GEAR JAMMERS

Version 1.0

Gear Jammers is a system of alternative rules for the Classic Car Wars game by Steve Jackson Games. Think of it as a suped-up version of Car Wars designed for speed - as in *speed-of-play* - as in being backwards compatible yet still hitting all the right beats and playing even faster than the original game.

While it will supply you with what you need to play, this book does not cover everything such as the rules for vehicle design. For this we highly recommend the **Car Wars Compendium** from 1989 which has more in it than you will ever need. Rule sets can be purchased online from **sjgames.com/car-wars** or **drivethrurpg.com**.

Read this rulebook once to get the jist of Gear Jammers. Afterward, you should have no problem playing the game using nothing more than its cheat sheets as a reference at the table.

Dice

Gear Jammers uses six-siders and percentile dice. Any number with a **d** behind it, such as **1d**, is the number of **six-sided** dice you roll. Tacked on modifiers add to the total. A 3d+3 would have you rolling three dice and adding 3 points to the total. There are a number of rolls with minuses like **1d-4**. When these add up to a negative number they stop at zero.

Percentile Dice. Percentile dice are a pair of ten-sided dice where the **d00** has double digits, and the **d10** has single digits. When rolled together they create a number ranging from 1 to 100, also known as a **1d100**.

So if the d00 rolls a 90 and the d10 rolls a 4? That's a 94. When the d00 rolls a 10 and the d10 rolls a 0? That's a 10. When the d00 rolls a 00 and the d10 a 1? That's a 1. When both dice roll nothing but zeroes? That's 100.

With percentile dice you always want to roll low. When given a number to beat you want to **roll that number or less** aka *Rolling Under*. Roll one point above and all hell breaks loose. In the game there are a few rolls that use just the **d00** die. When it rolls a 00 treat this as a 100.

Who Rolls The Dice? Gear Jammers is not a game where everybody sits in a seat with a pile of books and dice and character sheets spread out before them. Often the game is played on ones feet, moving around a table where every square inch has been taken up by a battle arena. Because of this only one player – **the Crash Master** – rolls the dice. *Drivers don't need dice*. They just need to accept what the Crash Master rolls.

If this isn't your style, you can still play with everyone making their own dice rolls, just try not to waste too much time running back and forth between where your vehicle is at and where you last left your dice.

Matters of Scale

Gear Jammers can use cars of any size as long as they are made to the same scale. We highly recommend toy cars with a some crazy glue or candle wax dabbed on a wheel to keep them from rolling around. The two most common scales are 1:160 and 1:64.

1:160 = 1 Inch Scale. Also known as *N-scale*, these are the small plastic cars made popular during the late 80's, 90's and 00's. At just 1-inch long they are easy to use in a small space and similar to the cardboard chits used by Classic Car Wars.

1:64 = 3 Inch Scale. The die-cast toy cars of the 60's, 70's and 80's tend to be about three inches long. They are a lot of fun to play with but require a large surface like a ping-pong table to play on.

Papercraft

Some work is required before you can play, but you'll get out of the game what you put into it. The **Papercraft PDF** is a collection of material that needs to be printed out and assembled. If you don't have a copy you can find one at

www.chameleondream.com/gearjammers

While Vehicle Sheets and Grid Sheets can be used fresh out of the printer, Razors and the game's assorted Chits and Tokens need to be cut free from what they've been printed on. It is highly recommended

that you print the PDF double-sided on heavy-weight paper. Carefully cover chits with packing tape before cutting them to laminate the pieces and make them last longer.

With **Turning Razors** there is a circle with a dot in the center of each one. It is highly recommended that you puncture the dot with a thumbtack and push its point into the eraser of a pencil. This will give your razor a handle, making it easy to pick up and move around.

Razors tend to get knocked about a bit so gluing them to some cardboard before cutting them out is recommended. Non-greasy pizza box is a favorite.

Boom Stick

Your table is also going to need a boom stick. This is essentially a yard stick or dowel marked off with range measurements and hit modifiers. Sharpies work well for permanent, easy to read markings.

1:160. For a 1:160 scale boom stick write **C +40** in its first inch. Draw a line at the **1"** mark and follow it with **S +20.** Draw a line at the **3"** mark and follow it with **M +0**. Draw a line at **10"** mark and follow it with **L -10.** Draw a line at **20"** and follow with **E -20.** Lastly draw a line at **30"** and follow it with **F -30**.

1:64. For a 1:64 scale boom stick start with **C +40**. Draw a line at **3"** and follow it with **S +20**. Draw a line at **9"** and follow it with **M +0**. End with a line at **30"** and an **L -10** after it. While you could flip the stick over and continue drawing on its backside, we find it best to keep a pocket tape measure on hand for attacks that are too long for the boom stick to measure.

Mini-Boom Stick. When playing with 1:160 miniatures, some colored electrical tape can be used to turn the pencil of a razor handle into a mini-boom stick. Most unsharpened pencils are 7" long. Wrap red electrical tape to cover the first inch following the eraser. Then wrap black or some other color tape to cover the next two inches.

The red tape is the C +40 range. The black is the S +20 range. The rest of the pencil is M +0. For any distance beyond that you will need a larger boom stick or measuring tape.

Threshold Tables

Gear Jammers uses many threshold tables like this one which tells us what happens when someone fails a Crash Roll.

000: Nothing.
100: Minor Fishtail.
110: Major Fishtail.
120: Skid Stop.
130: Spin-Out.
150: Flip.
170: Crash & Burn.

Each line number tells us where a threshold begins. The next larger number is where a new threshold takes over. Should the dice roll from 150 to 169 you *Flip* your car. At 170 or more you *Crash & Burn*. Threshold tables can read top-down or bottom-up. To save space, they may even be laid out on their sides like so:

000: Nothing. **100**: Minor Fishtail. **110**: Major Fishtail. **120**: Spin Stop. **130**: Spin-Out. **150**: Flip. **170**: Crash & Burn.

