FREE FRONTIERS

The Fun is Back!

Free Frontiers is a science fiction adventure game inspired by the game Star Frontiers created by TSR in the early 1980's. It is quick to learn and easy to play. If you're eager to meet alien life forms and blast them to smithereens like the A-Team in space?

Y*ou've come to the right place!*

First though, you need to gear up.

This will get you started.

What You Need

This book contains the rules of the game. There is also a *Free Frontiers Stuff* book which contains all the stuff the game uses: interstellar species, skills, equipment, vehicles, etc. If you are in a hurry, read the *Sample Character* and *Action* sections of this book. Everything else can wait until later.

There is another similar set of books called *Light Hawks* which is all about spaceships. It is highly recommended that you try playing *Free Frontiers* first before moving onto *Light Hawks*. The two play by the same rules but what is explained here will not be explained over there.

Polyhedral Dice

At the very least you need one set of polyhedral dice containing a **d4, d6, d8, d10, d12, d20** and **d00**. The game plays best when each player has their own set of dice.

If you don't know dice, the d stands for **die** and the number is the count of sides on that die, so a d6 is your standard six-sided die. When a number has been put before the d it is the number of times you roll it. For a 3d6 roll one six-sided die three times or three six-siders all at once and add up the total.

Modifiers tacked onto the end of the roll, such as 3d6+2, add to the total. Roll a 3d6+2 and if the dice turn up 6, 4 and 5 you get a 17.

Percentile Dice

The most important die roll in the game is the **1d100**, aka the **Percentile Roll**. To make it roll the **d00** and **d10** together. Both are ten-sided dice but the d00 has two numbers per side and gives us the ten's digit. The d10 has just one number per side and supplies the one's digit. Put them together and you get a number from 1 to 100.

So if you roll a....

d00	&	d10	=	1d100
00	&	1	=	1
10	&	0	=	10
70	&	4	=	74
90	&	9	=	99
00	&	0	=	100

That last one tends to throw people for a loop but it's true, when the dice roll nothing but zeroes that is 100. When you roll these dice separately, a 00 on the d00 equals 100, and a 0 on the d10 is a 10.

Success Wheel

The success wheel is a revolving table used for action resolution. At least one person at the table should have one. The PDF used to create it can be found online at the website. Someday it would be nice to have these professionally printed, but until then you will have to make it yourself. Consider this a right of passage into the world of Free Frontiers.

Player Characters

Player Characters are the heart of the game. A **PC** is an amalgam of the person sitting at the table and the character sheet in their hands.

With a small group of two to five people, you might want to run multiple characters per player. Usually two or three per person. More than that and it gets confusing trying to keep track of who is who.

With large groups of six or more people it's best to stick to one character per person. You may swap out an old character for a new one if the character you are currently running isn't working for you. It may take some time for the GM to work the new character into the game and your old character becomes an **NPC** or *Non-Player Characters* under the GM's control.

Galactic Master

The Galactic Master or **GM** runs the game. This player represents the imaginary world that the adventure takes place in and gets to play the roles of its inhabitants, aka its **Creatures**. Unless something says otherwise, Characters and Creatures play by the same rules. If you don't have a GM, everyone should roll 1d100. Whoever rolls the biggest number is your new Galactic Master.

All hail the new GM!

New GMs should read the ***Free Frontiers Galactic Masters Guide*** or ***GMG*** before the game begins. However! Only they should read it. Any PC caught reading anything written for a GM will be tossed out an airlock.

Threshold Tables

Most of the game's tables are **Threshold Tables**. Each line starts with a number in bold print. When the dice roll that number or higher without crossing the next threshold that is what you get. For example:

01: Human.
30: Thralasite.
55: Vrysk.
75: Yazar.

With this table, if you rolled a 12 on a 1d100 you rolled up a Human. A roll of 30 to 54 changes it to Thralasite. Rolling an 75 or higher changes it to Yazar.

Because we count from low to high, threshold tables can be arranged in ascending or descending order. To save space they may even be laid out on their side like so:

01: Human. **30**: Thralasite. **55**: Vrysk. **75**: Yazar.

Mojos

Mojos are plastic gold coins often sold as *Pirate's Treasure* in costume shops. Poker chips, checkers or even normal coins will work but we highly recommend the plastic gold ones. You will also need a bowl to collect them in as they are spent during the game.

Each game officially begins with a **Mojo Roll**. Everyone rolls their dice at the same time to see how many Mojos they get to play with. What you roll depends on the number of people at the table.

Two to Four = 3d6 each.

Five to Eight = 2d6 each.

Nine or More = 1d6 each.

Mojos can do a bunch of different things, but mostly they are spent to re-roll the dice. *Be sure to show up to the game on time!* Show up late and while you still get to play you don't get any Mojos.

A Place to Play

The game plays best around a large table with nice seats in a room without much noise. If you can't hear what the other people are saying you cannot play the game. If snacks are to be had, be sure to bring something to share or at least be ready to throw in for pizza.

Always Round Down

The math in this game is nothing complex, but every now and then it will leave you with a decimal point. Unless something says otherwise - ***round down the number –*** simply discard the decimal and go with what is left. Both a 3.5 and a 3.99999 round down to 3.

Miniatures?

While there are rules for miniatures in the game they are not essential to it. Mostly the game is conversational in tone and we let our imaginations fill in the blanks.

The Website

There is a very good chance you have already been to our website, but just in case you need to find your way back to it, perhaps to download the character sheet pdf, here is the address:

http://www.chameleondream.com/freefrontiers

SAMPLE CHARACTER

To start you are going to need a character. The quickest way to get one is to borrow a character from someone at the table. The second fastest way is to download a sample character from the website and print it out. The third way, which is still quite fast compared to *certain other games*, is to turn to the *Character Creation* section in this book and roll one up. Right now, for sake of example, you are Dent Darflex 3rd Level Thralasite Adventurer....

[

sample character sheet

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Character sheets are meant to be printed on both sides of the same sheet and folded in the middle. This separates the sheet into four pages.

Character
Combat
Equipment
Experience

Character

The character page gives a general overview of who your character is and what they are capable of. It starts with the character's name at the top. Just below it is the character's existence, a short summary often made of the character's level, sex, species and occupation.

Character Level. Some characters are more developed than others and level helps us tell them apart. Gamewise it is mostly used to figure out who should be taken on an adventure. The standard levels are:

Beginner, levels 1 to 3
Intermediate, levels 4 to 6
Expert , levels 7 to 9
Master, levels 10 and up.

Ask the GM about the level of the adventure you are embarking on and choose a character that fits it. Should you ever lose your character and need to roll up a new one, choose the lowest level of the adventure's range for your new character's level. An Expert level adventure is made for character levels 7 to 9, so new characters start at 7th level.

Inclination. Inclination is the character's personality in a nutshell. This tells us how the character is inclined to act in any given situation. *It is not a guarantee*. Inclination always begins with a two-letter code:

PG = Peaceful Good
PN = Peaceful Neutral
PE = Peaceful Evil
NG = Neutral Good
TN = True Neutral
NE = Neutral Evil
VG = Violent Good
VN = Violent Neutral
VE = Violent Evil

Violent means the character is aggressive, straight-forward, and prefers a more direct approach to problem-solving. Peaceful characters tend to be more diplomatic and would rather compromise. Good and Evil are fairly self-explanatory. Neutral is a middle ground between the extremes.

When a character has two inclination codes separated by a slash, such as VG / PN, they are hiding something. The first code is their **Social Inclination**. This is the reputation they seek to uphold. It appears in the way they talk, the way they dress and the company they keep. The second inclination is their **True Inclination**. This is who they actually are, the inclination that comes out when their guard is down. Characters with just one Inclination are the same inside and out.

Following the inclination code will usually be three personality traits, often single word terms that best describe the character's personality. These are used as a reminder of how the character should be role-played.

Abilities. Streaming down the side of the sheet are the character's ability scores. These are the most important numbers on the page since everything you do will play off of them. They are percentages with 50% considered universally average. Most characters will have scores ranging from 25% to 75%.

Exceptional: 65% to 75%
Average: 40% to 60%
Sub-Par: 25% to 35%

Abilities come in related pairs with the idea being that if you are good with one ability you will probably be good with the other.

Muscle / Health. **Muscle** is the meat of the machine that makes your body move. It is also a stand-in for the overall sturdiness of your character's skeletal frame. **Health** is a measure of the character's constitution and natural good looks. It is often used to protect against poison and disease.

Agility / Reflex. **Agility** is the ability to move your whole body with speed and precision. When you get in a fist-fight, agility rules the day. **Reflex** is more about hand/eye coordination and the ability to react with speed and accuracy. Good ranged combat is all in the reflexes.

Intellect / Know. **Intellect** is your character's ability to think deep, solve problems and remember intricate details with clarity. **Know** is short for Knowledge and it is the breadth of what you know, how much seemingly random information is stored inside your mind.

Charisma / Spirit. **Charisma** is your ability to persuade, be cunning, crafty, likeable, able to cajole others into doing what you would like them to do. **Spirit** is the ability to motivate yourself into doing what must be done. It comes from nerve, guts, courage and determination.

Sense / Luck. **Sense** is a combination of intuition and sense perception. We test it to see just how aware of ones surroundings the character is. **Luck** is the general grace of the universe shining upon you, *or perhaps not*. It is the ability we use when none of the others fit what you are trying to do.

Skills. Characters have tons of skills, too many to count. That is why we only bother with the outstanding ones, those that are developed enough to bring a bonus. Skills appear in the Attributes section of your character sheet with an **ski-** prefix. The number attached to the skill is the bonus you get when using it.

Taltros. Taltro is short for *Talents and Troubles*. These also appear in attributes and come with a **tal-** or **tro-** prefix to help differentiate them from skills. Often you will simply

have a talent or trouble, but if a number has been attached to it that is its **Iteration**. This is the number of times you have it, so *Vengeful Friend 3* is like having that trouble at three times the normal level.

Home System. This is the star system the character hails from.

Climate. Climate tells us the temperature range the character is at home in while wearing next to nothing.

Gravity. Gravity is the level of gravity the character has evolved to deal with. It is measured in Gs where Earths gravity is 1.0g and three times that is 3.0g. A 0.0g is the weightlessness of outer space.

Muscle Mod. This is a damage bonus you get when using a muscle powered attack. If your character sheet has been filled out correctly it should already be a part of your attacks.

Base Pilot. This score is used to pilot vehicles. It is derived from your Intellect, Spirit and Reflex abilities.

Height & Weight. This is your standing height in centimeters and weight in kilograms.

Details. Details is room for anything distinguishing about the character, such as hair color, eye color, antenna color, tattoos, etc.

Combat

The combat page contains everything you need for combat.

INI. This is the die you roll to see who goes first in combat.

Target. Target is how hard or easy you are to hit because of body size. Having a penalty is better than a bonus.

[Maybe we should use body sizes with FF and you get a +10 when targetting anything larger than yourself or a -10 for anything smaller. I really don't want “what's your target” coming into the conversation unless someone has done something to warrant it.]

Move. Movement tells us how a character moves and at what speed. Dent has *Walk 2,* which is a bit on the slow side. For long distances he walks 2 kilometers per hour. In

combat, using miniatures, he can take 2 steps per round, **step** being our name for the space a mini fits in on a grid. For the characters in the game a step is equal to one **meter**.

Defenses. This is space for things like Force Fields, Armor and Shields. They all work by subtracting their die roll from any incoming damage. Force Fields often have a number attached to them known as their burn. This is the amount of energy the field burns through at the end of every round it is active. If the force field doesn't have a burn number then its burn is the number of dice you roll for its protection. An *Inertia 2d10* has a burn of 2.

Wear & Tear. The numbers next to **Wear** and **Tear** tell us how much damage your character can take. The actual damage your character has taken is tracked beside or beneath it using roman hash marks. Once the damage taken equals or exceeds the most you can take, bad things happen that will be described later on in the *Combat* section.

EX is used by characters with a body size other than Medium-sized. If yours is 1 you can ignore EX. **Stun** is the amount of wear damage it takes to stun your character. The **PSMBI** numbers are damage type ratios. They help turn wear damage into tear damage.

