

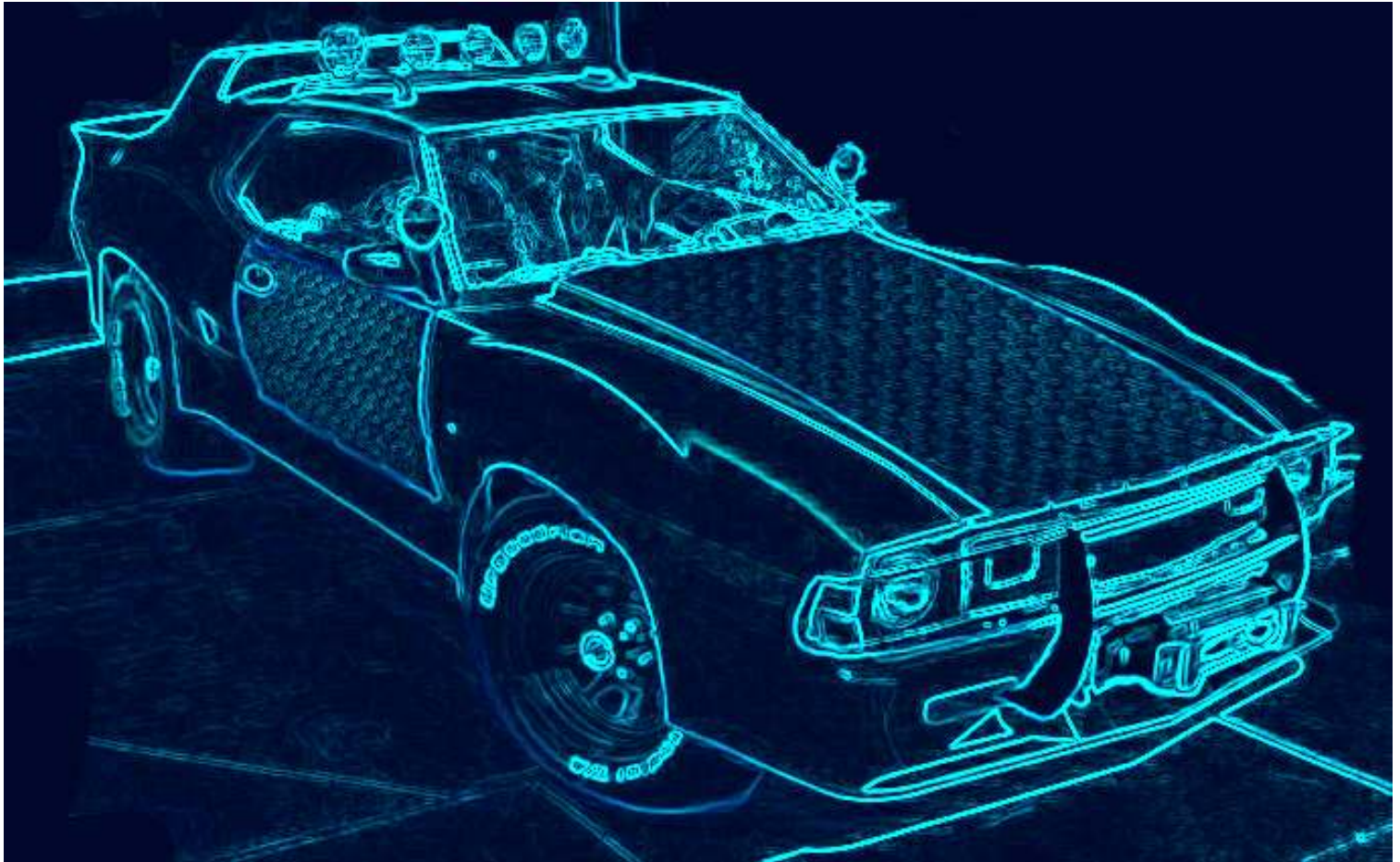
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Presents:

VEHICLES UNLIMITED

Advanced Vehicular Combat and Civilian Land Vehicle Construction Rules For Interlock Unlimited.

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This is just one of many articles for the Interlock Unlimited System you can find on Datafortress 2020, the largest, most comprehensive Cyberpunk 2020 site in the world.
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ADVANCED VEHICULAR COMBAT RULES

These rules were created to make vehicular combat more accurately representative of reality, while still maintaining cinematic style and game fun.

Advanced Vehicle Armor Rules

For most situations and quick combats, the standard SP/SDP rules work just fine. Occasionally however, a character or GM will invest more time in their vehicle(s) or would like to resolve vehicular combat a bit more realistically. So just like the Basic and Advanced hit locations for personal combat, we are providing advanced rules for dealing with a vehicles Armor and Structural Damage Capacity.

LAND VEHICLES

The tires and treads of a vehicle are not included in the vehicles listed SP/SDP rating. They are treated separately due to the nature of their construction and use.

Standard Tires:

Tires are a special case, in that they only work if inflated. The rubber on a tire is actually SP:12, but due to the pressure caused by inflation, the SP: Reduces to 1/3 Vrs All piercing attacks (bullets blades, arrows, nails....) and x2 SP to all impact/bludgeoning damage. The SDP of a standard tire is 2 attacks that deal less than 2 points of SDP damage will cause a slow leak (1d10 minutes), attacks that do more than 2 points of SDP damage will immediately deflate the tire, resulting in a negative modifier to all maneuvers factored by how many wheels the vehicle has:

TIRE/WHEEL LOSS MODIFIER TABLE
1 wheels (Monocycle) -10
2 wheels (Bicycle, Motorcycle) -8
3 wheels (trike, tricycle, 3-wheeled citycar) -6
4 wheels (standard car, truck, van, etc) -4
6 wheels or more -2
If the wheel hit is a maneuver wheel (usually one of the front wheels) then add -3 to the modifier.
If the wheel hit is a redundant wheel, (such as one of the wheels on a multiple wheel axle like a "duelie" truck, divide modifier in half.
Modifiers stack for multiple wheels hit.