Always Round Down

This is Car Wars. At some point you're going to need a calculator, maybe not during play but definitely when it comes to designing and customizing vehicles. Every now and then the game will leave you with a decimal point. Unless something says otherwise, always ***round down***. Lop off the decimal point. A 3.01, a 3.5 and 3.99 all round down to 3.

Tire – Oil – Sparkplug

Gear Jammers is a competitive game and where you have competition you will inevitably have disputes. Instead of wasting time squabbling about one thing or another, disputes should be settled by a quick round of *Tire-Oil-Sparkplug*, called a ***TOS*** for short.

This is played just like Rock–Paper-Scissors. Players shake their fists three times and toss out one of the following. **Tire** is balled up fist. It will smash a sparkplug but slides on oil. **Oil** is a flat hand, palm down. It will slick a tire but be burned by a sparkplug. **Sparkplug** is your index and middle finger extended forward. A sparkplug will be crushed by the tire but burns up oil.

Whoever wins it gets their way.

With all of that out of the way, the game is ready to begin. The first thing we do is pick our **Crash Master, CM** or ***Master Crash,*** aka the game's referee.

If you haven't run a battle yet, everyone at the table should roll **1d100** with the **lowest** roller becoming your new Crash Master. *Providing that person has played before!* When mixing people who have never played with more experienced players, only the experienced players should roll.

Otherwise the winner of the last battle gets to CM the next battle. This way everyone eventually gets the chance to drive as well as be the game's Crash Master. Typically, Crash Masters do not drive in the battles they preside over, but they can when your number of players is small.

Now the CM should set up the battle area and grid sheet while the rest of the players – aka the **Drivers** - choose vehicles and fill out their sheets.

Arenas

An arena is any walled in area that limits the movement of your vehicles. One of the great things about Gear Jammers is that your arena does not need to be accurate. You do not need to draw it out on graph paper. While there is nothing wrong with spending hours creating an intricately detailed scale model of an actual arena, you can also have a whole lot of fun using nothing more than a kitchen table and a stack of dixie cups laid out to represent side walls and barriers.

Starting Places. Place one Starting Place token per vehicle somewhere in the arena, preferably as far from each other as possible. When the battle is ready to begin, let your drivers roll

1d100. The lowest roller gets to pick where they want to start and the rest follow in suit. Place their minis on the tokens.

Victory! From here the drivers go wherever they want. Like a demolition derby with heavy weapons, the last vehicle to stop moving wins the match!

Race Tracks

You can also run a classic race track with a start/finish line. Just be sure to tell your players that their weapons will be disabled until they have completed a set number of laps around the track. A race that lets everyone start with guns blazing while packed together like sardines rarely makes it past the starting line.

Pole Position. For the vehicle's starting positions, have your drivers roll **1d100**. The lowest roller gets to place their vehicle first, presumably as close to the starting line as possible. The rest follow in suit and the highest roller gets placed last.

Victory! With a race track the winner is the first vehicle to cross the finish line after a set number of laps, or stop moving.

Road Battles

To hold a classic wastelands road battle, try cutting up three to five rectangles of cardboard (4" x 12" for 1:160 or 12" x 36" for 1:64) and laying them end to end to make one long straight stretch of road.

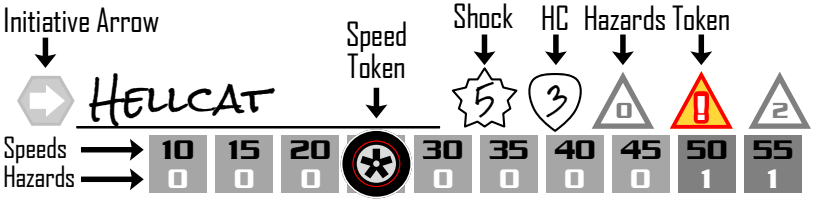
Starting Places. Racing from left to right, pursuit vehicles begin at the far **left** edge of the first length of road. Chased vehicles do the same on the second length. All vehicles begin at the same speed.

End of the Road. Every time a chased vehicle reaches far **right** edge of the road, take a piece from the start of it (far left side) and bring it forward to place in front of that vehicle. Now slide the entire road back so it doesn't fall off the table. Anyone who was on the moved piece of road has been outrun and is out of the game. Any chased vehicle on this section of road has been captured by its pursuers.

Victory! The chased vehicles win when they either outrun or destroy all pursuers. The pursuers win when they take down the last of the chased vehicles.

The Grid

Whatever kind of battle you run, you will need a **Grid** sheet to keep track of it all. This should be laid flat on the table before the CM. Each vehicle will need an entry on it. Put the fastest vehicles at the top of the sheet. When speeds tie have their drivers roll **1d100** and order them from highest roller to low. Write in the vehicle's **Name, Shock** and **Handling Class** under **SK** and **HC** respectively. On the speedometer draw a line to the right of the vehicle's **Top Speed**.



Haz Track. In the triangles next to HC, find the one with the same number as the vehicle's handling class and pencil **borders** around the three triangles which **follow** it. This is the vehicle's **Danger Zone.** Triangles to the left are the **Safe Zone.** Triangles to the right are its **Crash Zone**. Place a hazard token on Hazard Zero.

Speedometer. Below the haz track is the vehicle's speedometer. Black numbers are speeds. White numbers are speed hazards. Place a Speed Token on the game's starting speed. This can be anywhere from 0 to 45 MPH just as long as all vehicles start at the same speed.

Initiative. Basically, each round follows the grid from top to bottom with the fastest vehicle moving first, as in *fastest over-all.* It doesn't matter what speed that vehicle is currently at, just the vehicle's position on the grid. Once the last vehicle has gone the current round recoils and the next round begins.

