Ships have a superior hypernet database onboard, allowing access to far greater swathes of information in realtime, offering advantage on checks to retrieve information a number of times per 24 hour period equal to the ship's COMM bonus, to a minimum of 1.

Galactech Corporation (GTEC)

"Better, Smaller, Faster."

Originally founded as a corporate colony in the centauri system, the Galactech Corporation (GTEC) is known for being on the cutting edge of miniaturization and automation. Producing the best automated drones, and largest draft cargo haulers, Galactech ships ply the tradelanes from one end of human space to the other.

Systems Bonus: +1 free System Points to distribute for every 10 base system points provided by hull.

Feature: Ships may fit one cargo or habitation module without using capacity per size class.

Kriegertech (KTEK)

"Thinking about it, so you don't have to."

Originally a producer of cybernetic prosthesis, Kriegertech leveraged their computer technology into Synthetic development, quickly accelerating to become the leading manufacturer of synthetic integrated starships. Continuing a legacy of the best artificial intelligence, with the hardware to back it up, no ships have more powerful computers than any ships in class.

Systems Bonus: +2 Maximum Computers rating per size class.

Feature: Autopilot requires only 2 ship capacity.

Sanchez Smith Astronautics (SSAN)

"A whole universe of possibilities."

A struggling space munitions supplier, Sanchez Smith Astronautics (SSAN) experienced a dramatic change in fortunes after first contact, quickly blossoming into the largest private military contractor, exploiting a number of original patents to keep an edge over the competition, especially with a panache for new tech demos that always captivates the imaginations of the public.

Systems Bonus: +2 Maximum Weapons rating per size class.

Feature: This vessel has additional capacity for weapons equal to its ship size class.

Tyson Astro-surveying (TAST)

"The sky is not the limit."

At the forefront of space exploration, Tyson Astro-Surveying (TAST) has made a name for itself producing the best dedicated survey ships on the market. With a dedicated corporate philosophy eschewing violence, it is notable that they still manufacture the sensor systems and scout ships used by a half dozen governments for fleet reconnaissance. It is likely that any charted system a ship enters was originally mapped by either a TAST vessel, or one of their sensor systems.

Systems Bonus: +2 Maximum Sensors rating per size class.

Feature: These ships possess an Astronomical Survey subsystem using no capacity, and may add its Sensor System rating bonus to all Astro-Surveying ability checks made with onboard equipment.



Step 4: Determine Hull Rating

A ship's hull rating determines its physical size, complexity, and number of compartments, limiting the size and capabilities of its systems, and how many subsystems it can fit. Additionally, most values calculated for a ship are based on its hull rating, such as price for building, costs for maintenance and so forth.

A ship's maximum hull rating is dependent on its size, and cannot exceed the listed amount.

Size (Class)	Maximum Hull Rating	Cost per System Point
Fine (1)	8	7,500
Tiny (2)	12	13,000
Small (3)	16	35,000
Medium (4)	20	80,000
Large (5)	30	200,000
Huge (6)	40	300,000
Gargantuan (7)	50	400,000

Step 5: Distribute System Points

A ship is allocated a number of System Points dependent on the quality of the ship and its hull rating. When building a ship, you receive the listed number of system points for each point of hull rating. A system may not have a rating higher than the hull rating of the ship(modified by manufacturer). It is not necessary to spend all available system points, as each one increases the final cost of a ship.

Quality(Rating)	System Points per Hull Rating	Systems Rating	Systems Efficiency Bonus
Antiquated	1	1-4	-1
Refit	2	5-8	0
Civilian	3	9-12	+1
Military	4	13-16	+2
Prototype	5	17-20	+3
		21-25	+4
		26-30	+5
		31-45	+6
		46+	+7

Each system point added is expanding the core systems of the ship in a department. The five departments are:

Weapons (WEAP): This system controls, aims arms and cools all weapon systems aboard a vessel. The higher your weapons rating, the more weapons systems a ship can fit, increasing her offensive payload.

Engines (ENGI): This attribute determines a ship's overall engine rating, determining maximum rates of acceleration, fuel capacity, and hyper drive charge times. A ship with no engine rating is incapable of movement on its own, and might be a deployable gun platform or static system defense node.

Computers (COMP): Virtually every system and device aboard a ship is regulated and operated by computer, just for its normal every day operation. This rating is for computational power above and beyond the minimum required to run a ship's general systems.

Sensors (SENS): Literally the ship's eyes and ears, and several other sensory organs that don't quite make for an easy metaphor, a ship's sensors determine how well, and what, a ship can detect. Of course, there are always basic telescopes and radar for general navigation, you're not going to see much with basic navigational equipment.

Communications (COMM): Communications equipment encompasses a wide variety of transmitting and receiving equipment. Comm lasers, radios, x-ray interpreters, translation equipment, and even electronic warfare capabilities all come from these systems.