Resealing Tires/Drive Flat Tires:

These tires have the same SP and rules associated. These special tires however will allow a tire to take up to 10 points of SDP damage and still be useable. If the tire takes under 10 points of SDP damage it will suffer the standard modifiers for 2 rounds, then it will seal itself and re-inflat via internal foam canister. Cost is x5

Solid Rubber Tires:

Unlike Conventional tires, which are inflated with air, these tires are made from solid rubber. The solid rubber tires have an SP of 30 and an SDP of 50 (half SP/SDP for motorcycle tires, x 2 SP/SDP for heavy truck tires). Unfortunately, while nearly indestructible, the tires are extremely heavy (add's 1/10th to vehicle total weight) and play havoc with the vehicles suspension (-1 to all maneuver rolls). Solid Rubber tires CANNOT be fitted on an off-road vehicle, and in fact the negative modifier triples for using solid rubber tires on a non-paved surface. They are also extremely expensive, cost is times x10.

Treads:

Treads are much more reliable and sturdy than tires, and more maneuverable providing the treads are used for steering as well as propulsion. The SP and SDP of treads are determined by the size and material used.

TREAD SIZE	RUBBER SP/SDP	METAL SP/SDP
Small (Snowmobile)	10/20	20/30
Medium (Car/Truck/ Bobcat)	15/25	30/40
Large (APC/Bulldozer/Small Tank)	25/35	40/50
Very Large (Standard Tank/Crane)	N/A	50/60
Very Heavy (Large Tank/other)	N/A	60/70

Ski's:

Some vehicle, like snowmobiles, use skis to maneuver, skis will typically be made of wood or metal. Wood Skis have an SDP equal to their SP, for Wood Ski's this will be 10/10 for small (snomobile/motorcycle) or 25/25 for Large (Snowcat, Drawn Sled). Metal Skis will have SP:20 SDP:20 for small, and 40/40 for large. Ski's work horribly on anything other than snow/ice/and sand. In fact not only will using them on any other surface result in a -5 to all maneuvers, but if used on a paved surface their SP will be reduced by 1 point every 20 rounds (after which the damage will go straight to SDP at the same rate)

Windows:

Like tires windows have their own SP/SDP ratings. A standard vehicle window will have a 5 SP rating, and the front or back glass will have an SDP of 10.

Armored glass may be purchased, and is rated in 3 stages.

STAGES OF ARMORED GLASS	
Stage 1:	SP:10, if used on side windows can still be rolled up or down. Cost 200 per window Font/Back, 100 per side window (of standard size, significantly smaller or larger windows adjust accordingly)
Stage 2:	SP:15, must pay an extra 300eb to replace the mechanism to roll window up or down, or the window will not be able to be opened. Cost 500 per window Font Back, 250 per side window (of standard size, significantly smaller or larger windows adjust accordingly)
Stage 3:	SP:20 if use on side windows they cannot be rolled up/down under any circumstance, they can however be hinged. Cost 1000 per window Font/Back, 500 per side window (of standard size, significantly smaller or larger windows adjust accordingly)

Engine Compartment:

The engine of a vehicle makes up 2/3rds of the total SDP listed for the vehicle. It is the heart of the vehicle, and as such is the most difficult part to damage. Any shot to the engine compartment that penetrates the SP will go direct to SDP damage. The SDP rating of the engine is to be treated separately from the SDP of the body. Depleting the SPD of either location will render the vehicle inoperable.

The Rest Of The Vehicle:

The rest of the vehicle contains the final third of the vehicles SDP, but due to the nature of vehicle construction this can be spread out quite a bit and be quite difficult to effect. For every ttrack on a part of the vehicle other than the engine compartment that penetrates the SP there is only a 1/6 chance of doing SDP damage to the vehicle. For example you can shoot at the passenger compartment of a vehicle all day, and you might not hit anything that damages the ability of the care to remain motive or

maneuver, but then again you might hit the steering mechanism, or the drive shaft if you get lucky. The SDP of the body is to be treated separately as the SDP of the engine. Depleting the SPD of either location will render the vehicle inoperable.

With a successful Basic Tech roll of 20+ you can aim directly for the essential parts of the vehicle located in the non engine compartments, this increases the chance of doing SDP damage on a successful penetrating attack to 3/6. A basic tech roll of above 25 increases the chances to 5/6, and a roll of 30+ allows you to attack straight to SDP providing you penetrate the SP.

Attacking A Land Vehicle From Beneath:

Unless otherwise noted, most land vehicles aren't very armored on their undercarriage. SP is treated as half for the purposes of doing damage to the vehicles SDP, and the chance of hitting SDP with a successful penetrating attack is 4/6.

SP And Its Relationship To The Vehicle:

The SP of a vehicle is the amount of protection it provides the SDP and does not necessarily protect the driver, passengers or cargo, it is for this reason that it is advised to have an image of the vehicle in question, or at the very least a detailed description. If the vehicle has solid doors, roof, and/or body, it is assumed that the doors will provide the same SP as listed for the vehicle, however for cars/trucks without doors, motorcycles, or soft top/convertibles, it is to be assumed the driver/passengers/cargo are not protected from attacks at angles which would affect those areas.

While the standard is to assume the listed SP covers the entire body of the vehicle, even if the armor is improved. It is also possible to increase the armor to specific locations only, such as