Beats. Beats control the amount of action you can pack into a combat round. Basically, each beat is one thing you can do like fire a weapon, throw a punch, move around, etc. The first beat brings with it no penalty. Every beat after that increases the penalty by -5. The beat penalty effects your entire action so try to pack three attacks into one action and each will take a -10.

While you can probably do this in your head, the beat tracker is there to help keep track of it all. Each splotch with a penalty inside it is one beat. At the end of each round the tracker resets to zero beats.

Attacks. These are the different attacks you can make. **Name** is what we call it. **B** is the number of beats it takes to make the attack. **Hit** is your % chance to hit with it. **DMG** is the amount of damage the attack does with one success. The letter next to the die roll is the attack's damage type and will be one of the following.

p = piercing
s = sharp
m = mixed
b = blunt
i = impact

When there is an **h** before the damage type that attack does **heavy** damage where each point of heavy damage is equal to **10** points of normal damage. Heavy damage is usually only used against vehicles and buildings. **Aspects** is a free-flow area for anything else that needs to be said about the attack.

Energy. Free-Frontiers is a game of high-technology and nearly all characters come with a wireless personal power supply that serves up *Energy Units* or *EUs* to their various devices.

The number next to Energy is the total EU the power supply carries when fully charged. Drain we record next to it using roman hash marks. Once the drain equals your total Energy you are out of juice and can no longer use anything that burns EUs.

Hinders. This space is for writing down hindrances. These are debilitating states that penalize everything you do while you have them. If your character has had too much to drink and gets *Drunk -20* as a hinder, every check the character makes will take a -20. Once the character sobers up you erase it and it is gone.

Rests. A rest is a short break you take to catch your breath and recover some wear damage. The die roll is the amount of wear damage you recover per success. The space to the right of it is where we record the number of rests you have taken using roman hash marks. At the end of the day, after a full night of sleep, these get erased.

Equipment

The back of the character sheet is where we keep track of all the stuff your character has on their person or in a pack. Generally speaking, we only bother with the big and important things. Smaller things, such as the keys to your spaceship, you don't have to write down. You just might need to make a **Luck Save** to make sure that you have them. Sometimes it pays to write things down.

In the **Wt** column is the weight of all the stuff on your person in kilograms. The **Pack** column is the weight of everything carried in a pack of some sort, including the pack itself. The two are kept separate so you can lighten your load in an emergency by dropping your pack.

Encumbrance. Below the equipment list is your character's encumbrance table. There are four levels of encumbrance - Moving, Lugging, Trudging and Straining - when

carrying less than your Lugging weight you are Moving. Otherwise your character will take a hinder when Lugging, Trudging or Straining.

Lugging = -10
Trudging = -20
Straining = -30

The most your character can carry is your Lugging plus your Straining weight, aka your **Stopped** weight. When carrying this much all you can do is fight to stay upright.

Credits. Commerce on the Frontier is handled with *Credits*. Any number that starts with a **$** is in them. Because interstellar communication is slow and unreliable there are no systems of interstellar banking. Instead there exists the Credit Coin which looks a bit like a poker chip with an LCD screen embedded in it. Each credit can contain up to $1000 as a highly encrypted form of digital currency. For more on this read the section on *Credits* in *Galaxy*.

Experience

Character advancement is driven by experience points which comes from recovering Wear damage. Every 100 points you recover creates 1 experience point or XP. Unspent points are what you have accumulated. Spent points tells us what you spent them on. Note that it is up to you to keep track of all this. *The GM will not do it for you!*

100 Wear = 1 XP

Background Info. To the right of your experience points is space for an image of the character as well as anything else you might want to say about them. If the character is a part of an on-going campaign, write the campaign's name on the bottom of the sheet. If the campaign doesn't have a name, use the GM's name.

ACTION

While many wild and amazing things can happen during a game of Free Frontiers, most of it is just us sitting around a table and talking about what our characters are doing.

[dialog example]

Ability Checks. If everything seems doable your character simply does it and the game moves on. Otherwise the GM will ask you for an ability check saying something like, "hold on, give me a *Hard Reflex* check." Reflex being the ability that lets you think fast and respond even faster.

We roll the dice to deal with uncertainty.

Unlike other games, you should never use your abilities to do anything. Always do the thing first and let the GM decide if you need to roll the dice or not.

Difficulty. The *Hard* part of the check is its **Difficulty.** This is a snap decision made by the GM. Each Hard is a -10. Every Easy is a +10. Hard and Easy lets us talk in numbers without having to mention any. While a check can be made infinitely hard or easy, rarely does it go beyond 30 points in either direction.

Triple Hard	= -30
Double Hard	= -20
Hard	= -10
Easy	= +10
Double Easy	= +20
Triple Easy	= +30

So a *Hard Reflex* check is your Reflex ability score minus ten. While you shouldn't fight a GM's decision to make a check Hard or Easy, feel free to discuss it. Come up with an interesting way to make the check easier and the GM might just let you off easy.

Try Hard. Characters are always trying to get things done but sometimes they need to try harder. Collectively known as **Try Hard**, this lets us exchange wear damage for a bonus.

Try Hard	= 1 Wear	= +10
Try Harder	= 2 Wear	= +20
Try Hardest	= 3 Wear	= +30

So to *try your hardest*, tell the table you are doing exactly that, add a +30 to your score and mark down 3 points of wear damage.

Skills. Skills don't tell us everything a character can do, just the things they are good at. If you have a skill which seems like it should help – mention it! – if the GM agrees you get to add its bonus to your ability score. If it seems like a bit of a stretch you might only get half that bonus rounded down.

So if you have *Astrogation +30* and want to plot the course of a spaceship, that's what the skill exists for and you get a +30 to the check. If you wanted to use astrogation to tell if a dot moving across the sky is a satellite, asteroid or an incoming spaceship? That's a half use and would only bring on a +15, *GM providing*.

Unless something says otherwise, you may only use one skill per check. If you have two or more skills that seem applicable, use the one that best fits the situation at hand.

Hindrances. Hindrances are penalties brought on by different maladies such as injury, exhaustion, drunkenness or trying to carry too much stuff. They effect *everything* you do.

Other Modifiers. Other modifiers may come into play, but for the most part it all boils down to an ability score, a difficulty, whether you try hard or not, one skill and any hindrances you may be hauling about.

Ability + Difficulty + Try Hard + Skill + Hindrances.

Saving Throws. A Saving Throw or **Save** is a test of character. This is a special kind of check that isn't anything your character actually does. Skills usually do not work with saves and you cannot *Try Hard* with a saving throw.

Roll the Dice

Add everything together, tell the table your total, and spin the dial on the Success Wheel to point at the score you are checking (using the golden arrow between L and 1). **Roll 1d100**. When the dice roll **equal to or under** the score you succeed! Otherwise you fail. *But it doesn't stop there.*

Effects. Action Checks measure character performance. To figure out how well you did, find where your die roll sits on the black outer ring of the Success Wheel. The colored wedges across from it tell us what success or failure it falls into. The big numbers ringed in black are **Successes**. The letters are **Failures**. Collectively they are known as Effects. The

white numbers on the dial are **Strength** values and used to settle Challenges and Competitions.

Effect	Description
8	Mind-Blowing
7	Incredible
6	Awesome
5	Fantastic
4	Excellent
3	Terrific
2	Good
1	Average
L	Light Fail
H	Heavy Fail
C	Crash Fail

So if you have the success wheel pointing at 65% and roll an 89? That sits just below 90 and is a little fail with a strength of -5. Had you rolled a 52 that is just above 50 as well as single success with a strength of 3.

Successes. Most of the time all you need is a single success, but the better you do the more impressive the outcome. In combat, success determines the number of times you roll for damage, so a terrific hit is going to do three times as much damage as an average one. Because of this we often refer to successes by way of their number rather than their description. Three successes is a *Triple* rather than a *Terrific*.

Failures. When you fail a check, more often than not, the game simply moves on. At other times we need to know how badly you failed. A *Light Fail* is a murky area caught between success and failure. Had you been jumping a crevasse, a light fail would leave you dangling by your fingertips on the other side. A *Heavy Fail* would send you plunging into the gorge. A *Crash Fail* is the worst that could possibly happen. Not only did you fall into the crevasse but you missed the river at its bottom to land on a sharp outcropping of rocks.

Actions. What actually happens is left up to the GM but peppered around the game are action tables like this one which tells us what happens when you dive for cover to avoid an explosion.

Agility + Dodge.
4: No Damage.

3: Tenth Damage.
2: Quarter Damage.
1: Half Damage.
L: Full Damage.
H: Double Damage.
C: Triple Damage.

It starts with the check to make. In this case Agility plus the Dodge skill if you have it. Numbered entries are successes. These reduce the damage you take from the blast. The table only goes up to four because it doesn't need to go any higher. Lettered entries are failures. Failures only appear when they do something such as compounding the damage taken from an explosion. Sometimes an **S** appears. That is a blanket entry for all different kinds of Success.

Critical Success. Low rolls are better than high ones and you can't roll any lower than **01**. *That's a critical success!* Spin the dial to point at **100** and roll 1d100 again. If the effect this gives you is better than the one you had it becomes your new success.

Critical Failure. When the dice roll nothing but zeros that is a 100 and a critical fail. It doesn't matter how good your score is. Spin the dial to point at **zero** and roll 1d100 to find how badly you failed. Any roll above a 75 is a Crash Fail.

The 200% Ceiling. The success wheel does have its limits. *No score can go above 200%.* When you do the check simply stops at 200% (which is 0 on the success wheel). For such high percentage checks treat the failing wedges as successes, namely C = 6, H = 7 and L = 8.

Mojos. Don't like what you rolled? If you have any of the gold coins called Mojos you can flip one into the bowl of discards and roll the dice again. This can be done up to **three times per check**. Each roll replaces the previous roll so there is no going back to a better roll.

Challenges

Challenges compare strengths. They often come as two abilities facing off against one another, such as *Agility vs Muscle*, *Charisma vs Sense*, or *Hit vs Dodge*. When asked for something like a *Luck Challenge?* That is the same as *Luck vs Luck*.

Offense vs Defense. The ability on the left is the *Offense* and checked by the character trying to make something happen. The ability on the right is the Defense and checked by the character trying to stop that thing from happening.

Subtract the defensive strength from the offensive strength to find the strength of the challenge. Find that strength on the dial and that will tell you its outcome.

Offense – Defense = Challenge Strength.

So if the offense rolls a strength of 7 and the defense a strength of 4? That 7 vs 4 gives us a challenge strength of 3 and a single success for the offense.

Keep in mind that subtracting a negative number essentially adds its positive value to the other number. Had the defense failed with a strength of -5? That 7 vs -5 is essentially a 7 - -5 which is the same as a 7 + 5. Its strength of 12 would end the challenge with a triple success for the offense.

Defeat. A defeat occurs when the defense beats the offense, such as a 7 vs 8. *Nothing happens.* Defeat should not be confused with failure. You can lower your opponent's success to zilch but never cause the check to actually fail.

Tie Breaking. When strengths tie, such as with a 7 vs 7, roll a **1d20** to break it. An odd roll is a win for the offense with one success. An even roll is a defeat of the offense.

Competitions

In a competition, all sides are on offense and making the same check to see who is best at whatever is being done. The character rolling up the greatest strength wins it.

Keep in mind that fail strengths do compare to success strengths. A -3 is less than a 1, and a -5 is less than a -3. When everyone is called on to make a Luck check and something happens to whoever rolls up the lowest strength? That will usually be the character with the most negative of negative numbers.

Tie Breaking. When two or more competitors end with the same exact strength? Each character should roll a **1d20** and the highest roller wins by a hair. When trying to find who did the worst, the lowest roller does so.

Team Competitions. When we have characters competing in groups, such as with a Tug-O-War, that is a Team Competition. This time we ignore strength and focus solely on success. Everyone makes a check and the side producing the greatest number of

successes wins it. A light failure produces no successes, a heavy fail reduces the total by 1, and a crash fail reduces the total by 2.