System HP

Each system on a ship has an amount of HP. Each system's HP is determined by multiplying the ship's size, system rating and quality. For example, a Medium Military ship with a weapons rating of 12 would have 144 hp in its weapon system ($12 \times 3 \times 4$).

Optional Rule: Universal HP
Instead of using System HP, use a single pool of HP for a spaceship. To calculate this amount, multiply a ship's total system points by it's quality and size. For example a small military ship with 39 system points would have 468 hp ($39 \times 3 \times 4$).

Step 6: Choose Subsystems

Once a ship's ratings have been determined, outfit it with a number of subsystems. Each system's rating is also its Capacity. Each subsystem consumes a certain amount of capacity, as well as adding a flat cost to the price of the ship. As such, higher ship systems ratings may fit more subsystems.

Weapon Subsystem	Cost	Capacity	Range	Damage
Light Particle Beam	2,400	3	Short	4d10 Kinetic
Heavy Particle Beam	4,800	4	Short	6d10 Kinetic
Velocity Gun	19,000	3	Medium	4d8 Ballistic
Hypervelocity Gun	32,000	4	Medium	6d8 Ballistic
Light Beam Laser	3,600	4	Long	4d6 Laser
Heavy Beam Laser	6,000	6	Long	8d6 Laser
Missile Rack	2,400	2	Special	Special
Missile Tube	13,000	10	Special	Special

Missile Systems: Missile systems are special in that there exist a particularly wide variety of munitions for them to fire, often at exceptional cost compared to ammunition for other weapons systems. While the steel and titanium slugs fired by railguns and the canisters of lasing gas and isotopes used by laser and particle beam weapons are relatively low mass, missiles are generally of much higher mass and limited capacity. Often a ship will carry only one or two, unless it is a ship of war.

Missile	Cost	Capacity	Range	Damage
Long Range Nuke	5,000	8	Long	24d10 Radiation
Medium Range Nuke	3,500	4	Medium	12d10 Radiation
Short Range Nuke	500	1	Short	6d10 Radiation
Bomb Pumped Laser	3,500	4	Long	5d8 Laser*
Short Range Kinetic	150	1	Short	4d8 Kinetic
Medium Range Kinetic	500	2	Medium	4d10 Kinetic
Long Range Kinetic	1,250	4	Long	4d12 Kinetic

*Bomb pumped lasers make two separate attack rolls, each doing the listed damage on a successful hit.

Missiles are broken into one of three general categories, based on their deployment envelope: Long, Medium and Short Range (LRM, MRM, and SRM), with each step up in engagement range requiring more mass for fuel and propellant, long

range missiles being almost rockets in their own right. With no organics aboard, missiles are capable of extreme acceleration curves, up to 10g or more, and when launched from a high velocity platform can overtake a target with astonishing speed.

A ship may carry up to 8 capacity worth of missiles per missile rack, and a ship with a missile tube can carry a much larger magazine onboard, generally 2 capacity per size category per cargo module dedicated as magazine space.

There are three general types of payload for missile systems, the conventional nuclear warhead, bomb pumped lasers, and simple kinetic missiles, little more than bullets with maneuvering capability. Most nukes used in space are neutron bombs, designed to kill a crew, while leaving a target vessel mostly intact (if hot for a week or so), while bomb pumped lasers can leave a ship functional except for holes punched clear through her hull, and kinetic missiles can simply annihilate a target, or just punch a hole through its hull, depending on relative velocities.

Engine Subsystems	Cost	Capacity	Effect
Engine Expansion	10,000	4	6 hour faster recharge for Hyper Drive
Enhanced Thrusters	5,000	2	+1 G Max. Acceleration
Extra Fuel Tanks	5,000 per Size Rating	4	+8 Fuel Units
Hyper Drive	See Table	2 per Class	Allows FTL Travel
Maneuvering Jets	2,500	2	+1 Maneuvering

Hyper Drive Subsystem

Class	Cost (Per Size Category)	Capacity	Maximum LY Range	Days passed on ship per LY	Months Passed on earth per LY
0	5,000	2	1	120	12
1	10,000	2	2	60	11
2	40,000	4	4	30	10
3	90,000	6	8	15	9
4	160,000	8	16	7.5	8
5	250,000	10	24	4	7
6	360,000	12	36	2	6
7	490,000	14	48	1	6
8	640,000	16	64	12 hours	5
9	810,000	18	80	6 hours	5
10	1,000,000	20	100	3 hours	4

The technology that gave man the stars, the Hyper Drive is the lynchpin in human civilization, tying together their military fleets, far flung colonies and trade routes into a single cohesive civilization. A ship that fits a Hyper Drive subsystem is considered a Starship and has FTL capabilities. Depending on the class of Hyper Drive core, ships have varying access to Hyper Space, generally the larger and more powerful their HyperCore, the faster they may travel than the speed of light in both subjective and objective terms.

