

VEHICLES

Vehicles come with their own kind of character sheet which can range from a page long description to just a handful of stats on an index card. For this section we will be using the Rover, whose sheet looks a bit like this:

ROVER					
TERRAINS	Handling	Speed	Burn	Pilot	INI
Land	-5	60	20	45%	d6
Water	-15	20	30	35%	d6
COMPUTER					
Level 3. Pilot +5, Gunner +5.					
ENERGY 7000:					
HP 40:					
DEFENSES					
Albedo 12, 3d10. Armor 1d10.					
ATTACKS	Hit	DMG	Dir	Aspects	
Laser Cannon	60%	2d10e	RT		
ACCESSORIES					
Robopilot. Robogunner.					
PASSENGERS					
Max: 10. Total Weight: 1000					
CARGO					
5 C Batteries, 50.					
ENCUMBRANCE	Lugging	Trudging	Straining	Stopped	
Weight	2000	4000	6000	8000	
MAINTENANCE CLOCK: III					

Terrains. This tells us what kind of terrain the vehicle can be used with. **Handling** is the modifier used with the *Base Pilot + Skill* of whoever is driving it. **Speed** is the *Cruising Speed* of the vehicle in KPH. **Burn** is the number of Energy Units that it takes to travel 1 hour at cruising speed. **Pilot** is space for the Base Pilot + Skill + Handling score of whoever is driving the vehicle so you don't have to keep adding it up over and over again. **INI** is the initiative die used by the vehicle in combat.

Energy. This is where we keep track of the vehicle's power supply. The number is what it holds. Power drain you track in the space to the right of it. Vehicle crews may link their wireless personal power supplies to a vehicle's power supply (see *Energy in Galaxy*) so that their energy usage (laser fire, force

fields, etc) will draw power directly from the vehicle before draining the character's personal power supply.

HP. All vehicles take **Heavy Point** damage where each HP is worth 10 points of normal damage. So if you hit a Rover with a laser pistol doing 19 points of damage? The first 10 points do 1 HP to the vehicle and the other 9 points do nothing but cosmetic damage. HP damage should be recorded to the right of this number using roman hash marks.

Defenses. This lists the kinds of defenses the vehicle has such as force fields and armor. They work the same way for vehicles that they do for characters.

Attacks. This lists the weapon systems mounted on the vehicle. **Hit** is a modifier that should be used with the *Reflex* + *Gunnery* skill of whoever is firing the weapon. **DMG** is the damage done by a single success. **Dir** is the direction the weapon is facing. **Aspects** is a free-flow area for any aspects the attack has.

Computer. This tells us about the vehicle's onboard computer and any software it possesses.

Accessories. This is a list of other accessories the vehicle possesses. **Robopilot** means the vehicle has the machinery necessary for a computer to pilot the vehicle. **Robogunner** does the same with the vehicle's weapon systems.

Cargo. This is space for keeping track of all the stuff a vehicle has onboard.

Encumbrance. Like a character, a vehicle can only carry so much weight beyond what it was designed to carry. These are the limits in kilograms which will cause the vehicle to slow down and eventually grind to a halt.

Maintenance Clock. Every hour of continuous travel adds 1 hour to the vehicle's maintenance clock. Mark these down using roman hash marks. Every time you add 10 hours to the clock you need to make a malfunction roll (See *Vehicles* in *Rambles*).

Terrains

Terrains are what a vehicle was designed to traverse. Most have just one terrain and it will be quite obvious. Others, such as the Rover, have more. The main terrains used in the game are:

Road	= for driving on paved roads.
Land	= for driving off-road.
Hover	= for floating a few feet above a solid surface.
Water	= for sailing on relatively calm water.
Sea	= for sailing on unstable water.
Sub	= for moving underwater.
Earth	= for digging underground.
Air	= for flying through the air.
Space	= for traveling into space.

Multi-Terrain vehicles should have different stats for each terrain. Just because a vehicle can drive on roads, fly through the air and into space does not mean it performs the same way for each terrain.