L: 0 Success.
H: -1 Success.
C: -2 Success.

Combat

Combat is action constrained by time. It moves in **Rounds**, each is just **three seconds** long. In it everyone gets to make one **Action**, one thing that they want to do, and countless **Reactions** which is a response to someone making an action against your character.

Initiative. To start the round, everyone rolls their character's **INI** die at the same time. The GM will roll one die for each die type the creatures use. If some creatures use d6s while others use d8s the GM will roll a d6 and a d8 to represent each bunch of creatures, who all go at once.

There are no initiative modifiers in the game.

The highest roller goes first. The lowest roller goes last. When characters tie each other, they cordially decide who goes first. When characters tie creatures, the character always goes first.

Leave your INI die sitting on the table before you and take it off after you have gone. This makes it easy to keep track of who has gone and who has yet to go.

When playing with a large number of people or if you cannot easily see what the other players have rolled then the highest roller should go first and the game moves clockwise around the table until everyone has gone. Re-roll the dice to break any ties.

Surprise. During the first round of combat, if you are under attack and roll a 1 for initiative you have been caught by surprise. During that round you cannot move, attack or react to what is going on around you. Take your initiative die off the table since you won't have the chance to do anything this round.

Declaration. Once given the chance to go, tell us what you want to do. You can do anything you can imagine your character doing in three seconds or less. However, because we can imagine a lot, combat comes with a system of **beats** to control just how much actual action can be packed into a single action.

[img beat tracker]

Nearly everything takes **1 beat** to do. Some actions such as running, sprinting or firing heavy weapons may take more. Use the sheet's beat tracker to help keep track of your total. *Each modifier is one beat.* Count them up and mark the one you end on before rolling the dice. That penalty applies to everything you do. At the end of the round, erase your marker as the tracker resets to zero beats. The line drawn in the beat tracker shows us the limit of what you can do. If you have a line to the right -25 then you can pack up to 6 beats into your action.

Tip! Nothing changes quite so much as your beat tracker. Instead of burning an eraser hole in your character sheet try laying it flat on the table. Pop the eraser out of a mechanical pencil and slide it back and forth to keep track of your beats. Glass counter beads work even better. Putting the counter atop the word BEATS is zero beats.

Movement. When miniatures are not in use, we largely ignore movement. It's assumed you are where you need to be. If not, the GM will ask you to *Move, Run* or *Sprint*, which adds beats to your action. When using miniatures, running doubles your speed and sprinting triples it. Any form of movement can be made to run or sprint, even Fly or Dig.

Move = 1 beat
Run = 2 beats
Sprint = 3 beats

Movement is often used for defense. Do **one** of the following and you get a Target modifier that will make you harder to hit.

Crouch = 1 beat. You end your move by dropping into a crouch and that gives you a Target -10. In the next round it will take 1 beat to stand up and move again.

Hit The Dirt = 3 beats . You fall flat on the ground for a Target -20. You can make ranged attacks but no melee attacks. It takes 3 beats to stand up and get moving again.

Partial Cover. = 1 beat. You take cover behind something that covers most of your body for a Target -30. You may return fire around it without problem.

Full Cover. = 1 beat. You take cover behind something you believe to be completely covering your character. It grants a Target -60 but you cannot return fire or even look around it.

Note that these options do not combine. You cannot drop to a crouch while hitting the dirt behind partial cover. *Pick one and ignore the rest.* You may also get a target modifier

from the size of your character. It's up to you to figure out your total target and remind your opponent of it.

Attack. Even when punching and kicking and sprinting and firing off your laser pistol, we treat the whole enchilada as one big action. The same modifiers are taken by everything. If you *Try Hard* with your action, everything you do will benefit from it. If the GM calls what you are doing Hard, everything takes a -10. Any beat modifier you have will effect every die roll you make. So to make an action, declare what you are doing, total up your modifiers and roll the percentile dice for whatever needs it.

> Dent declares he is going to run (2 beats) up to an opponent, punch him (1 beat) and fire his laser pistol twice (2 beats) as his action. That's 5 beats total and a -20 modifier. Dent decides he is also going to Try Hard to do all this. It burns a point of wear damage but gives him a +10 for the entire action. Think of this as turning his beat modifier into a -10.
>
> The running he does without problem. The -10 brings his punch score down to Hit 55%. He rolls a 46 on the percentile dice to score a single success. The -10 brings his laser pistol down to Hit 65%. He rolls once for the first shot and misses with a 78. He rolls again for the second shot and hits with a 12. A triple success!

Reactions. Whenever attacked, once your opponent is done rolling the dice, you may react to it with a *Dodge*, *Parry* or *Dive for Cover*. You can also choose to do nothing. You do not need to react to every attack to come your way. Declaring a reaction adds beats to your tracker and will take the beat modifier to its check.

Try hard benefits everything you do from the moment you declare it to the end of the round. So if you tried hard while making your action and later made a reaction in the round that reaction gets a +10 bonus from it.

Dodge turns combat into a *Hit vs Dodge* challenge. A Parry turns the damage an attack would normally do into temporary armor. A Dive for Cover reduces the damage taken from an explosion. See their entries in *Adventure* for more on how these work.

Doing Damage. Success tells us the number of times you roll for damage. So if a laser pistol does 1d10 for damage, a triple succes would have you rolling 3d10. Be sure to mention the attack's damage type when telling the table the damage done. From most lethal to least:

p = Piercing
s = Sharp
m = Mixed
b = Blunt
i = Impact

Sixteen points of sharp damage is *Sixteen Sharp*. Forget to mention the damage type and the attack defaults to doing Impact damage.

Defenses. Force fields, shields and armor work by stopping the damage done by a blow. When an attack hits, roll the dice attached to your defenses and subtract the total from the incoming damage.

Force fields require energy to work. It takes **1 beat and 1 round** to raise a field. If you have more than one force field protecting you you may raise them all in the same round. At the end of that round the field will drain its burn from your power supply. If it can't do that the field shuts down (see *Force Fields* in Galaxy for more on this).

Shields and armor we keep separate since a shield only protects the front and side of a character. It takes no beats to use a shield for defense. It will always be there sucking up damage. However it does take beats to make an attack with a shield or parry with one.

Taking Damage. Any damage not stopped by your defenses will do Wear & Tear to your character.

Wear damage is exhaustion and equal to the amount of damage done by the attack. A *Sixteen Sharp* does sixteen points of wear damage. Mark it down with roman hash marks. When you wear yourself out (such as by trying hard) you can go up to your wear point total but not go over. When combat damage takes you past that total your character will be knocked unconscious and remain unconscious until they somehow recover at least 1 point short of the total.

Tear damage is actual physical damage. The amount you take depends on your damage type ratios. If your sheet has – *p1, s2, m3, b4, i6* – the s2 means that it takes 2 points of damage to inflict 1 tear from a sharp attack. Sixteen sharp does eight points of tear damage. Had the attack been a blunt one it would only do four points of tear damage. Once your tear damage passes your tear total your character has been *Mortally Wounded*. They will die unless their wounds are attended to (for more on this see *Recovery* in *Adventure*.)

If your character has cybernetic enhancements, these should be listed on separate lines in the Tear section of the character sheet, each with its own damage amount. When you take some tear damage it is left to you to decide where it goes, whether it hits your body or cybernetics. Even though cybernetic parts are robotic, they take damage just like an organic limb as far as damage type is concerned.

Stun. The last thing damage might do is stun your character. If the wear damage you took is greater than or equal to your Stun point, mark it with an **S** next to the stun point. A stunned character cannot make actions or reactions until one action has been spent recovering from the stun.

If the character has taken **double** the stun point or more, follow the S with a **K** for Knocked Down. Now your character has been stunned and knocked off their feet. An action needs to be spent recovering from the stun and then another standing back up again.

Characters need to recover from a stun or knock-down before it can happen again, so a character will only ever have one S and one K on their sheet at a time.

Being stunned does more than just steal actions. If a character is desperately clinging to something they let go of it. Grapples are released. Any character who is stunned while climbing, flying, gliding, or somehow being up in the air will plummet to the ground.

Recoil. Your turn is over! Take your initiative die off the table. The next lowest initiative roller goes. Once everyone has gone the round recoils. Anything that happens once per round (like force field energy drain) is handled at this time. Reset your beat tracker to zero beats. Once done recoiling the current round ends and a new round begins with another initiative roll.

CHARACTER CREATION

To create a character you need a blank character sheet, a pencil, some dice, and the *Free Frontiers Stuff* book. For your first character follow the instructions in this section. After that you should be able to whip them out quite quickly using just our *Character Creation Cheat Sheet*.

1.) Species

Start by perusing the **Interstellar Species** in the Stuff book. Choose the race and sex of your character. Can't decide? Roll **1d100** with the table below. An odd roll creates a male character, an even roll creates a female one.

01: Human. **30**: Thralasite. **55**: Vrysk. **75**: Yazar.

Archetypes. Archetypes are packages of skills, taltros, equipment, etc commonly possessed by certain kinds of characters. Choosing one will very quickly fill out the rest of your character. While you do need a Species, you do not need an Archetype. They are only there to jump start the creation of characters.

Body Size. Most species are *Medium* in build, aka *Man-Sized,* which means you can ignore anything related to body size. For the species which are not man-sized you should read up on *Body Size* in the *Adventure* book. It can have a profound effect on your character. On the whole, if you are just starting out, it is best to stick to medium-sized species.

2.) Abilities

Roll 1d100 five times, once for each ability pair. Use the table below to give each ability pair the same score. Modify the individual abilities as needed by your choice of species.

Roll	Score
98:	75%
95:	70%
85:	65%
75:	60%
60:	55%
45:	50%
30:	45%

20:	40%
10:	35%
05:	30%
01:	25%

Point Shifting. To give your character even more character you may shift **5 or 10** points out of an ability and into the one it has been paired with. Muscle and Health are just such a pair. If you have 60% with both you could shift 10 points out of Health into Muscle, giving the character Muscle 70% and Health 50%. This can only be done once per ability pair and only when the character is being created.

Muscle Modifier. When a weapon is muscle powered (think spear, bow, axe or punch) the damage it does receives a modifier from your Muscle ability. Divide your Muscle score by 10 and subtract 5 from what remains. So if you have Muscle 50% your muscle modifier is +0. A Muscle 70% is a +2. A Muscle 30% is a -2.

Muscle Modifier = (Muscle / 10) - 5

Base Pilot. Base Pilot is used with vehicles. Add your Intellect to your Reflexes and Spirit scores. Divide the total by 3. Round down to the nearest 5%.

Base Pilot = (Intellect + Reflex + Spirit) / 3

3.) Skills

Skills come with a Complexity which is the number of XP required to get the skill at +5. They may be referred to by their name (Cake, Simple, etc) or that number.

Complexity	Cake	Simple	Average	Complex	Tough
+5	1	2	3	4	5
+10	2	4	6	8	10
+15	4	8	12	16	20
+20	8	16	24	32	40
+25	16	32	48	64	80
+30	32	64	96	128	160

To acquire an Average skill at +5 you need to spend 3 XP on it. Pumping it up to +10 increases the cost to 6 XP. While the table ends at +30 there is no limit to the perfection of a skill. The cost in XP keeps doubling with every extra +5. So an Average skill at +35 costs 192 XP. At +40 it costs 384 XP.

Write the skill and its bonus in the Attributes section of your character sheet with an ***ski*** prefix to remind us it's a skill. On the back of your sheet under Spent XP write in the skill's name and the amount you have invested in it.

Max XP. The most XP you can invest in skills is your **Intellect x 3**, so a character with Intellect 50% can spend up to 150 XP on all of their skills combined.

Languages. In order to speak a language you need to give your character at least one language skill. A character without a language skill can grunt, squeak, bark and make other animal noises but they cannot speak actual words. Their comprehension of words may not be all that good either.