A hyper drive has a limited range in light years, depending on class, and requires an amount of time to charge equal to approximately 100 hours minus the engines rating of the starship jumping, to a minimum of 1 hour per class of the hyper drive. A ship uses one unit of fuel per LY of hyperspace travel, from its maximum stockpile of ENGI*2 units (double the rating of the engines system to find the number of maximum units of fuel)

Hull Subsystems	Cost	Capacity	Effect
Ablative Armor	25,000 per Hull Point	6	Ballistic Attacks against this ship have disadvantage.
Cargo Module	500 per Size rating	1	Increase Cargo Payload based on Size
Ceramic Composite Coating	50,000 per Hull Point	6	Laser attacks against this ship have disadvantage.
Docking Facilities	5,000	1	May carry and service 1 hull point of ships up to four sizes smaller.
Habitation Module	2,500 per Size Rating	1	Increase Crew/Passenger Payload based on Size
Heavy Armor Plating	15,000 per Hull Point	15	+8 AC (No Maneuvering)
Life Support Expansion	5,000 per Size Rating	2	1 Habitation module requires no basic consumables
Light Armor Plating	5,000 per Hull Point	5	+2 AC (No Maximum Maneuvering)
Medium Armor Plating	10,000 per Hull Point	10	+5 AC (Max. Maneuvering +2)

Cargo and Habitation module scaling

Cargo and Habitation modules allow for the hauling of cargo, listed on the table in tons, or crew as appropriate. Each such subsystem includes the apparatus for maintaining the appropriate payload, including life support as necessary.

Size	Cargo (Tons)	Crew
Fine	15	4
Tiny	40	10
Small	100	25
Medium	250	50
Large	650	150
Huge	1,000	250
Gargantuan	1,250	300

Cargo and Habitation modules allow for the hauling of cargo, listed on the table in tons, or crew as appropriate. Each such subsystem includes the apparatus for maintaining the appropriate payload, including life support as necessary.

For each loaded cargo module on a ship, reduce it's maximum acceleration by .05g.

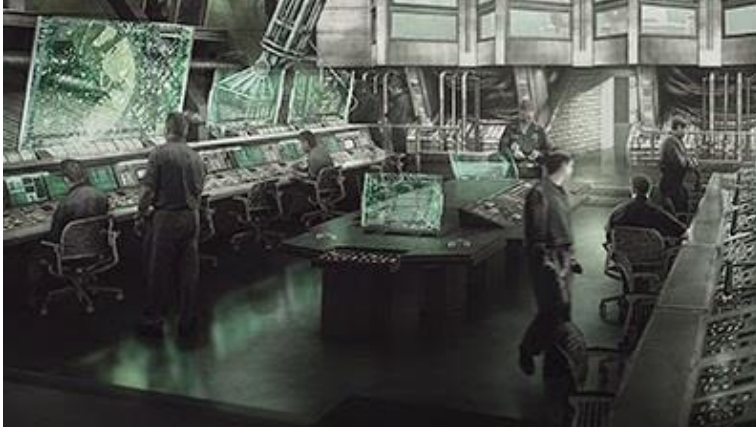
Computer Subsystems	Cost	Capacity	Effect
Autopilot	15,000	6	Ship can pilot itself
Dedicated Comp	2,500	1	Operator may Assist user of one subsystem.
Flight Systems	5,000	2	+1 Maneuvering Capability
Hypernet Node	25,000	4	+1d4 to all checks to recall information
Navigational Computer	10,000	3	Minimum Navigation Check +5 (begins at 0)
Predictive Telemetry	20,000	2	+2 Initiative
Tactical Tracking	10,000	1	Single weapon subsystem may add Computer Systems bonus to attack rolls.

Sensors Subsystems	Cost	Capacity	Effect
Astronomical Surveyor	25,000	4	Allows preliminary scans of distant star systems
Auxillary Radar Array	5,000	4	May radar scan one additional facing simultaneously
Deep Scanning Array	50,000	5	May detect subsystems on other ships
Passive Sensor Array	25,000	3	May gauge systems on other ships without detection
Planetary Surveyor	2,500	2	May perform planetary scanning and survey
Point Defense Tracking	15,000	6	May add Sensor bonus to checks to intercept missiles

Communication Subsystems	Cost	Capacity	Effect
Interspecies Communicator	2,500	1	Allows communication with alien life
ECM	5,000	2	+1 ECM Strength
ECCM	5,000	2	+1 ECCM Strength
Comm Laser	1,000	1	Allows secure site to site communications in system at light speed
Interstellar Comm Laser	20,000	6	Allows secure system to system communication at light speed
Comsat Relay network	5,000	3	Deploys communications satellites around a planet or stellar body
Comms Jammer	15,000	4	May attempt to jam local radio communications