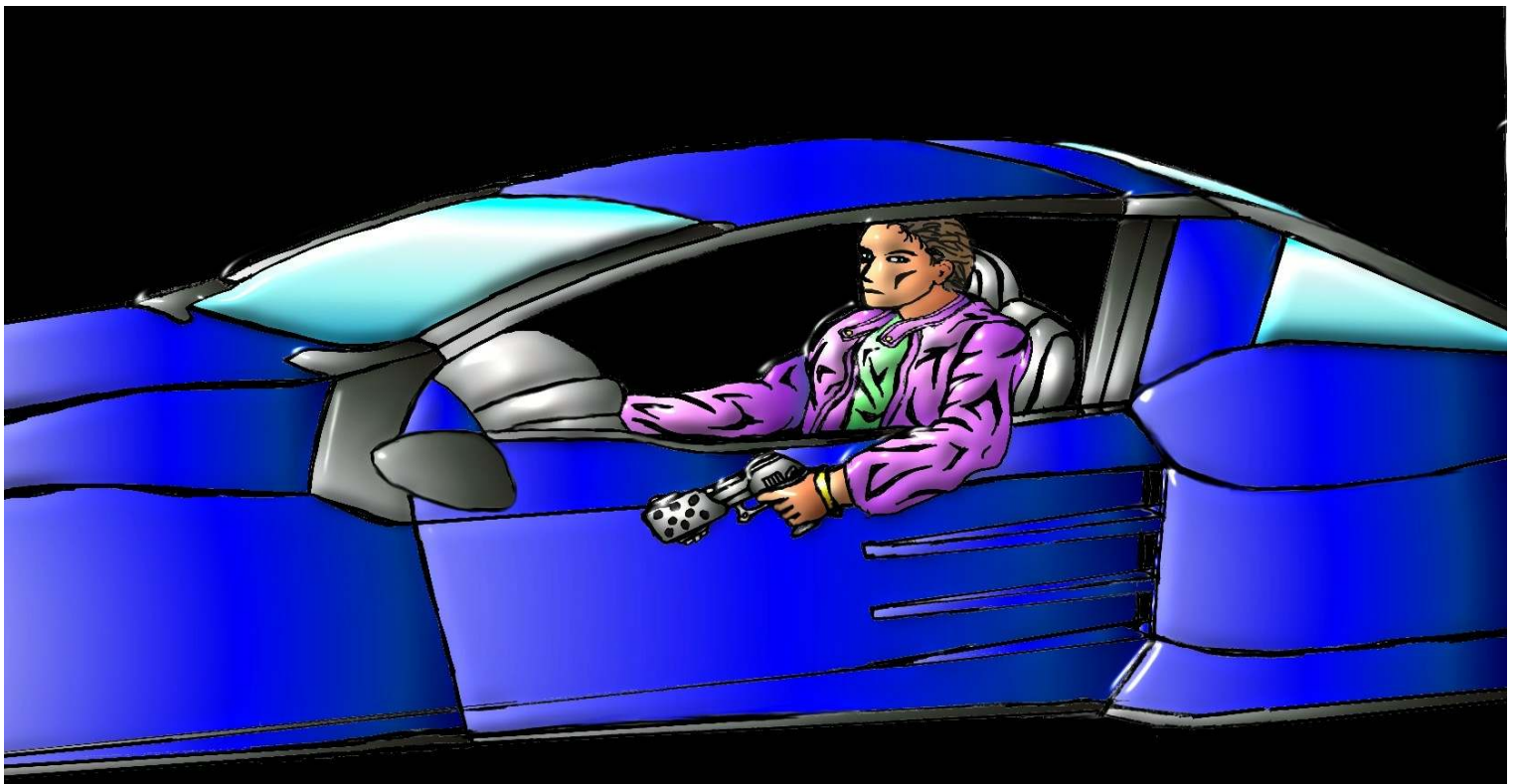
by welding on steel plates to the doors or over the rear wheels. In such situations having an image or a very detailed description is absolutely necessary, as this added protection is location specific and won't protect anything else. It is also possible to remove SP (down to a base of 5 for motorcycles, 10 for cars and trucks, 20 for heavy trucks/machinery) in specific locations to save on weight.

WATERCRAFT

Unlike a land vehicle, penetrating the armor of a Watercraft can have extremely severe reactions, particularly if below the waterline. SP/SDP is handled the same as with a land vehicle (Engine SDP = 2/3rds total vehicle SDP) however a new value must be added as well, BR or Buoyancy Rating. This is the watercrafts ability to stay afloat and it is equal to half it's SDP. Every attack on a vessel below its waterline will reduce points to it's BR. Anytime a vessel takes any damage at all to it's BR, it means the vessel is taking on water and will sink at a rate 1 hour for every point of BR that remains. If the vessel has lost more than half it's BR it will sink at a rate of 1 minute per BR remaining. If the BR is exceeded, it is a catastrophic floatation failure; the vessel will sink in 1d10 rounds.

AIRCRAFT

Unlike Water or Land vehicles, Aircraft operate on a much harsher scale of error, and even minor damage can prove fatally disastrous. While the Engines still house 2/3rds of the listed vehicles SDP, due to weight issues and mechanical complexity, the rest of the vehicle is close to every bit as vulnerable to damage as the engine. Any shot to the wings, tail, or control surface of an aircraft will have a 5/6 chance of doing SDP damage, while hits to the body will have a 3/6 chance.



STANDARD LAND MOTOR VEHICLE CONSTRUCTION

These rules are meant to cover construction, repair, and customization to civilian vehicles. R. Talsorian's Maximum Metal book for Cyberpunk 2020 should be used for Military vehicle construction. Some options will not be available depending on time period and setting.

CHASSIS TYPES

Motorcycle – Moped

Cost: \$30eb Weight: 5kg

The simplest and most inexpensive chassis you can buy.

Motorcycle – Small scooter

Cost: \$50 Weight: 10kg

These are the Vespa type scooters, or similar models.

Motorcycle - Medium Scooter

Cost: \$100eb Weight: 20 kg

A step up from the Vespas, but still small and economical.

Motorcycle – Large Scooter

Cost: \$200 Weight: 40kg

Some have enough speed to legally travel on highways.

Motorcycle – Dirt bike

Cost: \$300 Weight: 30 kg

The bikes used by motocross enthusiasts and off-roaders.

Motorcycle – Road/Chopper

Cost: \$500 Weight: 50kg

Your standard Harley type bike.

Motorcycle – Racing/Performance

Cost: \$700 Weight: 50kg

The Japanese-style racing bike

Motorcycle – Cruiser

Cost: \$900 Weight: 75kg

The very large touring bikes, built for comfort over long distance.

Trike - Small

Cost: \$300 Weight: 60kg

A 3-wheeled ATV

Trike - Medium

Cost: \$500 Weight: 150kg

The front end of a motorcycle, the back end of a small car.

Trike – Large

Cost: \$1000 Weight: 250kg

Usually custom built, the same as above only larger and heavier.