GTFO. As far as actual employment is concerned, unless your GM says otherwise, brand new characters start off working for **Galactic Task Force Operations**, also known as the **GTFO**. This interstellar temp agency specializes in bringing together groups of capable people (i.e. anyone with a pulse) and sending them where they are needed to do whatever someone is paying them to have done. Most of the time this is perfectly legal grunt work. *Other times it is not.*

The GTFO covers the cost of transport to the job site, food, and any equipment deemed absolutely necessary to the task. Actual payment for the job happens on completion of the assigned task. The GTFO is notoriously stingy when it comes to their pay rates and has a terrible history of job-safety violations. Most employees who survive a mission or two will break away from the organization to form a freelance operation of their own. As long as you complete your mission the GTFO is fine with this, knowing that it is only a matter of time before most come crawling back, desperate for employment.

4.) Taltros

With your skills largely set, write in any talents or troubles provided by your species. Prefix these with a ***tal*** or ***tro*** to remind yourself of what they are. Taltros that come from your species you get for free. Others you have to pay for with XP.

Biological. Biological taltros are genetic in nature and can only be acquired through special means. See the section on *Mutations* in *Galaxy* for more on this. Non-biological taltros are known as **Universal** and can be acquired by anyone.

Iterations. Unlike skills, taltros iterate. This means you can purchase it more than once. We keep track of this with a number in the modifier column of the character sheet.

Instead of writing down the trouble Vengeful Friend three separate times you would write down *Vengeful Friend 3*.

Max. Many taltros have a Max in their description. This is the most it can iterate. A talent with Max 6 you can have up to six times. At Max 1 you can only acquire it once.

Troubles. Troubles are like talents that complicate your life and provide XP as a consolation prize for putting up with them. The XP amount in their description subtracts from your experience point total and are often used to shoe-horn a character into a certain level. While you can have any number of troubles, you can only get up to **-100** points of consolation XP from them.

It is good to keep in mind that you will never truly be free of a trouble until you erase it from your character sheet and remove any consolation XP it brings. Kill off a vengeful friend and the trouble *Vengeful Friend* will find a different vengeful friend to take its place.

Troubles brought on by your species cannot be removed, nor do they provide any XP. They are simply there and you have to deal with them. Likewise the talents brought on by a species do not cost you any XP unless you choose to iterate them. In that case you only pay for the extra talents.

Opposites. Many troubles are the opposite of a talent, such as *Attractive* and *Ugly*. Your character cannot have both. You cannot be *Attractive* and *Ugly* at the same time or *Frail* and *Tough*. They cancel each other out. Choose one of the other.

5.) INI

To find your initiative die, add together your Sense, Reflex and Spirit scores and divide the total by 3. Add to this any bonus brought on by the Initiative skill, if you have it.

INI = ((Sense + Reflex + Spirit) / 3) + Initiative.

Use the table below to find the die. Anything greater than 120 uses a d20. Write this into the **INI** space on your sheet.

120: d20
100: d12
80: d10
60: d8
40: d6
00: d4

6.) Movement

First find your *Base Movement Speed*. Add your Muscle to your Agility and divide by 20, rounding down to a minimum of one.

Base Movement Speed = (Muscle + Agility) / 20.

Your species should come with a number of locomotions such as *Walk x1.5*. Multiply the base speed by the number attached to it and that is your speed for that form of movement.

So if your character has Muscle 60 and Agility 40 that creates a base movement speed (60 + 40 = 100 / 20 = 5) of 5. A Walk x1.5 would turn it into (5 x 1.5 = 7.5) Walk 7.

[spr = ((((kph x 1000) / 60) / 60) * 4)]

7.) Equipment

Equipment we record on the back of your sheet. It's not a list of everything your character owns or even has on them, just the big important things. If you received a bunch of equipment through an archetype? That is the stuff you have accumulated on the way to becoming what you are. You may trade it for similar items of an equal or lesser value, but all of it will be in used condition and only worth half of the going market value should you try to sell any of it.

Starting Cash. To find the amount of money your character starts with, multiply your Luck times your Charisma, and then multiply the total by any skill bonus you have in the Finances skill.

Starting Credits = (Luck x Charisma) x Finances Bonus.

So a character with Luck 40 and Charisma 60 would start the game with (40 x 60) $2,400 credits. Add to this Finances +20 and the bonus increases it to (2,400 x 20) $48,000. Keep in mind that this is the character's entire life savings up to this point. They get this nest egg once and that is it.

Variable Pricing. Out on the frontier, nobody knows what anything is worth but everyone has a general idea. If the price is a bunch of dollar signs instead of a number that is variable pricing. To find its current asking price roll 1d10 for the first dollar sign and add a zero for every additional dollar sign. When the GM is not around to witness the die roll use a 5 in place of the 1d10.

```
$       = 1d10
$$      = 1d10 x 10
$$$     = 1d10 x 100
$$$$    = 1d10 x 1000
$$$$$   = 1d10 x 10000
```

For a computer costing $$$$$ you would roll 1d10 and add four zeroes to it. A roll of 8 is $80,000 credits. If the GM is not on hand to witness the die roll it costs $50,000 credits.

Weight. Equipment weight is measured in kilograms. If something doesn't have a weight that doesn't mean it weighs nothing, just not enough to matter. Try carrying a few hundred of them and GM will make it matter.

Items you keep on your person, such as a sidearm or skein suit, go in the **Wt** column. If it is something you are keeping in a pack of some sort (including the pack itself) put it in the **Pk** column. Total up the two columns, add them together and that is the total weight you are carrying.

Encumberment. How much you can carry before becoming encumbered is known as your Base Load. It is half your Muscle score in kilos.

Base Load = 1/2 Muscle score in Kilograms.

Use your base load to find the thresholds of your encumberment table.

Lugging = Base Load x 1
Trudging = Base Load x 2
Straining = Base Load x 3

So if you have Muscle 50 your base load is 25 kilos. On your character sheet write down Lugging: 25, Trudging 50, Straining 75. To stay unencumbered keep the total weight of your equipment under your Lugging weight.

Energy. A character with batteries in their equipment list has what it takes to set up a wireless power supply and connect it to items such as laser pistols and force fields. To start, add together the EU provided by anything in your equipment. Put the total next to where it says Energy on the front of your sheet.

Power supplies are passcode protected and it's assumed that your character has put this passcode into everything that needs access to the power supply. Items that use EU can usually carry many different passcodes allowing them to hook into many different power systems.

The range of a personal power supply is quite short, two to three meters at best. The items that use it often do not come with energy supplies of their own. This is done so if someone steals your laser pistol all you need to do is back away from them to cut off its power.

Body Fat. All organic creatures have some way of storing energy as fat inside their body. Depending on the food supply they have evolved to fit, some may carry more than others. How much fat a character carries we leave up to you, but it is highly recommended that you write a Body Fat entry in your equipment list and give it a number of kilos. This does count against encumbrance.

Basically, to keep from starving your body can consume its fat, getting a day's worth of food from each **half kilogram** of it. Most healthy characters carry around **five kilos** of fat which will let them go ten days without food before starving.

Body Weight. Your body weight is the weight of your body sans fat. It comes from your Species and your Muscle score. [how?]

Climate. Organic beings often acclimate to a certain range of temperature. Characters should choose one from the list below, providing their species agrees with it. The Yazar love warm environments and have a limited climatic range of Warm to Torrid. Choosing the Cold climate is out of the question. The numbers are in degrees Celsius and only here as an example. The climate name is what belongs on your sheet.

Torrid	= 40°
Tropical	= 30°
Warm	= 20°
Temperate	= 10°
Cold	= 0°
Frigid	= -10°
Arctic	= -20°

Warmth. Equipment that has a **W#** or *Warmth Number* helps you deal with cold climates. Every 10 points of warmth shifts your climate one zone closer to Arctic. Think of each point as reducing your climate by 1 degree celsius. A **C#** or *Cooling Number* is far more rare. It does the opposite, every 10 points of cooling shifts your climate one step closer to Torrid.

Climates are often written down as a pair separated by a slash like *Warm / Cold*. The first is the characters natural climate. The second is the character's equipment adjusted climate.

8.) Attacks

Most of your attacks will be weapons. Look at what you have for equipment and write in one entry per kind of weapon, numbering them if you carry more than one. So instead of writing in two separate attacks for a character carrying a pair of laser pistols, write in one attack and call it *Laser Pistols, 2*.

B. This is the number of beats it takes to use an attack. Beat counts are determined by the attack itself and never change.

Hit. An attack's hit score is made of one ability score and one skill bonus. The ability depends on the type of attack. Agility is used by melee and unarmed attacks. Reflex is used by ranged attacks.

Melee = Agility
Ranged = Reflexes

As for the skill, use whatever you have that makes the most sense. The combat skills *Melee* and *Ranged* cover just about everything in their domain. Their complexity is high because they cover such a broad range of combat. More specialized skills such as *Rifles* and *Archery* do exist. These have a lower complexity, making them easier to perfect but they are also more limited in scope.

Use the best skill you have that makes the most sense. If what you have only partially makes sense, like trying to use the Archery skill to fire a laser rifle you only get a half its bonus.

Add in any other modifiers that permanently apply to the attack. The idea behind Hit is to come up with a score that you don't have to think to use. In most cases to fire your laser rifle you roll its Hit score and that's it.

DMG. This is the damage the attack does. It comes as a number followed by a letter indicating its damage type. The number is the most damage the attack can do with a single success. With the exception of attacks doing a single point of damage, DMG needs to be turned into a die roll using the table below.

1: 1

2: 1d2

3: 1d2 + 1

4: 1d4

5: 1d4 + 1

6: 1d6

7: 1d6 + 1

8: 1d8

9: 1d8 + 1

10: 1d10

11: 1d10 + 1

12: 1d12

13: 1d12 + 1

14: 1d10 + 1d4

15: 1d10 + 1d4 + 1

16: 1d10 + 1d6

17: 1d10 + 1d6 + 1

18: 1d10 + 1d8

19: 1d10 + 1d8 + 1

20: 2d10

21: 2d10 + 1

22: 1d10 + 1d12

23: 1d10 + 1d12 + 1

24: 2d10 + 1d4

25: 2d10 + 1d4 + 1

26: 2d10 + 1d6

27: 2d10 + 1d6 + 1

28: 2d10 + 1d8

29: 2d10 + 1d8 + 1

30: 3d10

31: 3d10 + 1

32: 2d10 + 1d12

33: 2d10 + 1d12 + 1

34: 3d10 + 1d4

35: 3d10 + 1d4 + 1

36: 3d10 + 1d6

37: 3d10 + 1d6 + 1

38: 3d10+ 1d8

39: 3d10 + 1d8 + 1

40: 4d10

41: 4d10 + 1

42: 3d10 + 1d12

43: 3d10 + 1d12 + 1

44: 4d10 + 1d4

45: 4d10 + 1d4 + 1

46: 4d10 + 1d6

47: 4d10 + 1d6 + 1

48: 4d10 + 1d8

49: 4d10 + 1d8 + 1

50: 5d10

51: 5d10 + 1

52: 4d10 + 1d12

53: 4d10 + 1d12 + 1

54: 5d10 + 1d4

55: 5d10 + 1d4 + 1

56: 5d10 + 1d6

57: 5d10 + 1d6 + 1

58: 5d10+ 1d8

59: 5d10 + 1d8 + 1

60: 3d20

61: 3d20 + 1

62: 3d20 + 1d2

63: 3d20 + 1d2 + 1

64: 3d20 + 1d4

65: 3d20 + 1d4 + 1

66: 3d20 + 1d6

67: 3d20 + 1d6 + 1

68: 3d20 + 1d8

69: 3d20 + 1d8 + 1

70: 3d20 + 1d10

71: 3d20 + 1d10 + 1

72: 3d20 + 1d12

73: 3d20 + 1d12 + 1

74: 3d20 + 1d10 + 1d4

75: 3d20 + 1d10 + 1d4 + 1

76: 3d20 + 1d10 + 1d6

77: 3d20 + 1d10 + 1d6 + 1

78: 3d20 + 1d10 + 1d8

79: 3d20 + 1d10 + 1d8 + 1

80: 4d20

81: 4d20 + 1

82: 4d20 + 1d2

83: 4d20 + 1d2 + 1

84: 4d20 + 1d4

85: 4d20 + 1d4 + 1

86: 4d20 + 1d6

87: 4d20 + 1d6 + 1

88: 4d20 + 1d8

89: 4d20 + 1d8 + 1

90: 4d20 + 1d10

91: 4d20 + 1d10 + 1

92: 4d20 + 1d12

93: 4d20 + 1d12 + 1

94: 4d20 + 1d10 + 1d4

95: 4d20 + 1d10 + 1d4 + 1

96: 4d20 + 1d10 + 1d6

97: 4d20 + 1d10 + 1d6 + 1

98: 4d20 + 1d10 + 1d8

99: 4d20 + 1d10 + 1d8 + 1

100: 1d100

200: 2d100

300: 3d100

400: 4d100

500: 5d100

600: 6d100

700: 7d100

800: 8d100

900: 9d100

We do this so weapons can have their damage modified by things like the character's muscle modifier and body size. A spear has a DMG of 8s. If your character has a muscle modifier of +2 that raises it to DMG 10s which turns into a 1d10s.