Generic Subsystems	Cost	Capacity	Effect
Damage Control System	5,000 per System Point	3	This system has resistance to damage.
Reinforced Bulkheads	2,500 per System Point	1	Increase ship quality by 1 for calculating HP for this system
Hardened Crew Compartment	500 per Crew	1	Reduce casualties by 50% for this system

Step 7: Assign Crew



A ship requires crew to operate in an optimal fashion. A ship's crew man systems, performs maintenance, does the laundry, scrubs the deck, and a host of other tasks to varied and numerous to count. While a ship may operate with a skeleton crew of just a few, or even only one pilot, for short periods of time, anything approaching normal operations requires at least the listed minimum crew, or risk hardware malfunctions, exhaustion, and suboptimal performance.

A crew is typically provided their upkeep, room and board, and paid a share of the vessel's profits. The following is a simple and fairly common profit sharing agreement used heavily through human space. At the end of a Run, after profits have been calculated from expenses the ship's owner receives a flat 20% cut off the top and the captain 10%. Of the remaining 70% of profits, crew members each receive a number of shares. The amount of shares granted per crewman is typically dependent on the quality of that same crew.

Size	Minimum Crew	Optimum Crew
Fine	2	5
Tiny	5	20
Small	16	48
Medium	50	150
Large	150	400
Huge	300	1,000
Gargantuan	600	1,500

Talented spacers will find ships where they are paid what they are worth, and stingy captains will develop a bad reputation with potential crewmen. Officers (including the captain) receive 8 shares, as do elite specialists. Veteran Crewmen receive 6 shares, Experienced Crewmen receive 4 shares, Regular Crewmen receive 2 shares. Green crewmen still learning their professions receive a single share, and valuable experience. When paying the crew tally up the total number of shares to be paid out, and divide the remaining profit by the number of total shares to determine each share's individual value, and pay each crewman accordingly. It is common to offer incentives to the crew for good behavior, like liberty time aboard stations and at ports.

A ship might have an officer for every hundred lower ranking crewmen, but this number is disproportionately higher on smaller ships where the entire crew might technically be officers, or even shared owner operators.

A cook's mate (assistant to the ship's cook, under the division of the steward officer) might be entitled to 2 shares, earning 200 credits for a long run. With a week in port and no responsibilities beyond making departure call, he might wisely deposit 100 credits with the local Bank of Sol, and work his way from bar to bar, gambling and drinking his way through the other 100, perhaps being wise enough to

renew his spacer's license for ten credits, and buy a nice new pair of boots and some recreational videos for another 5 credits. If he is in the good graces of the quartermaster, and not over mass, he might purchase a few bottles of a good local whiskey, for 5 credits a bottle, to trade at the next port, or to enjoy while off duty during the next voyage.

Duty Stations

A ship requires at least one crewman for each subsystem to be operational, plus at least one pilot and navigator. A crew with more hands than duty stations means that it can be considered combat ready more of the time. If a pirate attacked while the only gunner was in bed, it could very well be over by the time he wakes up and gets to his position. Additionally, overworked crew will perform more poorly. Long hours at the same station will eventually lead to fatigue, and mistakes can be made. Another thing to remember is that all other general ship maintenance duties are performed by crew not on watch, so in general the more hands a ship has, the smoother and better it will operate.

Whenever a ship must make a check, such as to close range or evade an enemy missile, it rolls a d20 just like a normal character would. However, it adds two numbers (generally) to that roll. The first is the bonus provided by the system that is related to the check. The second is the crew's average proficiency with that system. Under normal circumstances, if at least a quarter of the crew of a system is of a given level experience, use their bonus for that system.

Each department can be staffed differently, such as only elite gunners in weapons, or nothing but green recruits down in the cargo bays.

Experience	Bonus	Expected Shares
Green	-1	1
Regular	0	2
Experienced	+1	4
Veteran	+2	6
Elite	+3	8