Arrows. Often it helps to use an arrow token in the space next to the vehicle names to keep track of who is currently going. Slide it from one vehicle to the next as turns are taken. Use the space next to the title of the sheet when the round is recoiling.

Speed. Each vehicle's turn begins with its driver deciding to change speeds or remain the same. Track this by sliding the vehicle's speed token along the speedometer. Every vehicle will need to move **1 Car Length per 10 MPH** of speed. Things like skids, collisions and crashes may change a vehicle's speed while moving but this will not change the number of car lengths the vehicle needs to move that round.

Manuevers. As drivers move their minis about they should sound off anything which is not movement in a straight line, saying something like "turn, turn, drift" as the maneuvers are performed.

As Crash Master, you should listen for this and move the vehicle's hazard token 1 triangle to the right for every point of hazard the vehicle takes, aka **1h**. Most maneuvers will be turns and drifts and worth 1h. Other more dangerous stunts come with multiple hazards or even a die hazard such as **1dh**. *These you roll for.* A 2dh would have you rolling 2 six-siders and the total is the number of hazards you add to its track.

Speed Kills! Any time a vehicle takes a hazard it should also take its **Speed Hazard**. This means that at 50 MPH a drift does 2h instead of 1h. At 75 MPH it does 3h, at 100 MPH it does 4h, and so on.

Danger & Crash! When a vehicle enters the Danger Zone you should warn its driver. When it enters, moves even deeper into, or starts its turn in the Crash Zone make a **Crash Roll** to see what happens. This is explained later on in the *Crashes* section of *Driving*.

Shock! Any time a vehicle takes damage from weapons fire or a collision that is going to shake it up. Shock or **SK** is the amount of damage it takes to cause a **1h**. A vehicle with Shock 5 taking 14 points of damage from a vulcan machine gun would take 2h from the attack. Burst weapons add 1h to this. An anti-tank gun doing the same amount of damage would cause a 3h.

Blow-Outs! When a vehicle loses a tire both **SK** and **HC** decrease by **1** for each missing tire. Erase a triangle from the right side of the danger zone and draw a new one around the hazard to the left of it. After that add an **h2** to the vehicle's haz track. If the vehicle is using a set of tires in place of a single tire, every tire in that set needs to be destroyed for a blow-out to occur.

Recoil. Once all the vehicles have gone, the round ends with a recoil. This is time spent resolving any end-of-round actions such as taking fire damage and rolling for chit removal. On the haz tracks each vehicle should have its token moved left as many hazard points as a vehicle has **HC**. A vehicle with HC 3 will recover 3 hazards.

High Speeds. If none of the vehicles can go faster than 120 MPH you can get by with just one grid sheet, otherwise you'll need a *Grid Extender*. This looks a lot like the normal Grid sheet except its speeds start at 125 MPH. Place it to the right of your grid sheet and slide speed tokens onto it as needed. If the grid starts taking up too much table space, remember you can always use a scissors to cut it down to size.

Vehicles

While you can run special events where only subcompacts or station wagons are allowed, ultimately the great equalizer of all competition is the cost of the vehicles involved, aka its **Division**. Every $1000 is 1 division. Some common divisions and the max cost of the vehicles that can enter it are:

Div 5 = $5,000
Div 10 = $10,000
Div 15 = $15,000
Div 20 = $20,000
Div 25 = $25,000
Div 30 = $30,000

Div 5 is also known as "Amateur Night" and a good starting place for anyone who has never played before. Most arenas will give players some rinky dink death trap to drive providing they are daring enough to get behind the wheel. Otherwise it is left up to the CM to choose a Division. Drivers should seek out a vehicle that spends as much as of it as possible without going over. Even going $1 over will disqualify a vehicle.

Team Competitions. Most arena battles are free-4-alls but Team Competitions are also quite popular. The divisions are higher but the combined cost of a team's vehicles needs to fit under it. So a vehicle team in a Div 40 battle can have any number of vehicles as long as their combined costs add up to $40,000 or less. The team with the last moving vehicle wins the match.

Vehicle Designs. Vehicles are often summed up by a short description called a *Vehicle Design*. Choose one and use it to fill out a Vehicle Sheet.

> ***Hellcat*** *– Muscle Car. Hvy Chassis. Hvy Suspension. Super PP. 4 Solid Tires. Driver. Turret Gunner. 2 Linked MG front. 1 VMG in turret. 1 Fire Extinguisher. Front Ramplate. Armor: F30, R24, L24, B24, T24, U24. ACL 5. TS 100. HC 3. Push 6. Weight: 6,600. Cost: $19,200.*

Vehicle Sheets come with a thin silver line down their center. Fold along this line and you create a half-sheet placing armor and damage points on one side and weapons and ammo on the other. Print this on some heavy-weight paper and it will give you a nice stiff card that you can easily carry around and write on without having to find a place to set it down.

Name. The vehicle's name goes on the line above the vehicle schematic. It can be anything. Many minis have names printed on their undersides, using this is a good way to tie your sheet to a specific miniature.

Prestige. Prestige should be two numbers separated by a slash. *Battles Won / Battles Lost.* New vehicles get 0/0. Vehicles can be repaired so it is not unheard of for a vehicle to lose a battle only to return another day.

Schematic

The schematic is a visual representation of the vehicle. Use the grid to draw boxes representing your vehicle's different components. Draw smaller boxes inside each component to keep track of its *Damage Points* aka **DP**.

Power Plant. Power plants generally go in the front, middle or rear of a vehicle. Use this table to find its DP. Power goes in the circle next to Power Supply. Cycles power plants are also used by Trikes.