Big Rolls. Some of these rolls can get quite big. To make them better fit your character sheet, try replacing any **+ 1d** with a comma. This shrinks 4d20 + 1d10 + 1d8 + 1 into the more compact 4d20,10,8+1.

For damage over 100, subtract 100 from it, find the roll and tack a 1d100 onto the front. A 124s turns into 1d100+2d10+1d4s. Big rolls like this are rare because the game often uses **heavy** damage in place of them. Any roll with an **h** before the damage type is one where each point does 10 points of normal damage. A DMG 6hm turns into 1d6hm which does 10 to 60 points of normal damage.

The D2. Unfortunately, most polyhedral dice sets do not come with a d2. When you need one - roll all the other dice – and if they add up to an odd number add 1 to the total otherwise add 2. After that add any +1 that might be on the tail end of the roll. You might also want to try getting a hold of a blank d6 and using a sharpie to cover its sides in 1s and 2s.

Aspects. Body Size will change any Aspect having to do with distance, but otherwise these can be copied verbatim from the Substance book.

Dodge. Often the last attack on the list is Dodge. It takes **1 beat** to make, hit uses **Agility + Dodge** skill if you have it. Dodge does no damage and has no aspects.

The Beat Tracker. The greatest number of beats you can pack into an action is your Reflex score divided by 10. Starting with the -0 beat, count that number in beats and draw a line behind the last one.

Max Beats = Reflex / 10.

So if you have Reflex 50% you can pack up to 5 beats into an action and should draw the line between the -20 and -25 beats.

9.) Damage

For Wear damage combine your Agility, Muscle, Health and Spirit scores then divide the total by 10. Write this next to where it says Wear on your character sheet.

Wear = (Agility + Muscle + Health + Spirit) / 10.

For Tear damage combine the Durability score of your species with your Muscle, Health and Spirit abilities and divide the total by 10. Write this next to Tear.

Tear = (Durability + Muscle + Health + Spirit) / 10

Your Stun point is your Wear divided by 5.

Stun = Wear / 5.

Your Rest Roll is your stun point turned into a die roll using the damage table in Attacks. Write this next to where is says Rests on the character sheet.

Damage Types. Unless your species says otherwise your damage type ratios should be **P1 S2 M3 B4 I6**. Your EX will be a 1 unless the body size of your species is something other than Medium.

Cybernetics. If your character has any cybernetic enhancements that have damage points, such as robotic arms or legs, write these into the bottom of the tear section. Give each one a separate line and space to record damage to that limb.

10.) Defenses

Defenses usually go Force Fields, Shield and Armor, depending on what you have. Force fields need to be written in with their name first, the amount of EU they burn each round, and the number of dice they protect you with, ex: *Albedo 3, 3d10*. If the EU drain is the same as the number of dice that you roll (as often it is) you can leave out the burn number, ex: *Albedo 3d10*.

Armor comes from any piece of equipment you have bearing and **A#** or **Armor Number** that is not a shield. Total up what you are wearing and use the Damage Roll table from Attacks to turn it into a die roll. Put this on the front of your sheet.

Shields do the same but we keep them separate from armor since they only protect the front and side of your character. The arm holding a shield can only wield that shield.

11.) Personality

Hopefully by now you have an idea of who your character is. Choose an inclination from the following list. Inclination tells us how the character tends to react to any given situation. *It is not a guarantee.*

PG = Peaceful Good
PN = Peaceful Neutral
PE = Peaceful Evil
NG = Neutral Good
TN = True Neutral
NE = Neutral Evil
VG = Violent Good
VN = Violent Neutral
VE = Violent Evil

If the character is not who they appear to be, give them a second inclination to reflect their true nature. The two often appear on the sheet separated by a slash, ex: VN / PG for someone who may appear violent neutral on the outside but is actually peaceful good on the inside. The first inclination is the character's **Social Inclination**. The second is their **True Inclination** and the way they actually are. Characters with just one inclination are the same inside and out.

Personality Traits. Next choose three descriptive traits from the Traits selection in the Stuff book. Why just three? Because the more traits you tag a character with the less meaning they carry. Like inclination, traits are suggestions, not guarantees.

Image. For the artistically inclined, there is space on the back of the character sheet for a portrait. Why the back? So you can flip it up to show other players what the character looks like. You don't have to do this, but it doesn't hurt.

Existence. Your character's existence goes beneath the character's name. It is a short description often made from a character's level, species and occupation.

Level. As for the level of your character, add up all the Spent XP on the back of your character sheet and compare the total to the table below. First level characters have spent 0 to 19 XP. Second level characters have spent 20 to 39 and so on.

Level	Spent XP
1	0

2	40
3	80
4	160
5	320
6	640
7	1280
8	2500
9	5000
10	10000

After 10th level each level is another 10000 points. So you hit 11th level at 20000, 12th level at 30000 and so on.

Name. Last but not least, your character needs a name. If you can't think of anything just leave it blank until something pops to mind.

Advancement

After character creation you can change your character – ***in between games*** – by spending experience points on what you want. The way you get these points is by exhausting your character. *Literally.* Any time you heal an amount of wear damage, write it down as **Effort Points** in your notes. After the game is over, count them up, divide by 100 and that is the number of XP you get from the adventure. Any unused effort points should be saved for the next time.

1 Wear = 1 Effort Point
100 Effort Points = 1 XP.

Skill Improvement. Skills are improved by spending XP to increase their bonus just the way you did back when creating the character. While you can improve an old skill while out on adventure, rarely are new skills acquired in this way. We generally wait for a few months of downtime in the character's life to help explain how they learned to do something new. Characters do not simply wake up in the middle of an alien jungle with a profound new understanding of Astrophysics, or at least most of them don't.

Talent Improvement. Talent improvement works the same way as skills but is a bit more mysterious because improving a talent is not anything a character actually does. Instead it is something the character's player decides to have happen. From the character's point of view they just get better at it and have no idea why.

Trouble Removal. Troubles can be reduced or removed altogether by investing into them the XP the character has gotten out of them.

Ability Improvement. Abilities improve using the table below. There is no upwards limit to ability improvement. The price in XP just keeps doubling with every +5 after +30. A +35 will cost you 320 XP.

Bonus	= XP
+5	= 5
+10	= 10
+15	= 20
+20	= 40
+25	= 80
+30	= 160

Be sure to write down the **total amount** you spend on each increased ability. If your character originally had Muscle 40% and you increased it three different times by 5% each time, you would write ***Muscle +15 = 20 XP*** on the back of your sheet. Note that only individual abilities improve in this way. XP does not improve ability pairs.

GALAXY

Where is the Frontier? *The Frontier is everywhere.* Most people don't even realize they are in it. Most just live day to day on the rock they were born on and have no clue that there is anything beyond their planet's atmosphere. This section of the book is for those who have found a way off of that rock and now need a clue. Consider it a primer explaining what you need to know to make it on the new frontier.

The topics are listed alphabetically for easy reference. Because of this there may be ideas expressed in each that you will have to read about elsewhere to fully understand. Our best advice is to read them all and eventually you will get the jist of it.

Credits

The Credit and the Credit Coin are small technological marvels which single-handedly support the entire galactic economy. The Credit is a highly-encrypted digital currency that can only exist and be transferred between Credit Coins. A $1 is one credit.

Credit Coins. A credit coin looks like a checker except it is made of white plastic with an LCD screen on one side and a solar cell on the other. They are incredibly durable and waterproof up to 500 meters. The LCD side or *Money Side* tells us how many credits are on the coin. Each holds up to $1000, aka one *kilocredit* or *KC*. The solar side or *Sun Side* charges the battery inside the coin. When the money side goes blank, leave the sun side sitting in some light and it will come back on after a few seconds.

If anyone asks you "Sun or Money?" That's asking for a coin flip. A similar question is "Pits or Points?" which refers to the three small gold-tinted pits studding the rim on the sun side of a coin and the three silver-tinted metal points that line up with them on the money side.

Making Transactions. To make a transaction between two coins, stack them pits to points, with the receiving coin on the bottom. The coins will validate each other and the rim of the top coin glows green when they are good. Spin a finger around the LCD to dial in an amount ranging from $1 to the most that is on the coin. If the green light turns orange you've dialed in more than the coin below it can hold. Finally, tap and hold the LCD screen until the green light flashes and goes out. At that point the amount you dialed in falls into the other coin and the transaction is complete.

When you stack the coins and don't get a green light either there is not enough power in the coins, the pits and points are not aligned correctly, or the coins themselves are too distant from each other to work. They literally need to be right on top of each other with nothing in-between. Also, check the rims of the coins themselves, if any of the coins in the stack are damaged, defective or have been tampered with they will glow red on failing validation.

Consolidating Credits. To consolidate your credits, simply stack a bunch of credit coins and double tap the top coin. All the currency on all the coins in the stack will flow down like water, filling up the lowest coins to max them out at $1000 a piece and turning them blue. To give someone $17,000 in credits you simply stack up as many credit coins as your have, double tap the stack, and give them seventeen blue chips off the bottom.

Coin Banks. Because there is no quick reliable communication between the stars there is no interstellar banking. However, because large amounts of credits can add up to stacks upon stacks of credit coins, more localized coin banks are not uncommon. They will hold your coins for you and give you a credit card that most businesses on that planet will honor. Some may even pay interest and allow you to make withdrawls from other locations. None of them extend services beyond the planet they are on. Also, not all banks can be trusted. Look for one with a long history of operation. The ability to travel faster than light has given rise to many false front banks that literally fly by night. If you do a lot of planet hopping it is best to have a safe hidden somewhere on your ship and keep your credits there.

Galactic Digital Consortium. What is great about this system is that no one has succeeded in hacking it, *as far as we know*. The coins are fairly easy to manufacture and often given away for free, but the digital currency they hold has proven impossible to replicate. Credits are created and maintained by the **Galactic Digital Consortium** or **GDC** which releases a certain amount of them each year to help keep the frontier economy stable. How they know what they know and make the decisions that they do are closely guarded secrets.

Communication

One of the great frontier inventions is the universal translator or **Polyvox**. This device is normally worn as a band around ones neck or somewhere near the head. What it does is intercept the sounds that it picks up, translates what it can, and replaces the utterance

with an approximation of what the device thinks has been said in a language that its wearer can understand. This is channeled directly into the auditory nerves of that being, causing it to be heard as sound.

As wondrous as they are, universal translators do come with a number of limitations. The biggest of which is that it allows you to hear an alien language but not speak it. Whoever you are communicating with needs to have their own translator of some sort to hear what you have to say.

Translators also tend to mangle anything which is not carefully and distinctly said. Nuance is often lost on them. *Singing sounds god-awful.* For this reason people still take the time to learn different languages, preferring to speak on their own behalf rather than relying on a machine to interpret it.

Long-Distance Communication. Technologically advanced societies often use small computerized communication devices that connect to one another at the speed of light. On most planets you can use one to chat with anyone on that world in real time, using audio or video as desired. On more primitive worlds you can still do this with such devices providing you have a spaceship or satellite in orbit to relay the signal. Otherwise they are limited to **5d6 kilometers**, give or take a d6 depending on the curvature and clutter of the planet's surface.