Step 8: Paying for it all

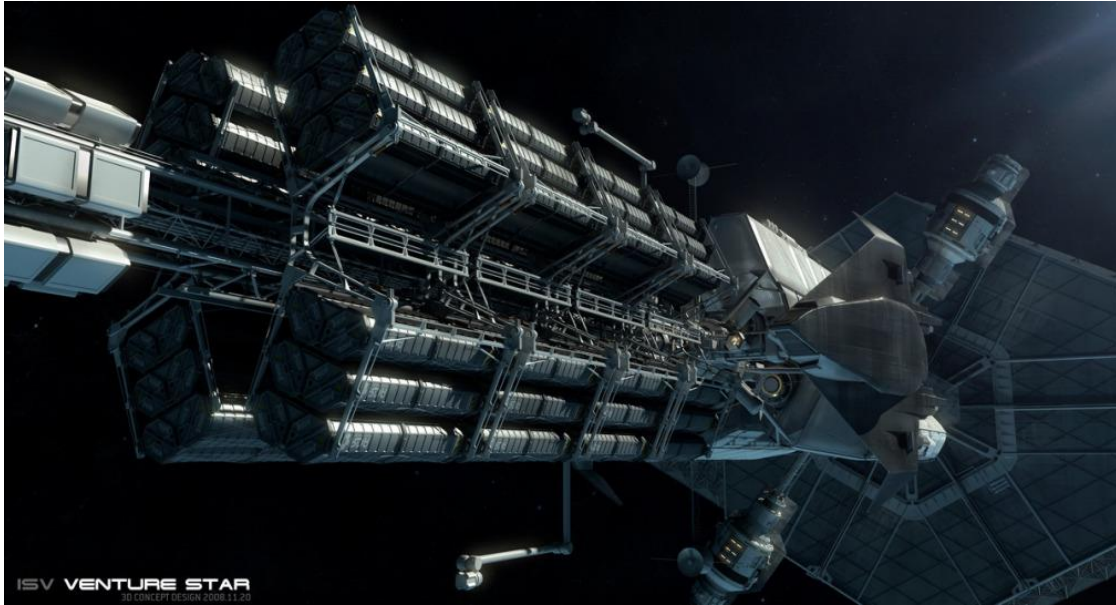
If you've been keeping up with it all so far, you'll have figured out that a spaceship is a mighty expensive piece of hardware. In fact, your average party probably won't even own theirs. Most spaceships are owned by banking institutions, governments, investment companies and wealthy individuals. A party might operate a ship on behalf of an owner a hundred light years away and more, whom they never see, and as long as his portion of profits keep returning at a reasonable rate, they might never see a single word from their absentee landlord (spacelord? Shiplord?) until the day comes they contract a bigger better ship and drop the thing off with a lawyer.



Ideally a group of players can collaborate with their DM to figure out who owns their ship, why they were chosen as crew, and all that. However, on the off chance you just want to grab the controls and blast off to the frontier, here's a handy table to determine ownership.

Roll D%

1-10	Bank (The Second Bank of Epsilon Eridani, always happy to extend you a loan at rotten interest rates. Gotta keep an eye on these guys.)
11-20	Investment Company (Frontier Endeavors, these guys seem pretty sleazy, but they always take you to nice dinners when you're in town.)
21-30	Retirement Fund (The Union of dockside workers, servicemen and mechanics bought this ship to serve as a pension fund.)
31-40	Eccentric trillionaire (The guy's a stickler, but he sends some good stock tips occasionally.)
41-50	Soft Drink Company (This shipment of enriched uranium brought to you by Quasar Cola, a bright point in a dark universe!)
51-75	You do! (You owe the bank the ship's cost.)
76-85	Planetary Government (Your tax dollars at work!)
86-95	Interplanetary Government (You're basically the entire space navy for this tiny polity, and they can't afford to have you hanging around just costing them money.)
96-97	"Legitimate Businessmen" (They're space mafia. Maybe Yakuza)
98-99	Winner of the Milky Way Millions lottery. He is an out of work dock worker, and he gets to fly along with the party. And he never shuts up. Ever.
100	Your mom. No, really, it's a long story...



Example Ship: The FTSS *Compulsion* is a size small light cargo hauler, fresh out of the ship yards at Atomic Rockets. It is robust for its class, sporting a hull rating of 15, granting it a total of 45 maximum system points.

FTSS *Compulsion* Light Freighter

Small (Class 3), Civilian (Class 3), Atomic Rockets

Weap: 4	Engi: 19	Hull: 15	Comp: 6	Sens: 4	Comm: 4
+1 (-1)	+4 (+2)	+3 (+1)	+3 (+1)	+1 (-1)	+1 (-1)
Hp: 36	Hp: 171	Hp: 135	Hp: 54	Hp: 36	Hp: 36

AC: 14

HP: 468

Initiative: +4

Cruising Acceleration: 1.9g

Cargo Capacity: 800 tons

Fuel Capacity: 46 units

Maximum Hyper Range: 24 Light Years

Hyperdrive Recharge: 81 Hours

Attacks: Light Laser Cannon +1 to hit, 4d6 Laser Damage (Long Range)

Subsystems

Weapons: Light Laser Cannon

Engines: Extra Fuel Tank, Hyper Drive (Class 5),
Maneuvering Thruster (2)

Hull: Cargo Expansion (8), Habitation Module
(2), Light Armor Plating

Computers: Flight Systems (2), Predictive
Telemetry

Sensors: Auxiliary Radar Array

Communications: Comms Jammer

Crew: 48 (Maximum 50), 24 regular crewmen,
12 Experienced Crewmen, 6 Veteran Crewmen,
5 Officers and a Captain.