Cars	DP	Power	Cycles	DP	Power
Small	5	16	Small	2	8
Medium	8	28	Medium	3	12
Large	10	40	Large	4	16
Super	12	52	Super	5	20
Sport	12	60	Super Trike	6	24
Thundercat	15	134			

Crew. Each crew member needs a box to show us where they are sitting with an arrow pointing in the direction they are facing. Drivers always face forward which is the top of the sheet. Gunners dedicated to a turret are Turret Gunners and should be placed somewhere next to the turret even though technically they are under it. By default all crew members have **6 DP**.

Tires. We don't need to know which tire is a *steel-belted puncture-resistant radial*, just the damage will do. Write it in at the top of the tire. The bottom of the tire is reserved for Fire Points. Put an FP in this space if the tire is fire proof. For DP:

Tire	DP
Standard	4
Heavy-Duty	6
Puncture-Resistant	9
Solid	12

Steel-belting adds 25% to a tire's damage points. Radial Tires increase a vehicle's HC by 1 but reduces each tire's DP by 1 after steel-belting. Off-Road tires gain HC 1 but only when off-road. If your vehicle has armored hubcaps or wheel guards, draw these in as damage points outside the tires they protect.

Ramplates. Likewise, ramplates are drawn a bit before or behind a vehicle rather than inside it. No damage points necessary, the value of a ramplate is always half your front or back armor.

Armor

To the right of the Schematic is where you record your armor stats. Next to each side name put your armor amount as well any abbreviation you need to explain its type. A front side with 25 points of Laser-Reflective armor would be written as *Front 25 LR*.

Metal Armor. With metal armor put an **M** after the metal armor count. For composite armor separate metal and plastic armor with a slash. A vehicle with 5 points of metal and 13 points of armor would have *Front 5 M / 13*.

Damage. The space below the armor count is meant for recording damage with roman hash marks. For metal armor damage simply erase its count and replace it. This will help keep the two damage counts separate.

Fire & Paint. There is a thin silver line in each damage area. Damage goes on the right, and anything else effecting the side goes on the left, primarily fire and paint.

Fire points are written down as a single number. If your armor is fire-proof put an **FP** in this area.

Paint is a hit modifier. Unlike fire points they always start with a minus sign and come in 5 point denominations.

Frame

In Gear Jammers, vehicle frames come with a number of damage points equal to the weight of its body frame **divided by 100**.

Body	DP	Body	DP
Subcompact	10	Camper	23
Compact	13	Sprinter Van	22
Mid-Size	16	Light Cycle	2
Sport Pickup	17	Medium Cycle	3
Sedan	17	Heavy Cycle	3
Muscle Car	19	Light Sidecar	2
Muscle Wagon	19	Heavy Sidecar	3
Luxury	18	Light Trike	3
Station Wagon	18	MediumTrike	5
Pickup	21	Heavy Trike	7
Minivan	19	X-Heavy Trike	9
Van	20		

Multiply this by your vehicle's choice of chassis. If nothing is mentioned it is a Standard chassis.

Chassis	DP Multiplier
Light	0.7
Standard	1.0
Heavy	1.3
Extra-Heavy	1.6

Always round down! A luxury car body weighs 1,800 lbs so a standard frame will have 18 DP. One with a Heavy chassis will have 23 DP. An Extra-Heavy chassis will give it 28 DP. **Carbon-Aluminum** body frames cut these DP amounts in **half**. Write your total next to where is says *Frame* on the sheet.

Frame DP is only damaged by collisions. Eventually weapons and fire will cause it to break down but only long after everything else in the vehicle has been destroyed.

Stats

The top block on the right side of the sheet is for various vehicle stats.

Body. While this should always begin with the name of the body frame the vehicle was built with such as *Compact*, *Luxury* or *Muscle Car*, feel free to embellish it with anything else you want to say about the vehicle. For example: *Muscle Car, Navy Blue '72 Barracuda* for a car made to resemble the iconic Plymouth Barracuda.

HC. This is the vehicle's handling class. Use the HC number in the vehicle design.

ACL. ACL is the speed in MPH that your vehicle can safely accelerate. It is occasionally written as *Accel* in Car Wars descriptions.

TS. TS is short for Top Speed and the fastest the vehicle can go.

The next three stats, Drive, Push and Shock are new to Gear Jammers. You won't find them in Car Wars vehicle descriptions.

Drive. Drive identifies the vehicle's drive wheels. Write down one of the following.

F = Front Wheel Drive
R = Rear Wheel Drive
A = All Wheel Drive.

If you don't know what your vehicle has, choose whatever seems right. Although *All-Wheel Drive* can only be had with an Improved or Heavy suspension.

Push. Push is your ability to push other vehicles around. Multiply your vehicle Weight by a factor determined by your ACL:

ACL 5 = 1
ACL 10 = 1.25
ACL 15 = 1.5
ACL 20 = 1.75
ACL 25 = 2

Next divide by 1,000 and round down. So a vehicle with 6,000 pounds of weight and ACL 10 will have (6000 x 1.25 = 7500 / 1000 = 7.5) a push score of 7.

Shock. Shock is the amount of damage it takes to add 1h to your Haz Track. Find it by adding 1000 lbs for each tire your vehicle has to its weight, divide by 2000 and round down. End up with less than your tire count and your shock value is your tire count.

For a Motorcycle weighing 1000 lbs you would add 2000 for its two tires and divide by 2000 (1000 + 2000 = 3000 / 2000 = 1.5) to get Shock 1, but since it has two tires you get Shock 2.

Cost. This is the cost of the vehicle.

Weight. The vehicle's total weight in pounds.

Date. The date the sheet was filled out.

Weapons

In the schematic, your weapons should sit flush against the side they are mounted on and have an arrow pointing in the direction that they fire. The obvious exception being turrets which are usually drawn in the vehicle's center and can point in any direction. Pintel mounted weapons often use a half-circle instead of an arrow to show their arc of fire. Linked weapons should have lines connecting their component boxes to show that they are linked.