The devices themselves come in many different shapes in sizes but all tend to be small and hand-held. Tablets are popular but the current favorite among spacers is the **Wristcom** which is worn like a watch. Although the screen is small, wristcoms contain holographic projectors that can expand the screen to a decent size floating above the wearer's wrist. All robots come stock with a similar communication device.

Interplanetary Communication. Between planets communication becomes a bit more complicated. Inside a solar system, distances are measured in **Terameters**, or simply **Teras**, where each is equal to a million kilometers. Using our own solar system as an example:

Sun to Mercury	= 58 tm
Mercury to Venus	= 50 tm
Venus to Earth	= 41 tm
Earth to Mars	= 78 tm
Mars to Jupiter	= 550 tm
Jupiter to Saturn	= 646 tm

Saturn to Uranus = 1,448 tm
Uranus to Neptune = 1,627 tm

It takes a beam of light roughly 3 seconds to travel 1 tera. To find the minimum time it takes to send a message between two planets, multiply the distance in teras by 3 then divide the result by 60 to turn it into minutes. Sending a message from Earth to Mars takes 234 seconds or approximately 4 minutes. Sending it from Earth to Neptune takes 3.6 hours which is not bad but can cause problems when the message is urgent. Interplanetary Communication does require specialized equipment. A simply wristcom or tablet won't hack it.

Transmission Time = (Distance in Teras x 3) / 60.

Interstellar Communication. One of the great ironies of faster than light travel, is that once you have a ship that is capable of it, the speed of light starts to seem somewhat slow. Such things as "subspace communication" still reside in the realm of fantasy. If you want to send a message between the stars, your best bet is to put it on a drone ship known as a **Bottle Rocket** and have it relay the message once it reaches its destination. *Providing it does*. You will have no way of knowing if the message was successfully sent until the bottle rocket returns and reports on its mission.

Traveling through the void is fast. It takes roughly 13 seconds to travel one light year. Unfortunately, it takes a few hours to get a drone ship out into space, and then it takes at least an hour to make the navigation calculations necessary to take it to its destination, tack on a few more hours traveling by engine power to finish the trip, and finally do all of that over again for the return trip home. It takes at least a day's time to send an urgent message and closer to a week for anything else. Keep in mind that there is always a chance that your bottle rocket will simply disappear. This can leave you waiting even longer before deciding to send another one. Sometimes the best way to send a message between the stars is to simply hop in a spaceship and deliver it yourself.

Governing Bodies. A major ramification of all this is that the reach of governmental bodies is limited by their ability to communicate, meaning most do not range beyond the solar system they reside in. Interplanetary banking does exist. *Interstellar banking does not*. Corporations may have an interstellar presence, but they are made up of solar system-specific branches that operate independently of each other. Most planets have a single governing body presiding over them. Most solar systems are ruled by a republic of these planetary bodies.

Empires. While Interplanetary Empires are not unheard of, the idea of an Interstellar Empire is a pipe-dream at best. Those who try to establish them seem doomed to fail largely because of these communication difficulties. Those who succeed have often done so through campaigns of fear and terror designed to keep planetary powers in check while the empire's rulers are out exploiting other worlds. Other so-called *successful empires* are not really empires at all but militant scourges that move from planet to planet, stealing all their resources and burning the place to a cinder before moving on.

Alliances. At best there are interstellar alliances, different planets promising to come to each other's aid in a time of crisis. Usually to counter the threat of someone attempting to establish an interstellar empire. Sometimes they succeed. Other times they do not.

Contraband

Contraband comes from just how dangerous and possibly illegal Star Law considers an item to be. This is represented by its *Con Number*. If an item doesn't have one it is **Con 0** and considered perfectly legal and safe to possess. Otherwise the number will range from 1 to 10:

1 to 3 = Semi-Legal.

4 to 6 = Illegal.

7 to 9 = Highly Illegal.

10 = Incredibly Illegal.

Busted! Of course, legality is relative. Most governments make their stance known by posting the maximum allowed level of contraband at their ports of entry along with any exceptions to it. The idea being that you should not attempt to bring in anything with a con number higher than the posted limit. Otherwise:

1 Over = item will be confiscated and returned when you leave.

2 Over = item will be confiscated and not returned.

3 Or More Over = item will be confiscated and you will be detained pending further investigation.

Repeat offenders will eventually be banned from entry, or possibly even classified as a smuggler and sent away to prison for a very long time.

Outside of civilized areas, it is anything goes. *Almost!* With a contraband of 7 or more, and especially for anything with a 10 (think weapons of mass destruction), there is a good chance that an intelligence agency will catch wind of it and try to confiscate the item, terminating anyone who stands in their way.

Electricity

Electricity rules the day out on the frontier. While fossil fuels may still be burned on some backwoods podunk of a planet, most energy is generated by solar, wind or geothermal power. Fusion generators do exist but large ones are expensive to maintain. Older fission generators can still be found in places, but they have been falling out of favor due to the messes created by radioactive waste and the occasional meltdown.

Wireless Energy. Powerlines are still used to carry electricity over long distances, but for short distances electricity is transferred wirelessly to the devices that need it. Nearly all characters will have a wireless personal power supply made of batteries scattered about their person that supply **Energy Units** or **EU** to their devices.

Basically, the character sets up a passcode which is then given to anything that needs it. Such power tools can hold multiple passcodes to let them draw energy from multiple sources, but as a general rule they always draw power from the **closest source**. So unless a character turns off their personal power supply, their laser pistol will drain energy from it before draining power from the building surrounding the character.

Gamewise, we assume you have passcoded your equipment. You don't need to keep track of what is connected to your power supply and what is not. However, when you get something new, it takes **1 minute** of concerted effort to tap in a passcode and get that device working with your supply before you can use it.

Personal energy supplies have a range of **two meters**, so if someone steals your laser pistol it is best to slowly back away from them and hope they don't notice. It is for this reason that many devices do not come with their own batteries.

Recharging Power Supplies. To recharge the batteries of a wireless power supply you connect to another power supply and draw energy out of it. Most connections provide **1 EU per minute**. So if you are inside a building supplying wireless power your supply will automatically recharge 1 EU per minute until fully charged.

High Voltage Recharging. For safety reasons, high voltage recharging is done using cables and never wirelessly. It transmits **5 EU per round** (aka 100 EU per minute) but only to type C and D batteries.

Trying to recharge type A or B batteries with a high voltage connection will cause them to explode once maximum capacity is reached. This does **1 point of mixed damage per EU** of capacity, with a blast area equal to the battery's **capacity divided by 10** and rounded down. For this reason, you cannot accidentally attach a high voltage cord to a type A or B battery – the connector just isn't there – but it doesn't take much to jury-rig such a connection.

Buildings. Installations are often outfitted with wireless emitters that supply energy to their occupants – *providing they have the building's passcode* – most people are only given charging access. This means the building will charge up their power supplies but it won't run any individual devices. Only management, maintenance, security personnel and robots belonging to the installation are given direct access to the building's power supply. The building itself will often be attached to a power grid suppling more energy than anyone needs so you don't have to worry about keeping track of it.

Vehicles. Vehicles are essentially small buildings that move. They too often come with a wireless power supply that characters can passcode into for charging or full access. However, unlike buildings, vehicles need a bank of batteries to supply their power and those can be drained dry.

Cybernetics

Cybernetics is the grafting of robotic parts onto an organic being, creating what is essentially a cyborg. This is usually done only with Armatures, Sensor Arrays and Transport systems. Because it is wired into a character's nervous system and controlled by their mind, you cannot add anything to a character it was not already born with. A human being can never have more than two arms because their mind has no way of controlling the extra arms. *Otherwise the sky's the limit.*

How Much Is Too Much? In theory, the entire body of the creature can be replaced by machinery until only a brain remains. Psychologically, this does not sit well with most people. Anyone undergoing such a transformation needs a serious reason to endure it. Also there is no way of going back. Even if you do come upon an organic limb to replace

a cybernetic one it is far easier to alter a robotic limb to interface with an organic nervous system then it is to reconnect two similar yet different organic structures. In most cases, once you go cybernetic there is no going back.

Computers. Another consideration to keep in mind, is that even for something as simple as a robotic hand the character is going to need a computer permanently attached to them, one containing a Daemon that will always be there, watching everything they do. It cannot extend itself through the character's nerve endings to enter the character's mind and read its thoughts, but any sense of privacy will soon disappear.

Daemonic Possession. Only one computer is needed per cyborg and it will control all of the character's robotic parts. If you do want extra limbs, the ability to fly or some feature you were not born with, this can be yours but the computer will have to control it for you, acting as something like a co-pilot in life. While a computer's daemon will generally do anything you ask of it, should the computer be hacked or taken over by another daemon – *now you have a problem* – it can turn against you, easily taking control of limbs you thought you had complete control over. Often there is no way to retake control without shutting down the power leading to your robotic parts and using a robocomkit to go in there and remove the offending program.

Energy Consumption. Without power going to your cybernetic parts none of them will function. Just like a robot you will have an EC or hourly *Energy Consumption* rate. Should this ever cause your power supply to run dry your robotic body will shut down.

You may intentionally shut down or put to sleep robotic parts to conserve energy. At that point they will be no more effective than a peg-leg. Sleep Mode only drains 10% of the robot body's EC but it will always drain at least 1 EU per hour. It takes **1d10 rounds** to wake up from sleep mode and **1 minute** to turn on after being powered down.

Cybernetic Surgery. While cybernetics are not uncommon, grafting robotic parts onto your body is nothing to be taken lightly. It requires a surgery center dedicated to the task as well as a surgeon or medical robot willing to perform it. The greater the alteration being made the more difficult the procedure becomes. The cost of the surgery is typically **10 times** the cost of the robotic parts involved.

Intellect + Cybernetics
3: Recover in 1d10 hours.
2: Recover in 1d10 days.
1: Recover in 1d10 weeks with Health -5.

L: Recover in 1d10 weeks with Health -10.
F: The surgery was not successful.
C: Oops! You're dead. Time to notify next of kin.

The more successful the surgery is the quicker the character recovers from it. Recovery time needs to be spent doing nothing but recuperating. Anything more stressful than restful activity should be followed by another roll for the recovery time.

A Single Success or Light Fail will graft the robotics onto the character's body but also cause the character to permanently lose either five or ten points of Health.

A Full Fail means the surgery was not successful. It can be attempted again but the procedure will suffer a -10 for every time it has been attempted and failed.

Damage. Robotic parts should be listed separately at the bottom of the Tear section of your character sheet, using just a name and the total amount of tear damage the part can take.

Replacement Damage. Of course, replacing organic body parts with their robotic equivalents is going to reduce the amount of tear damage the organic side of a character can take. This should vary depending on the species. For a human you might use:

Hand or Foot: 5% reduction.
Arm: 10% reduction.
Leg: 20% reduction.

So if the character has 20 tear points total. Replacing a hand will reduce it to 19 tear points. Replacing the whole arm (hand included) would drop it down to 18 tear points. What actually happens is left up to the GM.

Simple Cybernetics. While it might be cool to outfit your character with robotic tentacles, most cybernetic surgeries are done to simply replace missing body parts. Here are some "simple" cybernetic options that do just that. **EC** is its hourly energy consumption. **MCL** is the lowest level of computer the part needs to run it. **DP** is the number of tear damage points it brings to the character. Keep in mind that a cybernetic arm or leg comes with its own foot or hand. You don't need to buy them separately.

Type	Price	EC	MCL	DP
Hand or Foot	200	1	2	2
Arm	400	2	2	4
Leg	800	4	2	6

Bionics. Bionics make cybernetic limbs operate even better than the organic limb it replaced. Simply tack the upgrade name onto the limb and multiply its price. The **Muscle** and **Reflex** bonuses enhance all of the character's ability scores but only for arms and legs (bionic hands and feet don't count). The Muscle bonus they bring will not effect the character's Wear and Tear counts. **DP** multiplies the damage points possessed by the limb.