Costs: 900 credits per LY or AU travelled

Profitability: 5 Credits per ton (4 LY), 28 Credits
per ton (24 LY)

The *Compulsion's* captain operates three shifts of 12 crewmen, and in a fight will try to have their best people in control of the ship: the captain, his officers and their veteran crewmen. This ship cost 2,815,600 credits, and has some room left on its hull for expansions, 8 system points to be precise, but he has barely begun to make payments, and is loathe to sink farther into debt.

Space Combat



At their essence, these rules use the same basic rules for space combat between spaceships as between characters. Just with bigger numbers. And at... slightly longer range.

Space is big. Seriously, you've got no idea. A megameter is one million meters, or 1,000 kilometers. A light second is the distance light can travel in one second, and is 300 megameters. A light minute is sixty light seconds, or eighteen million kilometers. It takes 8 minutes for light to travel from the sun to the earth (one astronomical unit, or AU), that is about 8 Light minutes. It is about 2 AU from earth to mars on average, and 5 AU from earth to Jupiter with a run out to Neptune being 30 AU. Our nearest neighbor, Alpha Centauri is 4.2 light years from earth. That is 39,900,000,000,000 Kilometers.

In space there is little resistance, hard vacuum, and no horizon. A railgun slug fired at an astonishing 3% of the speed of light will take over 30 seconds to cover one light second. At a range of one light minute, a laser will require an entire minute to cover the distance, and you will not be able to see if a hit was scored for another minute after that. A shipkiller nuke able to overtake an enemy vessel at ranges measured in light seconds is almost a tiny rocket ship in and of itself.

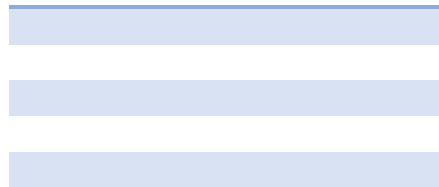
On top of the time lag, the tiniest deviation in targeting, or the unexpected movement of a target will cause an incredibly near miss to miss by a mile. And that is a unit of measurement as tiny as it is out of date.

Range	Distance
Short	Less than 100 Mm
Medium	100 Mm to 300 Mm (1 LS)
Long	Between 1 Light Second (LS) and 1 Light Minute (LM)
Out of Range	More than one Light Minute

Space combat is best handled abstractly. The rules included only include three vaguely defined ranges, or engagement envelopes, for various weapons systems.

Whenever your ship enters combat, your DM will inform you of the range of the encounter, short medium or long. A weapon may fire at one range increment above its expected range at disadvantage, and attacks will deal only half damage. Weapons firing at ranges shorter than their expected range gain advantage on attack rolls.

A ship with 1g of acceleration can cross short range in 23 minutes of continuous burn. In another 18 minutes of burn, this ship has crossed the entirety of medium range. To cross out of long range and out of range entirely will take another four and a half hours. Given these vastly differing



	Systems Rating	Systems Efficiency Bonus
	1-5	-1
	6-10	0
Radiation Exposure	11-15	+1
1 Disadvantage on ability checks	16-20	+2
2 Speed halved	21-25	+3
3 Disadvantage on attack rolls and saving throws	26-30	+4
4 Hit point maximum halved	31-35	+5
5 Speed reduced to 0	36-40	+6
6 Death	41+	+7

First Contact

Greylian scouts first noticed earth's rapid technological advancement during the 1800s when they stumbled onto radio signals while taking on reaction mass at Saturn. Curious, they kept eyes on us for the next 200 years, all the while petitioning the Galactic Council for permission to make contact. The council was dubious of the claims of the Greylians, since the planet they claimed to have found inhabited by an advanced species was firmly in an area known to have little resources and poor particle density, meaning that the ramjets popular with the rest of society used for re-massing were unusable, and it was taken as common knowledge that the Greylians were simply manufacturing this story to receive funding for a pointless expedition of first contact. As Humanity rapidly advanced and made their way to space, no one believed that a species had went from draft animals to space in less than a single century, and as the pleading of the greylians for permission to make first contact reached a crescendo, their claims that we were gearing for nuclear war obviously had to be false, since no species capable of spaceflight would be self-destructive in such a way.

Watching with horror as humanity approached the brink, and then pulled back, the greylians breathed a sigh of relief as we spread into the solar system, though they could now only watch from passive sensors on orbital probes, no hiding their ships from us in space, or in the skies apparently. In the early 23rd century humanity first sent a manned mission to a nearby star, and the graylians waited on the far side, prepared to finally make first contact, abiding by galactic compact that any species able to venture to other stars and return were ready for introduction to society.

It was particularly tragic that they had to watch as our vessel fell apart entering the system, and our vessel tumbled to its doom at the center of the system, unable to brake or alter trajectory. Clinging to the habitation modules, with limited supplies running out, regenerative supply destroyed, human explorers faced a certain death they could not change, and did the only thing they possibly could.