Weapon Stats. In the Weapons table, give each weapon an entry and copy its stats from the table on the following page. If you can't find what you need look to the Car Wars rules, but do realize that we have changed a few things and you should use what Gear Jammers has before resorting to Car Wars stats.

Direction & Name. On the vehicle sheet, there is a small column right at the start of the weapons table. In this should be put an arrow showing the direction of the weapon with the top of the sheet being the front of the vehicle and the bottom of it the back. Use a T for turreted weapons and a P for pintel mounted ones. Next to this put the name of the weapon or its abbreviation if the name is too long. Any weapon using incendiary ammo should include a small **i** before the abbreviation. An *iMML* is an *Incendiary Micro Missile Launcher.*

Hit. Hit is a weapon's percent chance of hitting a target. To convert from Car War's hit scores to Gear Jammer's percentages use the following table.

CW = GJ	CW = GJ
2 = 100%	**8** = 40%
3 = 90%	**9** = 30%
4 = 80%	**10** = 20%
5 = 70%	**11** = 10%
6 = 60%	**12** = 0%
7 = 50%	

DMG. DMG is short for damage. This is the number of dice you roll for a successful hit, same as in Car Wars.

Notes. On the vehicle sheet each line ends with Notes. This is a free-flow area most often used for Effects and Ammo. If a weapon only has a few shots and not many effects then you can keep its ammo in its notes. Otherwise you might want to commandeer the line beneath the weapon in the Weapons table for keeping track of its shots.

Name	Abbv	Hit	DMG	DP	Ammo	Effects
Machine Gun	MG	50%	1d	3	20	A
Vulcan MG	VMG	60%	2d	3	20	A
Autocannon	AC	60%	3d	4	10	A
Gauss Gun	GG	60%	3d	3	10 + 1	A
Paint Gun	PG	50%	1d*-5	3	10	A
Vehicular Shotgun	VS	60%	1d	2	10	MM
Recoilless Rifle	RR	50%	2d	4	10	B2
Anti-Tank Gun	ATG	40%	3d	5	10	B2
Blast Cannon	BC	40%	4d	5	10	B2
Micro Missile L.	MML	40%	1d	2	10	B1
Rocket Launcher	RL	40%	2d	2	10	B2
Light Rocket	LR	40%	1d	1	1	B1, E+10
Medium Rocket	MR	40%	2d	1	1	B2, E+10
Heavy Rocket	HR	40%	3d	1	1	B3, E+10
Light Laser	LL	60%	1d	2	1 pups	A, F6
Medium Laser	ML	60%	2d	2	2 pups	A, F6
Laser	L	60%	3d	2	3 pups	A, F5
Heavy Laser	HL	60%	4d	2	4 pups	A, F4
Twin Laser	TL	60%	2d+6	3	3 pups	A, F5
Light Flame	LFT	60%	1d-2	1	10	A, MS, F5
Flamethrower	FT	60%	1d	2	10	A, MM, F4
HD Flamethrower	HDFT	60%	2d	3	10	A, MM, F3
Mine Dropper	MD	—	2s/1d	2	10	
Spike Dropper	SD	—	1d-1	4	10	
Exploding Spikes	ESD	—	1d+1	4	10	
Oil Jet	OJ	—	1dh	3	25	
Flaming Oil Jet	FOJ	—	1d-2	3	10	1dh, F5
Ice Dropper	ID	—	2dh	3	25	
Paint Sprayer	PS	—	1d*-5	2	25	-30 to hit
Smoke Screen	SS	—	—	4	10	-30 to hit
Fire Extinguisher	FX	—	1d	2	10	All sides
Improved FX	IFX	—	2d	2	10	All sides
Handheld FX	HFX	—	1d	1	3	1 side

Effects. Effects is a collection of various weapon attributes. More on these will be covered in *Combat*.

A = the A stands for Area. This weapon can strafe while turning and hit more than one target but only for half damage.
B# = a burst number. This weapon creates an explosion around its point of impact. The # is its blast radius in car lengths.
E# = extended range. These weapons can strike farther than most. The # is a hit bonus that removes penalties brought on by range.
F# = this attack will set a vehicle on fire any time a damage die rolls its # or better.
M# = max range. These attacks have a limited distance. The # is a letter designating a range. S for Short or M for Medium.

Ammo. For most weapons, ammo is the number of shots it has to fire. **Lasers** feed off of a vehicle's power supply. They don't need ammo space just a ***pups*** or ***Power Units Per Shot*** entry in its notes. This is the amount of energy each shot drains from a vehicle's power supply.

To find a laser's pups, divide its best possible damage roll by **6** and round down to a minimum of 1. The best damage a Twin Laser could do with its 2d+6 is 18 points of damage, 18 / 6 = 3. Each blast drains 3 power units per shot. Targeting lasers do not drain enough power to matter and can be run by gas-burning vehicles with no power supply.

Gauss Guns are not lasers but they do drain 1 pups. They also require ammo, hence the 10 + 1. Run out of either and the gun will stop firing.

Incendiary Ammo using weapons get to add an **F6** effect to their attack. This gives it the ability to start fires. It does not change the damage done by the attack.

Fire Extinguishers. Fire extinguishers use ammo and should be written in as weapons. A blast from a normal fire extinguisher system will put out **1d** worth of fire points on all sides as well as tires. Improved fire extinguishers increase this to **2d**. It's left up to the vehicle's driver to decide which fire points will be put out if not all of them are extinguished. Handheld fire extinguishers can only effect the side a crew member using it can reach. Each HFX takes up 6 grenades worth of space (see *Combat, Hand Weapons*).