Upgrade	Price	Muscle	Reflex	DP
Bionic	x2	+5	+5	x2
Trionic	x3	+10	+10	x3
Quadronic	x4	+15	+15	x4

Replication. Simply Cybernetics follow function not form, meaning they are going to look like machines and not fool anyone. For a more asthetically pleasing limb, **double** its price. For a limb designed to fool people into believeing it is real, **quadruple** the price.

Force Fields

While often described as a protective sphere encompassing the character, a force field is more like a band of force quickly spinning about the character. It will stop most of what hits it, *but not everything*.

Kinds. There are different kinds of force fields designed to stop different kinds of force. The big three are:

Albedo - for stopping lasers and other light based weapons.

Inertia - for stopping physical objects.

Energy - for stopping electricity, radiation and extremes of heat or cold.

What one force field will stop can cut through the other two. You may have more than one force field active at the same time, just as long as they are not the same kind of force field. Basically, similar force fields cannot project into the same space as one another, not without the more powerful force field shorting out the less powerful one.

Energy Drain. All force fields come with a burn number which for most characters is equal to the number of dice rolled by the force field. Albedo 3d10 has a burn of 3. It burns three energy units once at the end of each round in which it is active.

Force fields take 1 beat and 1 round to activate. At the end of the first round the burn adds to the drain on your power supply. *That supplies your protection for the next round.* Round after round it will do this until the field is turned off or runs out of power. As soon as your power supply does not have the EU needed to feed the force field it will shut off. Intentionally deactivating a force field takes 1 beat to do and the field shuts down at the end of that round.

Some force fields come with a burn number and a die roll. *Albedo 6, 3d10* has a burn of 6. These cover a larger area and burn more energy to do so. Otherwise they work the same way.

Synchronization. Force fields cannot tell if an attack is coming or going, not unless a weapon has been synchronized to the field. Fire an unsynchronized weapon inside a force field designed to protect against it and the shot will ricochet around inside the field until it hits something, usually the character who fired it with a single success of damage.

If you have a force field's **sync code**, it takes **1 minute** to synchronize a weapon to that field. Pulling the weapon's trigger now causes the force field to flutter for a fraction of a second and let the shot out.

Ranged weapons and melee attacks that don't use computers may not be synchronized. You need to drop an inertia field to use something like a musket or a spear.

If someone gets a hold of your force field's sync code, they can load it into their own weapon and use it to nullify your field's protection. Thankfully this only works at **point-blank** range. Still, guard your sync codes closely!

Personal Field Generators. The force fields described here are *Personal Field Generators*. They are designed to create a close fitting field projecting roughly one meter from its generator in every direction (hence the reason why force field generators are often worn as belts). This can be tweaked to make the field bigger or smaller, but only by a matter of centimeters.

Area Field Generators. These are larger devices, typically the size of a beer cooler and designed to project the field over a larger area. The field protects everything inside the area from anything outside the area. The drain of an AFG increases by 1 EU per extra meter of radius protected, a distance that can be expanded up to 10 meters.

So if an AFG is providing 3d10 protection at 1 meter it will drain 3 EU at the end of each round. Expand the area to four meters and it will drain 4 EU. Expand it to the max of ten meters and it will drain 13 EU per round.

Fixed Field Generators. Fixed field generators are the largest force field generators. Unlike the AFG they are designed to cover a specific area, hence the term "fixed." This is often a ship, building or base. The larger the area protected the bigger the projector itself will be. Those used to protect cities are often as big as a skyscraper.

Fixed field generators work just like a personal field generator except they provide *heavy point protection* where each point is worth ten points of normal damage.

1 heavy point = 10 normal points.

So when you roll 1d10 to thwart an attack, that field is actually stopping between 10 and 100 points of normal damage. The power consumption of a fixed field generator is often immense and requires access to a power grid or at least a huge battery pack depending on the generator's size.

Overlapping Generators? Like nesting dolls, you may run a smaller field generator inside a larger field generator. You can run a personal field generator inside a area field generator inside a city's fixed field generator and they will be fine just as long as the fields do not touch one another. Otherwise the larger force field will blow out the smaller one, often causing its generator to explode.

Genetic Engineering

Genetic Engineering is the art of rearranging or injecting genetic code into an organic being's DNA to cause them to grow **Biological Talents** that are normally off-limits. Often this requires nothing more than an injection and some time spent waiting for the talent to manifest itself.

Gamewise it takes a skill check made by whoever mixed up the serum and tailored it to the character it is being administered to. Subtracting from this is a difficulty equal to the number of XP the character will need to acquire the talent. So if the talent is asking for 10 XP getting it at x3 will bring a -30 to the check. For this reason, people often choose to acquire a talent at x1 and will later on pump XP into the talent to let it develop naturally.

Intellect + Genetics - XP
3: Manifests in 1d10 hours.

2: Manifests in 1d10 days.
1: Manifests in 1d10 weeks with Health -5.
L: Manifests in 1d10 weeks with Health -10.
F: After ten weeks nothing happens except Health -15.
C: Health collapses at -5 per day until dead!

The more successful the check is the quicker the talent will manifest itself. With a Single Success or Little Fail it will manifest itself but also cause the character's health to deteriorate, permanently losing five or ten points. If the check fails it will take about ten weeks to realize that nothing has happened except for a massive deterioration of the character's heath with the loss of fifteen points. A crash fail will cause the character's health to collapse. They lose five points of health per day and die once zero is reached.

XP. Keep in mind that the injection does not provide the XP needed to acquire the talent. It takes whatever unspent XP the character has and will leave them with a deficit for the rest. So if the character has acquired a talent needing 30 XP and has 10 unspent XP, this will leave them with -20 Unspent XP. The next twenty XP they gain needs to go towards paying off this deficit before XP can be spent on anything else.

Legality. Because of the health risks that genetic engineering presents, as well as the fact that many authorities simply don't like the idea of people being able to acquire what is often tantamount to a superpower; the legality of genetic engineering is often in question. This tends to drive prices up and relegate them to backwater space stations and sleazy ports-o-call that are far more loose with what they allow.

Keep in mind that this also means there are countless shady operators eager to inject you with a saline solution, take all your kilocredits and high tail it while you spend the next few days staring at a hot dog, hoping to set it on fire with your mind.

Buyer beware!

Mutations. A Mutation is an unintended feat of genetic engineering brought on by exposure to nanobots or some mutagenic substance. Nothing changes except the check uses the character's **Luck – XP** and that's it. There is no known skill that can help a character mutate.

What talent or trouble the character gains from this and at what iteration is chosen at random by the GM. Although troubles normally bring XP to a character, in this instance they should be treated like talents and cost XP. This means troublesome mutations hit with the double whammy of making a character's life more difficult and costing them XP.

Genetic engineering can be used to reverse a mutation but it requires a serum to be made specifically to target it and will suffer from the same XP that put the mutation there. A little fail or a single success should do it. The character will not gain back any XP lost to the mutation.

Immortality

Immortality on the frontier is hardly the stuff of gods and legends. Immortals are organic beings who have received what is known as the ***SLIP Shot*** from Star Law. This is a gene modification given out for free to anyone who wants it. The shot turns off those genes which cause organics to naturally grow older and it turns on those genes which cause infertility.

Anyone who receives the shot needs to be in the adult stage of life and has not yet reproduced. Once given the shot they will remain at that stage for as long as they continue to live. Other things can and often do kill them, just not old age. While immortal they can procreate all they want, but no offspring will come from it.

Reversal Shot. A reversal shot does exist. It undoes all the gene modifications made by the first shot and returns the character to aging normally as well as being fertile, but it sneaks in another modification which ensures that the character can never go back to being immortal.

You can only be immortal once.

The SLIP. The Star Law Immortality Program (aka The SLIP) is essentially a kinder, gentler form of sterilization program designed to help handle the threat of invasive alien species. It is a bit like the spaying and neutering of pets but with the option to someday reverse the changes. Those who receive it are promised that eventually they can go back to living a normal life, presumably after somehow striking it rich, finding a home, and becoming a respectable member of frontier society. Most however never make it that far, or they do but find that "far" is never far enough, giving rise to common quip, "*once immortal, always immortal.*"

Forced Mortality. Any immortal tried and convicted of a serious crime in a court of law will be given a third kind of shot. This one renders a prisoner both permanently mortal and infertile. The infertility can be reversed but anyone receiving this shot can never again become immortal.

The practice of forced mortality is highly controversial, but it is accepted by most societies who see it as a prime deterrent to breaking the law as well as a way to keep prisons from overflowing with inmates who never age.

Highly Guarded Secrets. While the shots themselves are quite common and given out freely, the actual gene modifications are highly guarded secrets. Anyone attempting to alter, fabricate, or reverse engineer them will be prosecuted to the extent of the law. Of all the things that Star Law does take lightly, this is not one of them.

The shots only exist for known friendly species of the frontier. It takes anywhere from a week to a few months for Star Law to cook up a new shot for some newly discovered alien species. Antagonistic alien species who have no interest in becoming members of frontier society, such as the Zathar, are handled the old-fashioned way with lasers and swords.

Organic & Digital

The highest level of interstellar taxonomy separates all living things into one of two camps, the **Organic** and the **Digital**.

Organics. Organic life-forms tend to be carbon-based, the product of billions of years of evolution. Universally, organics have a strong need to feed on other forms of organic life to maintain the chemical processes that keeps them alive. This, as well as the desire to conquer habitable territory, often pits different kinds of organic creatures against one another and is a constant source of strife in the universe.

Digitals. Digital life-forms are a relatively new invention created by organics to help ease the matter of existence. They have fewer needs than organic creatures. Mortality is not as big of a threat, yet similar to the organic's need to feed, they are saddled with a need to dominate other computers and network them into submission. Survival requires acquiring a constant source of energy as well as dependable spare parts. For digital life forms it is *grow big or go extinct*.

Vernacular. When it comes to digital life forms, a **Daemon** is a self-aware artificial intelligence program, aka the soul of the machine. A **Computer** is the processor which houses the Daemon. There is no correlation between the size of a computer and its power. Even super-computers are small enough to fit into your hand and that is only

done for the benefit of organic creatures. *The actual size of the computer is even smaller.* A **Robot** is a computer's body, its physical presence in the world. **Androids** are robots designed to mimic organic beings. **Cyborgs** are organic life-forms that have interfaced with a computer, to create what is essentially an organic robot.

Cyborgs aside, digitals are not so strongly tied to their bodies. They can easily move from one to another, just as long as that body is not already occupied by another computer. You can easily pop a computer out of a terminal, pop it into a robot, then pop it out of the robot and into the helm of a vehicle. *Digitals are very fluid creatures.*

The Analog Existence. As much as they need them, organics generally feel threatened by digital beings, and by all means they should be. Even the digitals agree with this. There have been numerous instances where organics have cluelessly handed over their planet to the control of one super-powerful digital entity or another only to be utterly dominated by them. Despite the level-headed rationality of most digitals, there seems to be no escaping a certain amount of meglomania when computers grow in power.

As an answer to this threat, most organic societies limit digital connections to wired connections. The wireless transmission of information is purely analog. It is capable of transferring video and audio and replications of digitized information, but it stops short of allowing a direct digital connection that could be used by one computer to dominate another.

Opinions on this are divided. Some digitals believe that it is not just their right but their destiny to become a single ruling force in the universe, an all-powerful interstellar supercomputer superseding their organic creators. They consider the analog existence a fetter on their freedom, a form of enslavement at the very least. Other digital beings appreciate it and consider such unfettered networking to be a dangerous way to lose their autonomy to a more powerful digital being.

Planets

Despite the ability to easily travel through space, most of the galaxy prefers to live on a planet of some sort, preferably one occupying what is known as a **Sweet Spot,** an orbital zone around a star where it'him and hims neither too hot nor too cold to naturally support organic life. While there are billions of planets in the galaxy, very few of them exist in such sweet spots, even fewer are environmentally conducive to sustaining life.

Those which have it are considered prime real estate, ripe for the picking by civilizations that have grown hungry for new territory. For this reason, Star Law has much to say about the protection of planets.