Car – Compact 2-door

Cost: \$1000 Weight: 200kg

Your subcompact/citycar, usually paired with an economy engine.

Car – Compact 4-door

Cost: \$2000 Weight: 300kg

A little more seating room than the 2-door.

Car – Mid Sized 2-door

Cost: \$4000 Weight: 350

The standard chassis for most sport and performance vehicles.

Car – Mid Sized 4-door

Cost: \$6000 Weight: 400kg

The basic sedan or wagon style car.

Car – Large 2-Door

Cost: \$8000 Weight: 450kg

Only the largest sport and performance vehicles use this chassis.

Car – Large 4-door

Cost: \$10,000 Weight: 500KG

The large luxury vehicles make use of this type chassis.

Van – Minivan

Cost: \$8000 Weight: 500kg

Basic family vehicle

Van – Full Sized

Cost: \$10,000 Weight: 600kg

Full sized van, usually used for cargo or luxury.

Truck/SUV – Small

Cost \$6000 Weight: 450kg

Small truck, often equipped with economy or off-road engines.

Truck/SUV – Medium

Cost: \$9000 Weight: 550kg

Your standard truck

Truck/SUV – Large

Cost: \$12,000 Weight: 650

The large trucks, usually made for hauling cargo or towing

Heavy Truck – Small Bus/Cargo

Cost: \$11,000 Weight: 600kg

The classic shuttle bus or small cargo truck

Heavy Truck – Medium Bus/Cargo Van

Cost: \$15,000 Weight: 650kg

A “short” bus or bread truck type vehicle

Heavy Truck – Large Bus

Cost: \$20,000 Weight: 750kg

The full sized school or metro bus.

Heavy Truck – Small Semi

Cost: \$15,000 Weight: 600

A semi usually reserved for local delivery.

Heavy Truck – Medium Semi

Cost: \$20,000 Weight: 700kg

Standard semi, common sight on the roads

Heavy Truck – Heavy Semi

Cost: \$25,000 Weight: 800kg

The super trucks, usually outfitted with sleeper cabins. Used to haul the heaviest cargo. The largest street legal vehicles available. (Dump trucks, Garbage Trucks, Cement Trucks all fall into this category as well.

ENGINE TYPES

A standard vehicle engine has a Top Speed of 100mph (reduced by 5 for every 10 years before 1990)

It can haul an amount equal to its own weight on a trailer.

Its acceleration is 10mph

Its Deceleration is 15mph

Maneuverability is 0

Range is 300 miles (Reduced by 10 for every 10 years before 1990)

Cost is equal to that of chassis

Weight is equal to 25% of chassis

Some engines are purpose built for their proposed tasks:

Economy: -25% Chassis Cost

Sacrifices speed and power for better mileage. Adds 50% to range. -20mph to top speed

Hauling: Equal to Chassis Cost

These engines are geared for high torque, to better haul cargo or similar duties. Allows vehicle to haul x5 it's own weight on a trailer. -25 to top speed -5 to Acceleration

Off-road: Equal to chassis cost

Similarly geared as hauling vehicles, but with greater emphasis on acceleration. Adds +1 to maneuverability -20 to top speed

Performance: +25 percent of chassis cost

Built for maximum acceleration and high-end speed top speed. Adds 50% to top speed and +5mph to Accel.

ENGINE/MECHANICAL OPTIONS:

Higher Top Speed: 10 percent of the cost of both Engine and Chassis for every 10mph increase in speed to a maximum of 100mph. Top speed can be lowered as well for reduced cost equal to \$100 for every 5mph decrease in top speed.

Higher Acceleration: \$500 dollars for every 1mph of Acceleration to a maximum of 125% of base Acceleration. Acceleration can be lowered as well, for every 5mph of acceleration dropped from the basic engine performance you lower the cost of the engine by \$500 dollars to a minimum of 1mph.

Deceleration: Deceleration as standard is equal to 5mph over the acceleration on wheeled vehicles (water and aircraft the Accel/Decel is always equal). On wheeled vehicles the deceleration can be increased to a maximum of x2 the Acceleration at a cost of \$500 dollars for every 5mph increase.

Greater Hauling capability: At a rate of \$200 per 500 pounds, you can increase the amount of cargo or hauling capability of the vehicle. Doing this adds 50lbs of weight for every increment raised.

Front Wheel Drive: Adds +1 to Maneuverability, -5 to top speed -2 to acceleration. (Only available on vehicles with at least 4 wheels) (Standard is rear wheel drive)

4-wheel/all-wheel drive: Adds +2 to maneuverability. Cost is 50% of chassis.

Independent Drive: Adds +4 to maneuverability. Cost is 200% of chassis. Each wheel is separately powered for maximum maneuverability.

Nitrous Oxide Injection: \$350 Gives a 30% boost, rounding down, to speed and acceleration of a vehicle for 5 seconds, usable once, then tanks must be refilled. Multiple tanks can be installed, and used one at a time. This mod is slightly dangerous, any damage that penetrates the area nitrous is stored has a 25% chance of causing the tank to explode for 4d10 explosive damage. Can only be used for high performance vehicles.

Supercharger: \$3000 Can be added to virtually any vehicle and adds 25% to the vehicles top speed and acceleration, extended use damages the engine, for every 10 seconds used there is a 10% chance of engine failure.

Turbo Charger: \$4000 can be added to any vehicle to add 20% to the vehicles top speed and acceleration. Older style turbo chargers created what is known as turbo lag, and thus were slow from the starting position (-10mph first round from a stopped position). However for an additional \$500 dollars the vehicle can be equipped with a new electrically driven turbo to eliminate this problem. Unlike Nitrous or a Supercharger, vehicles equipped with a turbo charger always operate at peak, however they do require high octane clean fuel, and using lower grade fuel, or dirty fuel or oil may result in poor performance and engine damage.

Automatic Transmission: \$200

Without this option, all vehicles operate on a Manual Transmission, requiring the user to manually shift between gears.

Convertible Top:

Sun/Moon Roof: \$50 (ad \$25 if electric)

This provides a small window on the roof of the car, a sun roof is fully removable, while a moon roof typically operates on a hinge or slide system.