Pilot & INI. Driver, Helmsman, Rider, Engineer, Captain – there are countless names for the person who drives a vehicle. Gamewise, we use **Pilot** for all of them and when a character climbs into a vehicle's cockpit the first thing you need to do is find the character's Pilot score.

Pilot = Base Pilot + Skill + Handling

Add the character's Base Pilot score to any skill you have with piloting this kind of vehicle as well as the Handling of the vehicle itself (at the start of the terrain line). On the vehicle sheet write the total as the terrain's Pilot score. The Pilot score also gives us the terrain's INI die using the table below. Any score greater than 100 uses the d12.

100: d12

75: d10

50: d8

25: d6

00: d4

Computer Pilots. Most Free Frontiers vehicles have an onboard computer of some sort. With the *Robopilot* and *Robogunner* upgrades it will be able to use the vehicle like a robotic body. In this case, treat the computer like a character and use the *Computer* rules to find its Pilot and INI die.

Chases

When vehicles race along at breakneck speeds trying to outrun each other, you have a chase on your hands. Before it can begin we need to see if a chase can even happen. The cruising speed of the slower vehicle multiplied by 1.5 needs to be greater than or equal to the speed of the faster vehicle. Otherwise, the faster vehicle is too fast to be caught or avoided.

Slower Vehicle x 1.5 >= Faster Vehicle

Outrun! To outrun an opponent you put the pedal to metal and gun it. Gamewise we make a series of **piloting competitions**. The first to **win three** gets their way. Often this means the pursuit vehicle somehow muscles the pursued vehicle to a stop or the pursued vehicle disappears into the distance.

Stunts. To bring the chase to a quick end, the pursued vehicle may attempt a stunt between piloting checks. This could be jumping a gully or performing a high-speed skid turn, whatever seems available in the area where the chase is taking place.

First the pursued vehicle needs to successfully perform the stunt. Next any pursuit vehicles wishing to stay in the chase need to perform the same stunt. Of course, the crazier the stunt is, the more difficult the check should be.

Pilot – Stunt Crazyiness

S: You remain in the chase.

F: You go skidding to a halt.

C: You crash the vehicle.

Fail & Crash. Failing a stunt roll means the driver chickened out and abandoned the attempt at the last second. Crashing a stunt means the vehicle tried to perform it and crashed. Take the vehicle's total HP, **double it**, turn it into a die roll, and roll it. The vehicle will take that amount of hp damage.

Crash Damage = HP x 2 turned into Die Roll.

The damage taken by those inside the vehicle depends on just how devastating the crash seems to the GM using the following table. **Non-lethal** damage is taken by anyone wearing a seat belt or safety harness. **Semi-Lethal** damage is taken by anyone who does not.

Level	Damage
Soft	1d6
Mild	1d12
Medium	1d20
Heavy	2d20
Serious	3d20
Severe	4d20
Massive	1d100
Devastating	2d100
Oh The Humanity!	3D100

[example]

Slams. Attempting to run your vehicle into another vehicle is a stunt that is resolved with a **Pilot Competition** between the drivers. The winner gets to decide if the collision happens or not. To find the amount of damage done, take a vehicle's Total HP, turn it into a die roll, and that is the damage it does to the other vehicle. Flying vehicles will also take 1d100h in falling damage as they plummet to the ground.

Breaking Up! Any vehicle taking more damage than its HP will break apart. The pilot loses control and the vehicle goes crashing to a halt. The GM should roll damage for each occupant using the crash table above.

Eject! Airborne vehicles that break apart will fall out of the sky. If parachutes are available, each crew member should be given the chance to grab one and eject. Make a Luck Save.

Luck Save

1: You float to safety.

1/2: Complicated landing! Take **1d20s** in damage.

F: Chute fails to open, take **1d100s** in damage.

C: You grabbed someone's backpack by mistake, take **2d100s** in damage.