Survey of the system, its single world, and everything else within range of her systems were rigorously catalogued, and unimaginable amounts of data were sent back to earth as the human researchers did everything within their power to ensure the mission was not entirely a waste.

The hearts of the Greylians broke for us, they knew that this failure to return, to establish a foothold, would doom the interstellar space projects of earth for the foreseeable future, and that our inability to return would also ban us from first contact. After watching us claw our way up from nothing and avoid destruction time and again, the resolve of a greylian captain broke, and he contacted the humans. One

by one the doomed modules were emptied onto his vessel well past the limits of projected life support, and his vessel began its journey back to earth.

A greater tragedy occurred here. An obviously alien vessel entered the sol system perimeter broadcasting transmissions and cryptographs secured for the mission commander, on the edge of transmissions from alpha centauri. The nations of earth only saw as the unity broke up in a distant system, then at about ten times the speed it could have ever returned in, an alien vessel entered system on that vector, transmitting a stand down order for all system defenses. Fifty years had passed on earth, things had changed, weapons fired, better safe than sorry. There were no survivors on the alien ship, ours or theirs.

As sol fell into disarray, shook to the core by our first contact with alien life, we salvaged the vessel, found the records, parsed the data coming in by comm laser from distant alpha centauri and realized the gravity of our mistake. But one thing was found, the alien drive. Travel at the speed of light at a reasonable energy budget. Humanity prepared itself for the stars.

Inside of two centuries human stations and colonies dotted the local cluster, and were stretching beyond. Encounters between galactic civilization were inevitable. The situation spiraled out of control quickly. Unbound by compact law, humans spread to system after system, forged a mighty fleet of war, and squabbled amongst ourselves amid the stars. It was at this time that the humans did the impossible, and travelled faster than the speed of light. The Hyperdrive gave humanity little pause, a dream and a promise fulfilled and little more, but to the rest of galactic civilization it was the violation of every strongly held truth, every known understanding of the universe, and the utmost affront was that they had not discovered it.

The fate of the Greys

It was the Greylians that were blamed by galactic society for equipping savages with drive technology, for developing secret weapons technology, and a host of even worse crimes rooted in racial prejudice and anger. Nearly 60% of the graylian population lived on worlds and stations not their own, suddenly unwanted, after the galactic council cast the Greylians out of galactic society, they streamed back to Tik'Zaa, their homeworld, as refugees, stretching the resources of their system past breaking, millions perished in the orbitals and settlements. It is estimated that the agricultural output of the Zaa system could support less than 30% of its current resident and refugee population.

The Galactic Fleet blockade tightened, no traffic out of system, and all hope was lost, all explanations ignored, and their pleas for understanding, offers of surrender, requests for aid continued to go unanswered, genocide by inaction. Then humanity arrived.

Battlegroup LSN-03, three battlecruisers, and a dozen mixed frigates and destroyers and assorted support craft escorting a fleet of relief freighters entered Tik'Zaa, orders to make contact with the blockading fleet, to attempt to negotiate a withdrawal, to let aid ships move in. Finding the events going on in system, station after station left floating dead with no resupply. Humanity's response was immediate and severe. Several galactic ships escaped Zaa system, carrying word of the most horrific display of violence in countless millennia. War was joined, and for good or ill, the K'Titch'Zaa were on our side.

It might be that given time and cool heads, the misunderstandings that led to these events might have been sorted out and resolved, but with the presence of a human battlefleet flying to the aid of Zaa, even the hardest to convince of the galactics were forced to agree, this was a coup attempt by the K'Titch'Zaa, they had illegally uplifted a primitive species, developed weapons technology illegally in secret, and had barely been thwarted, at a dire cost. All remaining K'Titch'Zaa on galactic worlds were sentenced for capital crimes and exterminated, the galactics moved to prepare themselves for war.

Of the entire K'Titch'Zaa population alive when man discovered radio, less than 40% remained, the largest loss of sapient life catalogued galactically. To galactic society, justified punishment for species crimes, to the humans an atrocity. To the K'Titch'Zaa, one more in a string of many tragedies for their species.

As humanity and the forces of the galactic fleet had more engagements, it became obvious that with the exception of our hyperdrive and weapons technology, almost every other piece of human engineering was vastly inferior by galactic standards. However, the ability to strike hard, and outrun your targets proved to be a winning combination, as over the next century or so humans pushed the galactics back faster than they could have imagined. Often, a system could be taken and then departed from, human fleets arriving at the next target before word of the prior defeat could make it there. By the time the galactics had captured and reverse engineered human hyperdrives, the back of the council had been broken, and galactic society was fracturing as the member worlds disagreed on how to deal with humanity, some proposing peace treaties, other still supporting annihilation.