T-Top: \$80

Removable roof panels leaving only a center bar running down the roof. The removable panels can be made of metal or glass.

Convertible Roof : \$50 (Cloth) \$200 (Hardtop)

With this option the entire roof is removable. By doubling the cost, the roof retracts electrically (this option drops the cargo capacity by 200 kilograms)

Off-Road Suspension: \$500(Standard lift) \$2000(Monster Lift)

This suspension raises the vehicle, giving it greater ground clearance (1 meter) and provides better shock absorbency.

Hydraulic Suspension: \$500-2000

By spending 500 per axis (Front, Back, Left, Right) the user can raise and lower parts or all of his car, giving greater ground clearance (+2 maneuver over rough terrain, -25% top speed), or lower profile for faster speeds (-2 Maneuver on anything but smooth paved surfaces +25% top speed).

4-Wheel Steering: \$5000

Available only on 4-wheeled vehicles, this option maximizes maneuverability by allowing all the vehicles wheels to turn. Adds +2 Maneuverability.

Alternative Fuel:

Most land vehicles operate on standard fuel, however larger vehicles, or high performance vehicles may operate on Diesel or High Octane fuel.

Diesel: adds 25%, +20% hauling capacity

Bio-diesel: For a 20% reduction in speed, the vehicle will operate on used cooking grease and other bio-diesel sources, usually for free or for a small price from any commercial restaurant.

High Octane: adds 10% fuel cost, adds 10% to top speed

Ethanol : an Alcohol based fuel, prices will vary depending on setting and availability.

Hydrogen: Water based fuel, zero emission. Adds 50% to engine cost. Fuel prices will vary depending on setting and availability.

Electric: 300% engine cost, will drive for 1 hour per battery used (every additional battery takes up 20 kilograms of space) and requires 30 minutes per battery to charge. Electric power reduces vehicles top speed and acceleration by 20%. Hybrid models are available at 200% engine cost, which double a cars effective range and require 4 extra batteries taking up 80kg worth of cargo space. Solar panels may be added to the vehicle, for every meter of solar panel, the car will recharge 1 battery per 2 hours.

Methane/Propane: Reduces top speed by 10%, Highly explosive (10% chance of explosion if vehicle encounters flame). Fuel cost is 50% normal cost.

Extra Fuel Capacity: \$20 for every 10mile increase in range.

Every 20-mile increase in range uses up 10kg of cargo space. Extra fuel tanks can be mounted externally, but every 20 mile increase in range reduces top speed by 20 percent.

Exhaust:

Most vehicles have standard exhaust, however there are 3 exhaust options available:

Performance: \$400 (Adds +5 mph to top speed)

Dual Exhaust: \$200 adds 20 miles to range

Snorkel: Exhaust extends over roof of vehicle, allowing it to operate in water without drowning the engine. Sealed engine is required for any depth of water higher than mid-wheel)

Tires:

Most vehicles come with standard street tires, however there are other types available.

Racing Tires: \$300 per tire, these smooth soft tires add +2 to maneuverability and +10% top speed on flat paved surfaces. They also wear out in half the time (½ SDP). -2 to maneuverability and -20% on any other terrain.

Off-road Tires: Provide +2 to Maneuverability on rough terrain, -2 to maneuverability on paved surfaces.

Monster Tires: (Require Monster Lift Suspension) provide massive off-road capability and increases ground clearance by 1 meter. -4 Maneuverability and is prone to roll over due to increased top-weight.

Structural Reinforcement: \$100 per 5 SDP

By reinforcing the frame of a vehicle you make it tougher, thus safe. SDP can be increased to a maximum of +50% to vehicles base

Body Paneling: 50% chassis (Steel) 30% Chassis (Fiberglass).

The final touch of a vehicle, the body panels, the prices above are standard, however you can have custom bodywork done for double the cost. Steel Bodies provide SP:10, Fiberglass bodies provide SP: 5

Cargo/Extra Passengers: \$5 per 10kg (maxi ½ vehicle weight)

A vehicle engine has enough power to haul half it's own weight in cargo and passengers. For every 10% in cargo weight over this amount exceeded, the vehicles speed and acceleration drop by 5mph. Every 20% in cargo weight over listed results in a -1 to maneuverability.

Internal Storage: \$10 apiece

Glove boxes, center console storage, built in storage compartments in seats, and panel or shelf storage are included with this; cost is \$10 per 10kg storage space. Does not count against cargo capacity, however it may count against passenger space.

Paint: \$300+

A standard paint job costs \$300, however by spending extra money you can have a custom paint job, unique to your vehicle.

Windows: \$50 per half meter

Custom windows double the cost.

Seats: \$75 (single) \$150 (bench)

You can also have options installed with the seats, such as reclining for \$5 (\$10 if electric), folding \$5, seat warmer \$20, massager \$50, etc...

ELECTRONICS:

ENTERTAINMENT SYSTEMS

Radio

Simple Radio:\$20

Exactly what it says, a simple AM/FM radio.

Satellite Radio: \$150 (1998 and beyond only)

Hundreds of stations, but you might have to pay a monthly fee of \$5, in addition to the cost of the unit. On the plus side, like MP3 players these are usually portable and dock/undock from your car mounting, allowing you to take it anywhere.

Media Player: \$50-3000

The actual type of media played will vary depending on the time and setting of the game. For Instance, in today's world, the state of the art media player is the MP3 player, a few years ago it was the CD, before that cassette tapes, and before that 8-tracks. Name Brand units and options also have a great deal to do with the price, but the average popular media player will generally run around \$100. Outdated or abandoned tech media players will be available used for roughly \$10, but finding the media can be pretty difficult, so be prepared to shop at flea markets, swap meets, and online auction sites.

Video Entertainment System: \$50-3000 (television) \$100 (current tech media player, ½ price if outdated technology, x10 price if state of the art)

For time periods from the 1980's and beyond, it is also possible to have televisions, video game systems, and video media players installed in your car. In the 80's this required a large antenna for a television, and channel reception was dodgy at best, but with the advent of satellite links in the 90's, reception has become much better. The size of the video screen will vary depending on amount of available space in vehicle.