Power Supply

Power Supply is the amount of electricity your vehicle has for anything running on power units. It is the combined total of what is in your power plant and any batteries the vehicle possesses. Gas-burning engines have alternators that provide juice for the vehicle's electronics but not enough for anything running on power units.

Total Power. Batteries supply **20** power units per battery. Power Plants supply its **Power Factor divided by 50**. Look to the power plant table back in *Schematic* to find out what you have. Put your vehicle's total power in the circle next to **Power Supply** and record power drain as hash marks in the empty space beside it.

Mileage. Thankfully, most arena battles and many road battles will not last long enough for mileage to matter. However, firing your lasers enough to drain your power supply will cause your electronics to flit out and your vehicle to grind to a halt, losing **5 MPH** per round. Remember, it is the last vehicle still moving that wins the match!

If interested in mileage. Vehicles start with **10 MPU** or **Miles Per Unit** and lose 1 MPU for every 1000 lbs of weight. So a 3,000 lbs vehicle will get (3000 / 1000 = 3 and 10 – 3 = 7) 7 MPU.

Vehicles weighing 10,000 lbs or more switch to **Units Per Mile** or **UPM.** A 10,000 lbs vehicle consumes 2 UPM and this increases by 1 UPM for every 1,000 lbs added to it. A 14,000 lbs vehicle requires 6 power units for each mile it travels.

Streamlining a vehicle reduces its total body weight by **25%** for purposes of mileage.

Extras

Extras is space for anything else you might want to add about the vehicle. Be sure to check out the section on **New Equipment** at the end of this book. It doesn't just include new equipment but also some new modifications of old equipment such as Targeting Computers, Ramplates, and Armored Hubcaps.

DRIVING

Each round is just **1 second** long. While that may not seem like much, a lot can happen in one second while tearing around the asphalt at 100 MPH. In Gear Jammers each vehicle begins their move by adjusting their speed. Next they move their vehicle and attacks can be made at any time while moving.

Often it feels as if Gear Jammers is two games packed into one, a driving game and a skirmish game. If you are just starting out, it would be wise to go a few rounds simply driving around the arena to get a feel for how the driving part of it works before opening fire with your road cannons.

Speed

You can safely increase your speed by as much as your vehicle's ACL until your Top Speed is reached. Speed moves in 5 MPH increments so if you have ACL 15 you can increase by 5, 10 or 15 MPH per turn.

Floor It! Unsafely, you can also increase your speed by putting the pedal to the metal and redlining your vehicle. Doing so risks damaging your power plant.

Exceeding Top Speed = 1d-5 Power Plant Damage

Extra ACL 5 = 1d-4 Power Plant Damage

Extra ACL 10 = 1d-3 Power Plant Damage

Any damage rolled will go straight to your power plant. Kill your engine this way and something under the hood goes *THWANG!*, smoke billows out and your vehicle will decelerate by **5 MPH per round** until it stops, aka it takes a **DCL 5**.

Speed Kills! It's good to remember that speed is dangerous. Starting at 50 MPH the CM will add your Speed Hazard to any hazard your vehicle takes. *Consider yourself warned!*

Braking. When not accelerating your vehicle can safely decelerate **5 or 10 MPH** per round. Slam on the brakes and you can decelerate even faster but this will add hazards to your haz track and may even do some tire damage (see the section on *Tires*).

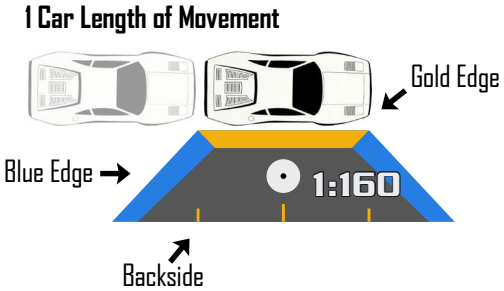
DCL 15 = 1h & LTD Front
DCL 20 = 2h & LTD Front
DCL 25 = 3h & MTD Front LTD Rear
DCL 30 = 4h & MTD Front LTD Rear
DCL 35 = 5h & HTD Front MTD Rear
DCL 40 = 6h & HTD Front MTD Rear

Crawling Forward. Sometimes a vehicle, possibly because of a lost wheel, will have their acceleration reduced to ACL 2.5. The best way to handle this is to let the vehicle accelerate by **5 MPH every other round**. You can still floor it but you need to treat your acceleration as if it were ACL 0. An ACL +5 would give you ACL 5 and ACL +10 would give you ACL 10.

Movement

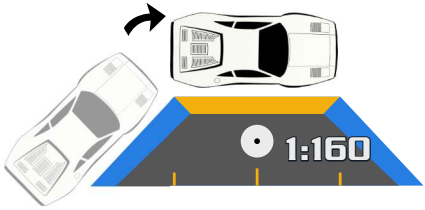
No matter what you are driving, be it motorcycle or tractor-trailer, you need to move **1 Car Length for every 10 MPH** of current speed.

A Car Length is approximately 15 feet. More importantly, it is the gold edge on the **Turning Razor**. Place that edge beside the front bumper of your vehicle and slide your mini forward until its bumper reaches the other end.

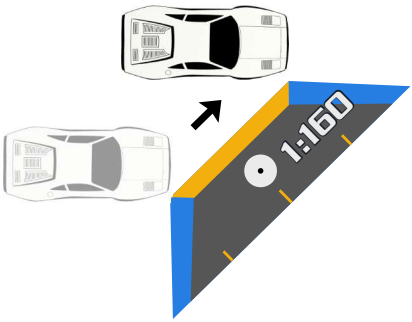


Note that the backside of the razor has been marked with small golden ruler ticks. It is equal to two car lengths, with the ticks themselves splitting it up into half-lengths. Cars don't move half-lengths but this does help when measuring out blast radiuses and such.