Combat

When vehicles are bristling with weaponry, **1d12 rounds** of combat can be inserted just after each stunt or in place of a stunt between piloting competition checks. Vehicular combat runs like character combat with a few notable differences.

Miniatures. A big problem with vehicles is that they are designed to travel extremely far and very fast. This makes it hard to accurately depict movement in combat. Most of the time we ignore it. The vehicles are close enough to attack each other and that is good enough.

You may use miniatures, possibly to keep track of who is next to whom as the pack of vehicles races along, but when it comes to actual speeds and distances? You will need a very big table to portray the combat accurately.

Using minatures to show position does help us decide if a weapon can even be used against an opponent. Weapons mounted on the front of a vehicle can only attack someone in front of it. If you don't have minis, remember that an opponent can only be on one side at a time. You cannot attack them with both front and back facing weapons.

Initiative. Every combat round begins with the pilots rolling their vehicle's **INI** die for the terrain they are traversing. Instead of going character by character we go vehicle by vehicle with everyone in that vehicle doing everything they will do for the round at more or less the same time. The highest rolling vehicle attacks first. The lowest roller goes last. When vehicles tie, the vehicles belonging to characters go before any belonging to a creature.

As with character combat, any vehicle **rolling a 1** during the first round of combat where they are under attack has been caught by **surprise**. Neither it nor its occupants can do anything aside from take damage during that round.

Evasive Maneuvers. When a vehicle goes, the first character to act should be the pilot deciding whether to make evasive maneuvers or not, essentially boogieing the vehicle about to make it harder to hit. This is a piloting check that takes the same penalty that the pilot wants anyone targeting the vehicle to take. Flying vehicles max out at -30, the rest are limited to -15. It takes **3 beats** for the pilot to do this.

Pilot – Evasive Maneuvers Penalty

S: Harder to hit. Crew jostled -5.

1/2: Half as hard to hit. Crew jostled -10.

F: Crew jostled -20.

C: Vehicle crashes.

Harder to hit means anyone targetting the vehicle takes that penalty for the rest of the round. Half as hard uses half that penalty. The big problem with evasive maneuvers is that it jostles the crew around, even when they are expecting it. This penalty is taken by anything they try to do. Crash the check and you crash the vehicle, just like a crashed stunt.

[example]

Targeting. You can either target a vehicle or specifically go after something on the outside of it. Shooting a vehicle is a normal hit roll, any damage done will be done to the vehicle. Targeting someone on the outside of the vehicle is just like targeting a character. Even though they are on the vehicle, if you miss your shot misses both the character and the vehicle. Someone who is half in and half out of the vehicle (hanging out a window or sunroof, etc) has partial coverage granted by the vehicle. If you miss your target you miss the vehicle as well.

Attack. The **Hit** on the vehicle sheet should be a modifier rather than a percentage. This is done so it can change depending on who is firing the weapon. Use that character's *Reflex* + *Gunnery* as its base.

DMG is what you roll per success. Any roll with an **h** before its damage type does heavy point damage, each point does 10 points of normal damage.

Dir tells us the direction a mounted weapon is facing. The most common abbreviations are:

F = Fixed Forward

B = Fixed Back

L = Fixed Left

R = Fixed Right

D = Dropped

T = Top Mounted

RT = Rotating Turret

RP = Rotating Pintel

If any of these has a C before it, such as CFF, it is a concealed weapon that takes **1 round** to emerge from its hiding place. Dropped weapons are dropped below the vehicle. A Top mounted weapon is on the roof and fixed to face one direction. TF is a top mounted weapon facing forward.

Defenses. Vehicle defenses work the same way for vehicles as they do for characters. Those die rolls with an **h** attached to them do heavy point defense where each point nullifies 10 points of normal damage.

Customization

You don't build a vehicle from the ground up. Instead you buy a base model and customize it. Base models come with all the amenities you would expect from a vehicle, even cup-holders. Anything listed in this section costs extra.

Weight. The limiting factor with customization is weight. All vehicles come with a **Base Load** which is the most the vehicle can carry before taking a performance hit. When it comes to customization, keep the weight of the stuff you add to a vehicle under its base load.