Speakers: \$50 - \$400+

Regardless of the type of entertainment system you install, it will need speakers. \$50 will get you the basics, \$400 will get you a good system with fantastic sound and a decent subwoofer. Spend more and you will be louder, though the sound quality probably won't be any better.

COMMUNICATIONS:

Civilian Band Radio: \$50

A must for truckers, drivers, cab services, or anyone who wants to keep in touch on the open road. Range 10 miles.

Police Band Radio: \$75

Like the Civilian Band Radio, only it also sends and receives on police, fire, and other emergency channels. Range 20 Miles

Military Band Radio \$100

Picks up all channels, including military bands, and other restricted channels. Range 50 miles

Signal boosting Antennae: \$50

Doubles range for any radio.

Loudspeaker: \$30

A loudspeaker installed into your vehicle, allows the operator to give public address, sound warnings, holler at girls, or yell at people.

Car Phone: \$200 +service fee

Mostly unnecessary in today's world where everyone has a cellphone, but in the 80's and early 90's these were the pinnacle badge of success and affluence. You still find them today, but really they are nothing more than an attached cellphone.

GPS: \$80

A satellite link and LCD screen provide instant maps, directions, and locations anywhere it can get a signal. Newer models also provide emergency and roadside services and act as part of the vehicles security system, enabling police and other emergency responders to know exactly where your vehicle is. More advanced models are also hooked into the onboard electronics of the vehicles itself, allowing the system providers and police to shut the vehicle down and prevent it from being restarted.

Onboard Computer: \$500 – 5000

In a car these usually consist of a portable laptop that attaches to a docking station built into the glove box, the passenger seat, or the dashboard. In larger vehicles the onboard computer can be a full size workstation, with all the available accessories. (In near future and beyond settings, Cybermodems are also available.)

Satellite Link: \$30 + \$40 month

Different than the link the GPS uses, which is a dedicated system, this satellite link hooks into your vehicles computer or entertainment system to provide internet and feed.

OTHER ELECTRONICS

Digital Display: \$200

Replaces or copies all the instrument panels in your vehicle with a digital readout. (Also includes the options of Compass, Fuel Efficiency Gauge, Estimated Miles Until Empty, Tire Pressure Gauge, etc... for an additional \$5 apiece.)

Heads Up Display: \$500

Using special projectors, that are hooked in to any or all of the cars control gauges and electronics, this system displays all relevant information directly onto the cars windshield.

Onboard Cameras: \$800

Positioned at key locations around the car, and displayed via dashboard monitor (if onboard computer or gps is installed it will be displayed on their viewcreens as an option) to give the operator of the vehicle a full 360 degree range of vision around the car. Primarily useful as a safety measure to avoid accidents when backing up or changing lanes it also serves as a makeshift security system, and features a 2 hour recording storage.

Climate Control: \$25

Provides Heat and Air Conditioning, standard for most cars and trucks. Not available to Cycles or Trikes unless they are an enclosed design.

Electronic Shifter: \$500

Simple touch button switching between gears, used mostly on high end racing vehicles.

SAFETY/SECURITY OPTIONS

Seatbelts:

Most cars and trucks have seatbelts as standard. For cars made before 1960, front and back seatbelts are standard across the waist seatbelts. In cars after 1960 the front seat seatbelts are the three-point variety, with a strap going diagonally across the torso in addition to across the waist. Since 1990, many auto-manufacturers began including three-point seatbelts even in the back seats of vehicles. All seatbelts are equipped with emergency releases.

Across the waist Seatbelts: \$10 per seat

Reduces impact damage to passenger by 10%.

Three-Point Harness: \$20 per seat

Reduces impact damage to passenger by 25%.

Four-Point Racing Harness: \$100 per seat

Reduces impact damage to passenger by 50%. If used in conjunction with helmet tether (\$100 per seat, special helmet required at cost \$400) damage is reduced an additional 10%.

Air-Bags: \$200 per bag

Reduces impact damage to an adult sized passenger (above 5 feet tall) by 25%, passengers below 5 feet tall air bags actually receive 1d6 damage in addition to impact damage. In addition, a deployed air bag doubles the time it takes to exit, or be removed from a vehicle, and may even entangle the passenger, which is why they aren't used in professional racing, emergency, or military vehicles. Front, side and center airbags may be installed, though the passenger can only benefit from one.

Roll Bar: \$200

A roll bar reinforces the frame of a vehicle, preventing the passengers from being crushed in event of a roll over. A roll bar has it's own SDP of 100 to prevent crushing damage and reduces the chance of passengers being trapped in a vehicle.

Fire Control: \$1000eb

In event of fire or crash, the engine and fuel compartments of the vehicle will automatically be filled with fire retardant foam.

Radar/Laser Detector: \$50

This option detects radar and lasers via forward window mounted sensors. An additional unit may be installed in the rear window.

Passive Security System: \$200

A passive security system will sound an alarm, and may shut down the vehicles engine. Anyone touching the car with more than 5 lbs of force, or causing the car to move, will set off the alarm, as will starting the car without disabling the security system. Security is usually activated/deactivated via keychain remote, but chipped ignition/door keys are also available. If GPS is also installed, the owner of the vehicle may contact his service to have the security system activated via satellite link, setting of the alarm and shutting down the engine. Most alarms have keyless entry systems, that unlock the vehicles doors, but this only works if the vehicle has automatic door locks.

Automatic Doorlocks/Windows: \$20

The door locks and windows will lock and unlock, or open and close at the push of a button.

Remote Entry: \$400

This option automatically provides a security system, automatic door locks and windows, but will also allow the owner to open the door via the Keychain Remote, as well as use it to start the car.

Advanced Door Lock: \$100

Using either a card reader, or 4-10 digit keypad, this replaces the key locks on a vehicle for enhanced security. Either option provides its own battery, so if the cars battery dies the owner can still gain access to his vehicle. If the independent batteries die or the circuit fails, the car will not be able to be locked.

Parachute: \$1000

For extremely high speed vehicles, rear drag parachute deployment is available, adding 10mph to deceleration speed.