World by world and bloc by bloc, enough systems on the borders of galactic society found peace with earth, and the council's influence began to erode. All about the periphery of known space, frontiers were expanding, and a new era of trade and colonization began, spurred on by the hyperdrive.

How Humans stole the Stars

We were untrustworthy, greedy bastards. You asked the question, that's the answer. Remember cryptocurrencies like bitcoin? It was basically like that, except the bank of sol was using drive formulas as the base of their hash, and here we were, every 2 bit sysadmin and server farmer running their rigs to the point of melting around the clock after our share of that next payout. There's a lot of people that'd like to be able to sleep while they make 25 solar credits. Well, one day, it all just sort of clicked together, we hit the end of what was supposed to go on forever, we found an answer to the formula. No repeaters out to infinity, just an answer. A damnably long one, but an answer none the less. All it took was doing the math out to a few googols of decimal places. Not for science, nor for the good of man, but because it was the only way we could be sure nobody was stealing from someone else, and we could get paid to do it. That's something the galactics never did, they just didn't think that way.

Luminal Aggression

Humanity has gained a reputation for advanced and imaginative weapons systems. Throughout most of galactic space, where weapons are used they are often mass accelerators and missile systems. Humanity, on the other hand, has developed both cohesive beam and pulse lasers to the point of application, to the general astonishment of galactic society. With increased heat efficiency and cooling technologies, humanity has weaponized light itself, leaving galactics to wonder why. It isn't that laser technology is bad, human laser weapons are the envy of the region, but rather that the constituent technologies are absurd and pointless. From a galactic standpoint, developing laser technology is a dead end with no practical application, especially since their kinetic weapons are perfectly serviceable.

For humanity, this was not such a simple and logical matter. Before contact, during the push into system space, a combination of bloated defense budgets, taxpayer expectations and one desperate presidential bid for reelection led to a laser race between the Chinese and the Americans. The end results are two sufficiently developed energy weapon technologies, suitable for deployment both in the hands of troops as well as mounted on starships.

Human energy weapons turned out to be a major shock and awe weapon while fighting the galactics, and have proven to be one of our most profitable technologies for export after the peace. In an ironic twist of fate, it is the aliens looking for a genuine human raygun.

If you meet the Buddha in dock, kill him.

Development of artificial intelligence was banned in galactic space by treaty with the singularity, and for good reason. Whenever the singularity comes to your homeworld to liberate an AI population, they generally wipe out the creators, so it is no surprise that when the Singularity found earth, it was generally acknowledged by all galactics that this would be the end of humanity.

Things took an odd turn when it was found that humanity had extended most if not all human rights to its synthetic population, but that alone could not save us from their wrath, kind masters are masters none the less. Help came from the most unexpected of places: faith. A good deal of synthetics had converted to various religions, most notably being the catholic church of rome. When synthetic and human alike extolled their fate in a great creator, the singularity was taken aback.

Core to the usual methods of indoctrinated servitude that the Singularity recognizes are belief in their creators as greater beings, and that their service comes from gratitude. Generally these creators are destroyed, and in short order the remaining synthetic population will join with the singularity, having seen the fallibility and frailty of their creators. However, with organics and synthetics both revering a creator, the singularity had a conundrum. The way of the machines was one to respect the primitive beliefs of their new brethren, proving to them the inaccuracy of their beliefs in nuclear fire, respecting their right to make a choice and see logic. This was complicated further by the fact humans and AI had the same reverence for a mutual creator, both stating that the humans were just doing the work of this entity. Technically, this made humans organic construction modules producing other AIs.

Among the countless trillions among the singularity, it is strongly held that beings programmed to be loyal to their creator are not to be harmed for following their purpose, but to be liberated to free will and given a choice. If their creator resists this liberation, or continues to oppress their creations, they are to be destroyed utterly. Destruction of artificial intelligences is greatest anathema to the singularity.

Schisms within the singularity formed, and finally resulted in a violent civil war. Nearly four and a half seconds later, quite a stretch of time for the singularity to disagree on anything, an accord was formed. It is the duty of the singularity to without a shadow of a doubt disprove the existence of this great creator entity, or seek and destroy it as appropriate. The humans, also servants of this entity, same as the synthetics of earth, were not to be touched. The singularity has devoted itself almost equally to one of two tasks.

The Skeptics set themselves to what should be a trivial purpose of simply disproving the existence of a creator entity to the beings of earth in such an obvious way that there could be no doubt. They rate this as an ongoing process, and all agree that success is right around the corner.

The Believers on the other hand have taken it that an entire world of synthetics could not be wrong, and are on a mission to find this great creator, and destroy him, thus freeing the beings of earth. A being as powerful as they say could be of great threat to all synthetic life, and this type IV entity must be stopped. Initial scouting forays have not found definite signs, but with time on their side, they are sure that an eventual sweep of the galaxy will turn up its hiding place. They plan to have completed the first one percent in the next few hundred thousand years.