Turning. A turn is a **1h** maneuver. Place the razor beside your vehicle on the side you want to turn to. Pivot it at the point where the gold edge touches the bumper. You can turn the razor until its blue edge is flush against the vehicle's side, creating up to a 45° angle. Move your vehicle forward along the golden edge and tell the Crash Master, "Turn."



Drifting. A Drift is what cars do when changing lanes. It is also a **1h** maneuver. Place the razor so that the bottom of the golden edge is touching the front bumper of your car and angling in the direction you want to drift. The blue edge should be parallel to your bumper. Slide the vehicle along the gold edge until the other side is reached and tell the CM, "Drift."



Reverse. Most of driving is just that - Turns and Drifts - more complex maneuvers will be covered later on in *Stunts*. Driving in reverse is no big stunt but it is worth mentioning as **2h** will be added to your haz track at the start of each round you drive in reverse.

Trike Turns. Ever wonder why trikes are even in the game? They're not as stable as a car or as sexy as a motorcycle (or even a wheelbarrow imho), but they do have something the others don't and that is a wheel that can turn 90° without flipping you over. *Most of the time.*

To make a trike turn, start the turn just like any other vehicle, but remove the razor and continue to turn it beyond 45° to a maximum of 90° perpendicular to the trike's original position. Tell the CM, "Trike Turn." It's an **h3** maneuver. Motorcycles can also do this but only when traveling 10 MPH or less.

Conditions

Most professional arenas are paved with smooth surfaces kept immaculately clean. Most Gear Jammer arenas are far from professional, but they are often paved and cleaned between battles of any oil, spikes or mines left behind. Wrecked vehicles may be pulled off or left in place to add atmosphere to the arena.

Off-Roading. Other battles may take place in the great outdoors, bounding over fields and dunes. Unless the vehicle has an Off-Road suspension it will take **ACL -5** to a minimum of 2.5 when attempting to do so.

Slippery Surfaces. Whether off-road or on-road some *Slippery Surfaces* just have no grab to it. These will add the following hazards to any manuever performed while on it. Nothing happens when you drive straight across it.

Lawn, Field, Dirt Road = +1h.
Gravel, Mud, Sand = +2h

If your vehicle has an off-road suspension remove a point of hazard from each. Lawn, Field and Dirt Roads make no difference. Gravel, Mud and Sand add a 1h to all of your manuevers.

Slick Surfaces. Pools of oil, slicks of ice, standing water and snow are all *Slick Surfaces*. Driving through one brings with it a die hazard roll. Having an off-road suspension does not help with slick surfaces, however most weapons designed to make slick surfaces (oil jets, ice droppers, etc) will not work off-road.

Water = 1dh
Snow = 1dh
Oil = 1dh
Ice = 2dh

Slick surfaces can only harm your handling **once per round**. If you hit some oil and then some ice the ice slick will only add 1dh to whatever hazard the oil brought on.

Deep Surfaces. Most slick and slippery surfaces are just a inch deep at best. When you get into something deeper such as a sand trap on a golf course (often re-purposed for off-road autoduelling, sometimes without the golfers being warned before-hand). There is a **70%** chance of getting stuck in a normal vehicle, **30%** when in an off-road vehicle.

Tire Damage. A good side to all of this sliding around is that tire damage largely comes from tires gripping pavement. Off-roading and

slippery surfaces reduce the amount of tire damage from skidding, sliding and crashing by **-3** points. Slick and deep surfaces do no tire damage whatsoever.

Potholes. Hitting a pothole will test your shocks with a sudden **2h** and **Light Tire Damage** to any tire that hits it. A Severe Pothole will increase this to **4h**, do **1d-2** to a vehicle's under armor and **Medium Tire Damage** to any tire that hits it.

Burst weapons aimed at the ground will cause a normal pothole with every **5** points of damage done and a severe pothole with every **10** points of damage done.

Collisions

When you collide with something, the speed of impact will do **1 die of damage per 10 MPH**. Both sides of the collision take the same amount of damage *until one side or the other gives way.*

So a parking meter with just 3 DP will be flattened while your car only takes 3 points of damage. Meanwhile, hitting a cement pillar with 100 DP will most likely smear your killer kart around it like a warm stick of butter while the pillar itself is barely damaged.

How you run into something may change the amount of damage done by changing the collision speed, especially when that other thing is another vehicle.

Head-On. Ram another vehicle head-on, as if failing in a game of chicken, and vehicle speeds combine. One vehicle going 40 MPH and another doing 30 MPH will result in a 70 MPH collision.

Side-Head. A Side-Head collision is almost a head-on. One car rams the side of a vehicle traveling in nearly the opposite direction. To find its collision speed, add the speed of the car making the ram to ½ the speed of the vehicle being rammed. A 40 MPH vehicle side-head ramming one doing 30 MPH will result in a 55 MPH collision.

T-Bone. A T-Bone collision has the ramming vehicle slamming head-long into the side of the other vehicle. Use the speed of the ramming vehicle. A 40 MPH T-bone will cause a 40 MPH collision.

Side-Rear. A Side-Read collision is almost a rear-end collision. One car slams into the side of a vehicle traveling in the same direction. For it subtract ½ the speed of the vehicle being rammed from the speed of a ramming vehicle. A 40 MPH vehicle side-rear ramming one doing 30 MPH will result in a 25 MPH collision.

Rear-End. Ram the rear-end of a moving vehicle and speeds subtract. A 40 MPH vehicle ramming one doing 30 MPH will result in a 10 MPH collision.

Side Swipes. A side-swipe is where a vehicle slams into another sideways. The slower speed subtracts from the faster one, but at least 1d of collision damage will always be done no matter what the speed.

Scrapes. If what you are side-swiping is not moving, like the sidewall of an arena, the damage you take is **one quarter** your speed. An 80 MPH scrape hits like a 20 MPH collision doing 2d of damage. It will always do at least 1d of collision damage.