Vehicles come with a curb weight but this does not count against your load. It is mainly used for figuring out the weight of customizations such as *Vehicle Build*. It is also used to help figure out the total weight of a vehicle (**Curb + Customization + Cargo**) just in case you want to carry a smaller vehicle inside a larger one. When towing a vehicle, **half** its total weight counts against the load of whatever is towing it.

Armor. Armor is protective shielding bolted onto the outside of a vehicle. It works just like character armor, translating into a die roll that subtracts from anything that hits it before hitting the vehicle.

Armor comes in three kinds: Crude, Normal and Refined. *Not all vehicles can be armored!* The base model's Armor stat tells us what it can use. A = Any, C = Crude, N = Normal, R = Refined, and a dash means none. The cost and weight per point is a percentage based on the base model.

Kind	Weight	Price
Crude	6%	5%
Normal	4%	20%
Refined	2%	40%

So a Car has a curb weight of 1500 and a base cost of 20kc. Its Armor is A for Any. Crude armor weighs 90kg and costs 1kc per point. Normal armor weighs 60kg and costs 4kc per point. Refined armor weighs 30kg and costs 8kc per point.

Armor should be translated into a die roll and written into the Defenses section of a vehicle sheet. Ten points of normal armor you would write in as: *Armor 1d10*. Any vehicle with forty points of armor or more may opt to use heavy point armor instead. For example: 40 = 1d4h, 60 = 1d6h, 80 = 1d8h, etc.

Batteries. All vehicles come with a specially made battery pack to give you a decent amount of travel time. You may buy extra batteries to increase the pack's capacity. The cost and weight depends on the battery type.

Type	Price	Energy	Wt
A	1	1	0.1
B	10	10	1
C	100	100	10
D	1,000	1,000	100
E	10,000	10,000	1000

You can run a vehicle using any type of battery, but only types C, D and E can be quickly recharged using a high-voltage connection. Type C batteries are most commonly used in vehicles. Only vehicles with an on-board capacity of less than 100 EU use type B batteries.

Bling. This is decorum, inside and out. It gives you **Charm +5** for every 20% of the base model price that you spend on tricking out your ride. The charm bonus only happens when people know the vehicle is yours. It maxes out at +15. The bonus is lost once the vehicle takes enough damage to become stressed.

Build. Strengthening the build of a vehicle is something its manufacturer does to make it more durable. This cannot be changed after the vehicle has been created. The default build is Normal. HP is increased by a percentage. The weight and price of the build comes from the base model's weight and price.

Build	HP	Weight	Price
Normal	0%	0%	0%
Heavy	+30%	20%	40%
Rugged	+60%	40%	80%
Hard	+90%	60%	120%
Brute	+120%	80%	160%
Tank	+150%	100%	200%

So a Car weighs 1500 kg, costs 20kc and has 18 hp. Turning it into a Heavy vehicle will increase its weight by 300kg, cost by 8kc and increase its hp to 23.

Computers. All vehicles come stock with a tablet computer which is one of the first things people tear out and upgrade. For more, see *Computers* in the *Equipment* list.

Force Fields. Vehicles use *Area Field Generators* to protect themselves. This is essentially the same thing as the *Personal Field Generators* used by characters but with a wider area of coverage. You buy them by the die. Price, weight and drain should all be multiplied by the vehicle's *Force Field Coverage* or FFC.

Force Field	Price	Wt	Drain	Notes
Albedo	\$800	0.5	1 EU per die	
Energy	\$600	0.5	1 EU per die	No plasma jets
Inertia	\$400	0.5	1 EU per die	Handling -10 in air
Sonic	\$200	0.5	1 EU per die	
Atmosphere	\$1000	1	1 EU per hour	
Cloaking	\$5000	1	1 EU per minute	

Force Field Coverage or **FFC** is the minimum number of meters needed to completely cover a vehicle. It is typically measured from the center of the vehicle to its most distant point.