Self-Sealing Environment: \$2000

This option allows the vehicle to seal itself air-tight at the push of a button, protecting the passengers from airborne contamination.

Independent Air Supply: \$50 per 20 minutes

Air tanks provide breathable air for an hour per \$50 investment, each taking up 10kg of cargo space in the form of drop down or otherwise easily accessible masks.

LUXURY OPTIONS

Accent lighting: \$25

This includes track lighting, neon strips, mini-lamps, and any other type of decorative lighting you can imagine. Installed on the interior or exterior.

Ice Box/Mini Fridge: \$40 (icebox) \$100 (mini-fridge)

Installation of an icebox or mini-fridge takes up 100 kg of space.

Full-Sized Refrigerator/Freezer: \$500

Generally this option is only available in vans, large trucks, or buses. It takes up 500kg of cargo space.

Microwave oven: \$75

Generally this option is only available in vans, large trucks, or buses. Takes Up 50kg of cargo space.

Stove/Oven: \$400

Generally this option is only available in vans, large trucks, or buses: Takes up 300kg of cargo space.

Window Tinting: \$100

Standard window tinting is black, however for an additional 50 dollars other colors can be chosen, or reflective tinting is possible.

Water Pump And Reserve Water Tank: \$50 each

A water pump is required for sinks, showers and toilets. The standard reserve water tank is 25 gallons, however larger tanks may be bought at a rate of \$10 per 5 gallons. The pump takes up 10kg worth of space, and the tank requires space in kg equal to the amount of gallons it holds.

Sink: \$25

Takes up 50kg worth of space.

Toilet: \$50

Takes up 60kg worth of space, can be combined with sink.

Shower: \$20

An external shower is just a shower nozzle or hose attached to the outside of the vehicle. An internal shower requires a full sized stall taking up 500kg worth of space.

Hot Tub: \$2000

Takes up 1000 kg of space

Wet Bar: \$40+

Takes 20 or more kg of space, depending on size of the bar.

Custom Upholstery: Price set by GM determined by setting
Shag carpeting, leather seats, etc...

Glove box security compartment with fingerprint lock: \$200
Lock is Diff 25 to pick.

Bed: \$50 (fold down bunk) \$200 (full sized bed)
Fold down bunks take up 0 space when folded, but require 75 kg of space and weight. Beds require 100 kg of space and weight for a single, 300kg of space and weight for a double.

WORK AND SURVIVAL OPTIONS

Extra-Storage Space:

Cycles:

Saddlebags: \$10-100 per bag

A cycle may attach extra storage space in the form of a pair of compartments on either side above the rear wheel. The bags may be either soft, usually made of cloth or leather, or hard, made of metal or plastics, for an additional 10eb. For every 5kg of storage space (max 25 kg apiece) the cost of a bag is \$10. A third bag may be added behind the seat.

Front Basket/Bag: \$10

A small cage or bag sits on the front of the bike, below the headlight and above the fender. Holds up to 20kg.

Cars and larger:

Hatchback: +10% chassis cost

A hatchback doubles the storage space on any car. This does not increase the amount of weight the vehicle can carry, but does allow for larger items to be stored.

Wagon Back: +20% chassis cost

A wagon back triples the storage space for any car. This does not increase the amount of weight the vehicle can carry, but does allow larger items to be stored.

External Racks. \$40

This does not allow any additional weight to be carried, but it does allow more room for storage by allowing cargo to be tied down to the outside of the vehicle. For every foot off the roof something is stowed, the speed drops by 10mph due to drag.

External Storage Pods: \$50(Small) \$100 (Large)

If the vehicle has an External Rack on the roof, a removable storage case may be attached. This has the benefit of being aerodynamically designed so as not to create drag, dropping the loss of top speed due to drag by half, and it provides protection from precipitation. Small storage pods can hold 50kg, large pods can hold 100kg.

External Storage Bays: \$200-2000

External storage bays do not change the amount of cargo that can be carried, but they do allow the cargo to be organized and safely stowed via mounted external compartments. Most often seen on work trucks and emergency vehicles. Weighs 50kg and holds 200kg for every 200 spent.

Trailers: Cost Varies

Dragging a trailer reduces the maneuverability of a vehicle by 1. For every 2-vehicle lengths longer than the tow vehicle, maneuverability drops by an addition. If the trailer has independent turning reduce this penalty by 1. For every foot taller or wider than the tow vehicle, reduce the top speed and acceleration of the tow vehicle by 10% and the chances of the vehicle flipping on a driving fumble increase by 10% as well

Trailer Hitch: \$20

Allows your vehicle to tow a trailer. 1 kg.

Winch: \$350

Usually added to the front of the vehicle, these motor driven winches have 50 meters of cable and can pull 1000kg. 80kg.

Search Light: \$50

A standard sight on emergency vehicles, this provides high power illumination in any direction. 1 kg.

High Power Lamps: \$30 per lamp

The extremely bright lights you see mounted to the roll bars of trucks. Weigh 1kg each.

Ramming Bar: \$100

Really just an oversized reinforced bumper, it helps minimize damage to your vehicle if you hit something. Provides +15 to impact damage when vehicle hits, or is hit from the front. Weighs 80kg.

Plow: \$2000

Attached to the front of a vehicle, it allows you to use your vehicle to clear snow from the road, hydraulically raises and lowers for times when its not needed, can be used as a cow catcher. Provides +20 to impact damage when vehicle hits, or is hit from the front. Weighs 100kg.

Water Distillation Kit: \$50 (single person) \$150 (4 person)

Cleans and sterilizes water for cooking and drinking. The single person version can distill 1 gallon per day and weighs 5 kg, the 4-person version can distill 10 gallons and weighs 20 kg.

Equipment Mount: Cost of Equipment x1.5

So long as it meets size, weight, and space requirements, virtually any piece of equipment can be mounted to a vehicle.

OTHER OPTIONS

NASTY MODIFICATIONS:

These modifications are simple, usually requiring at the most some scrap metal and a welder.

Spikes: \$10 apiece 1kg

Solid steel pikes, mostly cosmetic, though they are useful to keep vehicles and people away, add 5 points of damage in collision.