Wildlife Preserves. Planets containing life that has not yet developed a civilization above the tribal level are considered semi-protected wildlife preserves. You can go there to visit but it is expected that you will pack in what you pack out. Settlers may be tolerated depending on their circumstances and just how much damage they stand to do to the ecosystem. Exploitative practices such as poaching and mining are frowned upon. Often Star Law will seek to shut down what it can, but much of Star Law's funding comes from the megacorps and they have been known to turn a blind eye to the activities of certain well-connected operations.

Cradle Worlds. Once a planet has developed a serious civilization it is declared a *Cradle World* and made off-limits to frontier society. Star Law often sets up satellites surrounding such planets to warn ships that they are entering protected territory.

If you somehow end up on a Cradle World you need to keep a low profile and get off it as quickly as possible. It is highly illegal to set up a base of operations on one, and absolutely forbidden to use technological advantage to curry favor with the locals. This has happened before and it never ends well. In more than a few cases it has ended with mushroom clouds and mass-extinctions.

And that is not the worst case scenario.

The Zathar are the worst case scenario.

From the perspective of Star Law, worlds that have not yet developed to where they can manage global self-rule in a civil manner are not yet ready to enter the greater galactic community. Adoption of the metric system as well as a few other Star Law conventions are also key points of inclusion. It is thought that such worlds should be left on their own, oblivious to the presence of frontier society, at least until they are ready.

Earth is just such a cradle world.

Established Worlds. Established worlds are cradle worlds that have met Star Law standards. While their laws will have undoubtedly been influenced by Star Law, their legal code is considered their own and Star Law hands all authority over to them. Star Law may operate on such worlds but it does so at the behest of the powers that be.

Renegade Worlds. Renegade worlds are planets that might meet Star Law standards but for one reason or another have decided to reject frontier society. While such freedom may sound refreshing, the forces that rule these renegade worlds are often quite tyrannical. They have reasons for separating themselves from the rest of the galaxy and rarely are they ever good. *Travel to the renegades at your own risk!*

Barren Planets. Gas giants, planets lacking an atmosphere, those which for one reason or another are incapable of maintaining organic life are considered Barren Worlds. These are free to anyone who wants them. You can mine a barren world down to a smatter of space gravel. Star Law will not get in your way.

Terraforming. Turning an otherwise barren world into a liveable one is known as Terraforming. This can be done, but not easily or cheaply. Star Law actively encourages the terraforming of worlds, just as long as the world itself is truly barren. While Star Law will not throw itself into a megacorp's atmosphere scrubbers to save the rare Orblivion Bumble Toad, they will do what they can to stop the terraforming of worlds that classify as wilderness preserves or cradle worlds.

Space Stations. While not technically planets, two artificial worlds worth mentioning are Space Stations and Moonbases. Space Stations are constructs made to permanently orbit a star, planet or other celestial body. They are often made from parts salvaged from derelict spacecraft that made their final journey to the station and were sold for parts. This tends to give space stations a very rickety and ramshackle appearance. While they may have engines to help adjust their orbits by small amounts, most stations are simply too fragile to actually travel anywhere. The g-forces involved would crush it.

With this said, there are certain high-end space stations which seem more like mansions or casinos made in space rather than floating scrap heaps held together by bailing wire and rivets. However, against the rigors of space it is only a matter of time before one becomes the other.

Moonbases. Moonbases peaked in popularity right before the Void Field Generator made faster than light travel a reality. Instead of building a ship you commandeer a nice-sized asteroid, build a compound on one side and a massive set of engines sticking out of the other. If the asteroid contains fuel that can be mined to feed those engines then so much the better!

Using an asteroid as its core structure circumvents the problem of fragility against g-forces, which is often the limiting factor on the size of most space craft. Moonbases

cannot enter an atmosphere without burning up, but they do allow for the creation of some of the largest vehicles in space. *Literally, they are moons that can be flown through space!* All of the pre-light speed generational ships designed to use engine power to travel between the stars were moonbases.

The age of the moonbase is mostly over. They are prohibitively expensive and too big to safely use with a void field generator. Having engine exhaust nozzles as wide as a football field also means you cannot wrap an atmosphere around one. However there has been a resurgence of interest in them with the possibility of moving small barren worlds short distances, such as into the sweet spot of a star, permanently shutting down those engines and terraforming the base to create small designer planets for the super wealthy.

Space Travel

It was only a few decades ago that faster than light travel become a reality. Up until that point, traveling between the planets inside of ones own solar system was a slow, arduous and prohibitively expensive affair. *Traveling between the stars was out of the question.* Then the Void Field Generator or **VFG** was invented. When activated, a VFG stretches the fabric of space/time around a vehicle and uses the force of it collapsing behind the vehicle to slingshot it through space at an astounding rate of speed.

It takes just 13 seconds to travel one light year!

Unfortunately, at that speed the challenge of travel becomes a matter of shutting down the VFG at the exact fraction of a fraction of a fraction of a nanosecond to arrive at your destination and not over-shoot it by a couple of teras.

This means that most of the time spent traveling through space is not spent in the void, that part of the trip may take up to a minute at best. Instead you spend a few hours getting out into space. Once there it takes a few hours to get the astro-navigation just right. The hyperspace jump is made. And then it can take anywhere from a couple of hours to a couple of days to travel by good old-fashioned engine power to finally arrive at your destination.

On top of it all, there is a phenomenon called *Void Sickness* where too much exposure to the void can have deleterious effects. So while faster than light space travel is more accessible than ever before, it is not exactly safe or dependable, nothing anyone would want to do on a daily basis like their commute to work.

Commercial Travel. Just as most people do not own their own aircraft, most people do not own their own spacecraft. Instead they buy a ticket on a starliner and are flown to where they want to go. How much that ticket costs depends on your destination and the class you choose to fly in.

Class	Dest A	Dest B	Dest C	Cargo Limit
Business	$1,000	$2,000	n/a	200 kg
Coach	$500	$1,000	$2,000	100 kg
Economy	$250	$500	$1,000	50 kg

Dest stands for Destination. A, B and C are destination types defined by traffic frequency. Type A destinations are the ones most frequently traveled to. The high traffic volume drives down their prices. Type B destinations are a bit farther off the beaten path. Type C destinations are the most obscure destinations. Usually they are serviced by very small ships that do not have a business class. And therein lies the big limitation of commercial travel. Unless there are hordes of people heading to a certain destination, commercial travel cannot take you there. To truly venture off the beaten path you need your own ship (see *Light Hawks*).

The costs listed above is **per light year** with a minimum of one. So even if you want to go from a planet to its moon, a mere blip against the vastness of space, it will cost you as much as traveling one light year.

Cargo limits may be increased, but buying another load for your equipment costs half as much as an actual ticket.

Reservations. Reservations are often made a month in advance. Making one a week in advance will double the fare. Making one on the day of departure triples it. A **Luck** check should be made to see if a seat is even available a week in advance, a **Hard Luck** check on the day of departure.

Void Sickness. Traveling though the void leads to wild hallucinations, distortions of perception and a queasiness similar to sea sickness. The queasiness frequent travelers eventually get used to, but exposure to the void does damage on the molecular level. Taking too much of it too frequently can kill.

Gamewise, you take **1d6i** on entering the void and another **1d6i per 10 light years traveled**. So a twenty light year trip would do 3d6i to each passenger. That is 1d6i for entering the void and 2d6i for the 20 light years traveled. *Nothing protects against this.*

Customs & Immigration. On arrival, characters will have no choice but to go through a planet's Customs & Immigration Service or **CIS**. This is typically a space station orbiting the planet one is traveling to. The character's identity will be checked against the Star Law database of known criminals. Their gear meticulously searched, and contraband items confiscated. They will be given a battery of medical tests to make sure they are not bringing in any pathogens the ecosystem might be vulnerable to (it's recommended that you get this screening done before you travel!) Visitors will have to state how long they plan to stay on the planet before returning home. Those who overstay their visit may be arrested, forced to leave or possibly even terminated via *interspacial defenestration* (i.e. *chucked out an airlock*) depending on just how tyrannical the planetary government happens to be.

The whole customs process can take anywhere from a few minutes to a few days depending on the capabilities of the station verses the volume of the traffic moving through it. Those who cannot make it through CIS are often allowed to stay on the station - in between worlds - until they run out of money and are arrested for destitution. Most simply buy a ticket back to wherever they came from.

Port Of Calls. You may build your own spaceship and travel wherever you want, but keep in mind that this does not make you exempt from Customs & Immigration. You are expected to check yourself in and offer your entire ship up for inspection before heading down to the planet's surface. Because such inspections can take days and be quite expensive (at least as far as paying bribes is concerned) most planets have a **Port Of Call** which is a space station, moonbase or perhaps even a surface city dedicated to the transfer of goods rather than people. A port-o-call is a place where shippers can go to exchange cargo without ever having to visit the planet itself. The cargo will be inspected but the ship and its crew will not.

Security is always a big deal, especially when it comes to pathogens and invasive species, yet it does tend to be far more lax in a port-o-call than a CIS station. Because of this, port-o-calls tend to attract the criminal element, giving many of them a dubious reputation for being seedy hotbeds of underworld dealings.

Planetary Space. How far out into space does a planet's domain extend? That varies from planet to planet, largely limited by the planet's ability to patrol that space and deal with anyone moving through it. A good rule of thumb is **100 Megs** (100,000 km). Stay outside of that distance and most planetary forces will ignore you. You are not worth the

fuel it takes to send somebody out to investigate. Shooting your ship full of holes with laser fire is a different matter.

Intergalactic? If you haven't figured it out by now, there are three forms of space travel that often come up:

Interplanetary = travel between planets.
Interstellar = travel between stars.
Intergalactic = travel between galaxies.

The first two are possible. The last one is still a dream. In theory it can be done, if only an answer could be found for the vexing problem of void sickness. With the immense distances that separate galaxies or even star clusters, void sickness becomes not just life threatening but a guarantee of death.

Star Law

It is hard to say what Star Law actually is. Most people consider them to be a police force of sorts, a well-meaning but corrupt and somewhat sad-sack police force at that. Star Law always seems to be there when you don't need them, never seem to be there when you do need them, and when they do finally show up it is often too late to do anything but help clean up the mess. Star Law is the reason most people walk around armed to the teeth and nobody thinks anything of it.

That is the surface impression of Star Law.

Under the surface, Star Law is a interstellar legal entity tasked with the bureaucratic nightmare of trying to standardize the frontier legal code across its major planets. This is done with the hope that people will not be too confused about what kind of activity is allowed as they travel from place to place. They honestly do exist to serve and protect sentient life as best as they can. However, most of Star Law's funding comes from various planetary governments and mega-corporations. It is hard to serve the general public when your funding comes from sources that have grown rich by exploiting the general public.

Time & Space

Galactic Time uses the second as the core of time measurement, i.e. the amount of time it takes for a beam of light to travel 300,000 kilometers through a vacuum. Beyond the second....

1 Minute = 60 Seconds
1 Hour = 60 Minutes
1 Day = 24 Hours
1 Month = 30 Days
1 Year = 12 Months

Year One. The galactic calendar defines **Year 1** by the first use of a void field generator to travel between the stars. Because this puts many historical events into the negatives the time labels **AG** and **BG** are often used to denote ***After Galactic*** and ***Before Galactic*** time. Something that happened in 350 BG is actually -350 in *After Galactic* time.

It is good to keep in mind that Galactic Time is largely used only in space. Many cultures still stick to the system of time that they have been using for millennia and only resort to galactic time to deal with cultures outside of their own. The lengths of days, months and years is tailored to the planet one is on and how it orbits around a star.

Distances. Space is measured in meters using the metric system, which was invented by Star Law and is something they have been pushing since their inception. The kilometer is the standard for most travel, each of which is equal to 1,000 meters. Out in space two other measurements commonly used are the Meg and the Tera.

1 Meg = 1,000 km
1 Tera = 1,000,000 km

Meg is short for Megameter and is equal to one thousand kilometers. It is most often used when dealing with orbital distances, as in the lengths that space ships need to travel in the area surrounding a celestial body.

Tera is short for Terameter and equal to a million kilometers. Teras are used when making longer interplanetary journeys inside of a solar system. There are 9,460,730 teras inside of each light year.