So if you want an Albedo 3d10 force field. The field costs 3 kc, weighs 3 kg and burns 3 EU per round. A vehicle with FFC 4 increases this to 12 kc, 12 kg and burn 12. On your vehicle sheet you would write *Albedo 12, 3d10* with 12 as its burn rate.

Because inertia fields stop air molecules they cannot be used with anything that relies wings and air currents to stay aloft. Air vehicles using anti-grav technology to stay aloft take a -10 handling penalty. For similar reasons, anything using a plasma jet for propulsion (air and space vehicles, most grav vehicles) cannot use an energy field.

Passengers. While you don't customize a vehicle with passengers, it is good to remember that the weight of each person and their gear will count against the weight a vehicle can carry. This includes the pilot! When you don't know a character's weight, allocate 100 kg for the passenger.

Robos. Robos are equipment packages that connect a computer to a vehicle, allowing it to pilot the ship or use its weapons. Robopilot cannot be used with any cycle aside from the Gravcycle, Aircycle and Spacecycle. Robogunner cannot be used with pintel mounted weapons.

Accessory	Weight	Price
Robopilot	+5%	+20%
Robogunner	+5%	+10%

Spare Parts. This is a collection of small yet vital things that often break on this kind of vehicle. Each collection is another chance you get at fixing the vehicle when it breaks down. The weight and price is a percentage of the weight and price of the vehicle's base model.

1 Spare Parts = Weight 1%, Price 5%.

Weapons. Weapons tells us how many kilograms of weaponry a vehicle can have permanently mounted in a certain direction. If a direction is not present in the base model description then no weapons can be mounted in that direction. Cycles can only mount weapons pointing forward and back. The six main directions are:

- F = Forward
- B = Back
- L = Left
- R = Right
- T = Top
- D = Dropped

So the Rover has F10, B10, R12, L12, D12, T12 this means it can have up to 10 kg of weaponry firing forward or back and 12 kg of weapons firing from the sides, top or dropped below itself.

Fixed weapons can swivel side to side a small amount but can only fire in one direction. A fixed forward weapon can only fire ahead of itself. The direction letter goes under **Dir** on the vehicle sheet. Having a fixed mount installed costs \$100 per kg of weapon.

Top mounted weapons need to be given a direction to point in. Under **Dir** on the vehicle sheet put a T and the letter it faces (ex: F, L, R or B). So a TR is a top-mounted weapon facing right. Top mounted weapons cost \$100 per kg of weaponry.

RT stands for *Rotating Turret* and can be used in place of top mounted weapons. The turret can fire in any direction but it requires extra machinery to spin itself around. A turret mount costs \$200 and 5 kg per kilogram of weaponry contained in it.

RP stands for *Rotating Pintel* and is another top-mounted option. It is simply a post the weapon is mounted on. It costs \$10 and 0.5 kg per kilogram of weapon. A pintel mount can fire in any direction, like a turret. The only drawback is that somebody needs to go up there and fire it. *The gunner will not be protected by the vehicle.* Up to 10 points of armor can be put on a pintel mount to protect this person like a shield. Pintel armor costs \$50 and 2 kg per point of armor.

Concealment. Any weapon except a pintel mounted one can be concealed, meaning it pops in and out of the vehicle with the flick of a switch. Put a **C** before the attack's direction letter. A CRT is a concealed rotating turret. Concealment costs \$100 and 5 kg per kilogram of weapon concealed in addition to the cost of the normal mount. Concealment also increases the weapon's contraband number by 1.

Ammo Weight? Position weight is about the size of the weapon moreso than its actual weight. If a weapon uses ammo, the weight of it will not limit how much weaponry can be mounted on a side, but it does add to the load carried by the vehicle.

Linked Weapons. When more than one weapon is mounted facing a certain direction, they can be linked together to form a battery that fires them all at once as if they were one weapon. Weapon links cost \$50 and weighs 1kg per link. Go without them and you will need a separate gunner for each weapon.