Chain Link: 1eb sq. ft.

Often used to replace windshields or attached to body as an easy cargo foundation.

Barbed Wire - \$1 per 5 feet

Often used in strategic places to keep raiders from jumping on your vehicle.

Armored Wheel Covers: \$25-200 10kg apiece

Covers for the real wheels to make them harder to shoot out, price ranges from steel plating to custom built and molded to match your car SP:15.

Plate Steel Armor: \$25 sq. Ft. 10kg per sq. Ft

Simple plate steel welded or hinged to your vehicle for added protection, often used to cover windows SP:20 to specific location.

Cow Catcher: \$600 50% chassis weight

Like a monster crash bar, it juts from the front of your vehicle in a v-shape to push obstacles out of the way. Provides +25 SP to impact damage when vehicle hits, or is hit from the front.

Armor Shutters: \$200

Used to cover flat windows, they retract when not in use. SP:10.

Bladed / Sythe wheel covers: \$20 (per wheel)

Perfect for slicing the tires of other vehicles, or destroying their side paneling, and god help anyone who gets caught in them. The do 1d6 damage + 2 points for every 10 mph the vehicle is traveling and break on a 1 in 6 chance every time they are used if the vehicle is hit on the side.

Cable Cutting Device: \$100eb 60kg

Wires, ropes cables, and fencing are all encountered as obstacles on remote or protected roads, now you can take care of the problem without leaving your car, assuming the cable is accessible by the cutter). The cutter does 3d10 AP damage.

Hard weapon Mount: \$5 5kg

Mounts a weapon to the vehicle in a stationary position, requiring the driver to aim the vehicle rather than the weapon.

Pintle Mount: \$10 10kg

Allows for a mounted weapon to swivel up and down and left right.

Rotating Turret Mount: \$200 100kg

Lets the weapon mount rotate 180 degrees. A motorized ball turret mount is also possible, for \$500 250kg that allows for near 360 rotation of the weapon.

SLICK MODIFICATIONS:

These modifications require a full auto and body shop, unlike the nasty modifications, which are ugly and will generally get you noticed by law enforcement, Slick modifications are professional and will not change the interior or exterior appearance of your vehicle.

Ejector seat: \$14,000 apiece 100kg.

Either a last ditch escape plan, or a not so friendly way to get rid of unwanted passengers. The roof panel is jettisoned just before the seat is fired.

Oil slick ejector: \$50eb 10kg.

Creates a little road hazard for pursuers, Diff + 15 hazard for a 10 meter spread.

Caltrops Ejector: \$80 10kg

A bit more aggressive a diversion, Diff +20 to avoid, failed roll means 1d4 tires take immediate 20 points damage.

Smoke Screen: \$150 10kg

Obscure the vision of pursuers, Diff +12 hazard.

Revolving Number Plates: \$400eb

Your license plates flip at the touch of a switch for when you have to make a clean getaway,.

Concealed Weapon Holsters: \$10-100

Requiring an Awareness with a Diff. 25 to spot (+100eb for every additional point of Diff), these concealed weapon holsters can be placed anywhere on the vehicle there is room. Handgun and knife-sized compartments are \$10 and require 5kg of space. SMG's compartments are \$50 and require 20kg, and rifle sized compartments are \$100 and require 50kg worth of space. Provided there is room, larger compartments can be bought with GM approval.

Retractable Tire Slashers: \$200 5kg per wheel

Do the same thing as the bladed wheel cover, but they retract for concealment.

Retractable Rear Bullet Proof Screen: \$600eb 100kg

An SP:20 sheet of steel plate is hidden below the back window, and raises and lowers for those times you need that extra protection.

Mine Layer: \$5000 100kg

Drops up to 6 mines from under the rear of the vehicle. Mines do 1d0 damage apiece, and will detonate upon impact from anything weighing +400kg.

Strobe: \$50

An installed strobe, either rear or forward facing, that can be triggered via hidden console button. Has the effect of a Flash Grenade.

Concealed Weapon Mounts: \$500-5000

The same as the Nasty weapon mount options in weight and ability, only completely concealed (Diff 25 to Notice) dependent on free space under body panels or interior equal to size of weapon being installed.

Remote Triggered Weapons: \$50

Any weapons hooked up to this system will be fired and controlled electronically from the drivers seat or gunners seat.

Aggressive Security System: \$200 (electricity) \$50 (explosive)

This security system actively fights back against theft or intrusion. With the electricity version, the drivers seat is wired directly to the car batter, if unauthorized persons try to start the vehicle it will trip the switch, sending 4d6 electricity damage to anyone in the drivers seat (as long as person isn't killed, damage will be treated as stun only). The explosive version packs the vehicle with explosives (must be bought separately and adhere to weight and space limitations), and will set the explosives off if anyone breaks into the vehicle or tries to start it without proper authorization. For an additional \$200 your vehicles alarm remote will be equipped with a keypad able to set either system off remotely.

Professional Armoring: x2 chassis cost and 100kg per +10 SP

This is professional armor, the body panels of the vehicle themselves are comprised of the latest armor technology and indistinguishable from normal.

WEIRD MODIFICATIONS

Other options than those listed are available, this is merely a guide to how to implement some of the odder suggestions that might come up.

Panoramic Telescopes: \$200 20kg

Some nomads have there vehicles so covered in armor plating that this is the only way they can get a good look at what's going on around them.

Spiked Tires: \$300

These tires give a +4 to maneuvering and control rolls on ice, for an additional \$600 they can be made retractable)

Remote Control: \$2000 50kg

This allows the user to operate the vehicle remotely.

Amphibious: Chassis+Engine cost x2

When used in conjunction with Self-Sealing Environment and Snorkel exhaust, this modification that seals the engine compartment allows the vehicle to float and propel itself on water via small propellers.

360 Degree Wheel Radius: Chassis cost x 5

This modification requires Independent Wheel Drive, and allows the wheels of the vehicle to turn 360 degrees, even allowing the vehicle to move sideways.

(Created and written by Deric Bernier, all images by Deric Bernier.)

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