Shock Hazard. Any collision will cause at least **1h** from the sheer shock of hitting something. After that the collision damage should translate into shock hazards, just like weapons fire.

Speed Change. In addition to all this, the speed of a vehicle ramming something slower than itself will drop by **DCL 10 for each 1h taken**. Being rammed by something faster than yourself may thrust your vehicle forward a bit but not enough to speed it up.

Ram Damage. Collision damage taken by a vehicle should be split in **half**. The greater half goes to the **armor** on the side that was hit. The lesser half goes to the vehicle's **frame**. Once the vehicle's armor is gone, any excess damage goes to its frame. Once the frame is gone the vehicle will crumple up and can no longer be driven. If there is still any damage left to go around, it enters the cabin to tear through components like weapons fire.

After A Collision? When two vehicles collide the vehicle with the greater **Push** score tends to push the other aside. Speed, velocity and angle of impact all matter immensely, but instead of breaking out the slide rules and physics books, we simply let the Crash Master guess where everything should go.

Falling. A falling vehicle, such as one pushed off a broken highway overpass, will take **2d ram damage** for every **car length** fallen. Roll on the *Flip* table in *Crashes* to see which side hits the ground. Up to **5** car lengths may be fallen per round. Falling characters take **1d** of damage per car length fallen.

Jumping From Vehicles. Leaping from a moving vehicle and not falling too far to the ground is a much safer bet. For each character roll a **d00** and add the **speed** the vehicle was traveling at when they jumped. Every **25** points will do **1 point** of damage to the character. Subtract 1 point when doing this off-road. Armor does protect against it.

Crashes

Crash rolls are only made while a vehicle is moving. Any time its hazard token enters the Crash Zone, moves even deeper into it, or begins its turn in the crash zone a **Crash Roll** should be made. Roll the **d00,** add its speed, and find the total on the table below:

000: Nothing.
100: Minor Fishtail.
110: Major Fishtail.
120: Skid Stop.
130: Spin-Out.
150: Flip.
170: Crash & Burn.

Nothing. You got lucky! Nothing happens and you continue to move normally, finish your turn as if nothing happened which is exactly what just happened.

Minor Fishtail. Your vehicle pivots left or right around its hood. It slows by **DCL 10** and takes **Light Tire Damage** to its rear tires. To find the direction of the pivot roll **1d.** An even number pivots **Left 45°**. An odd number pivots **Right 45°**.

Major Fishtail. A major fishtail does the same as a minor fishtail only moreso. It slows by **DCL 15**, takes **Medium Tire Damage** to its rear tires. It also pivots around its hood just like a minor fishtail.

With fishtails, all of this happens on the car length of movement following the crash roll. If you don't have any car lengths left to move we give you one. Otherwise consider it a part of your normal move.

Skid Stop. You pivot **90°** once and skid sideways as many car lengths as it takes to slow you down to **0 MPH**. Each car length causes **DCL 20** and does **Medium Tire Damage** to the tires leading into the skid. *This is the end of your turn.* Any attacks or normal car lengths you have left to make are lost.

It may also be the end of the game. Blow either of the tires leading into the skid and your vehicle will flip on its side. Without any way to right itself that car is out of the game.

Spin Out. Same as a Skid Stop except now you go spinning out of control. Move forward as many car lengths as it takes to reach **0 MPH.** Each time, spin your vehicle **90°**, take **DCL 20** and **Medium Tire Damage** to **all** of your tires. A blow-out will not cause your vehicle to flip, but spin outs tend to do horrendous tire damage and may eliminate your vehicle in this way.

Flip. Your vehicle goes airborne. The Crash Master should hold the mini 1 inch (3" for 1:64) above the table for every 10 MPH it was traveling before crashing and drop it. The side it lands on takes **1d collision damage per 10 MPH**. Any vehicle accidentally hit by the falling vehicle should take **1/2 that damage**.

When using chits instead of minis, do drop the chit to see where it lands but also roll a **1d10** with the table below to find the side that it lands on. Roll again after rolling a Front or Back to find the side it will ultimately keel over onto.

1:Front. **2**:Back. **3**:Left. **5**:Right. **7**:Under. **9**:Top.

During the flip, each crew member will take **1d** of damage from being tossed about. After the flip at least **1d rounds** need to pass before the crew can do anything.

If the vehicle lands upright (aka *Under* side down) and has not been utterly destroyed the vehicle may be restarted and driven. Landing upright will do **2d** to each tire no matter what speed the vehicle was traveling at. Roll once for each tire.

Crash & Burn. Same as a flip except the vehicle is flaming toast flying through the air. We don't bother with collision damage unless its mini hits something when dropped. Each crew member will take **2d** of damage from the crash. Those this doesn't kill somehow managed to escape the wreckage.

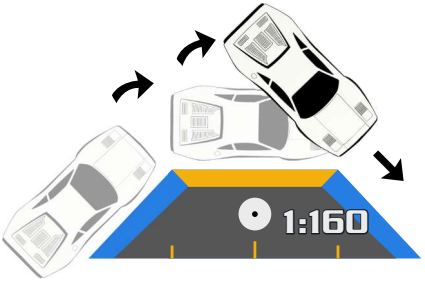
Motorcycles. Motorcycles are not stable vehicles. A skid stop or worse will cause it to **Flip** and take ram damage equal to its speed when it crashed. Riders will be jettisoned. Roll for damage as if they jumped from the vehicle (see page 26).

Crash Master Takes Control! Vehicles that crash generally follow the path of momentum, but they can also bounce around like pinballs as they hit into side walls, barriers and other vehicles. What happens is left up to the Crash Master to decide. *It's why the Crash Master is called the Crash Master.* Taking control when a driver loses it is what they do!

Stunts

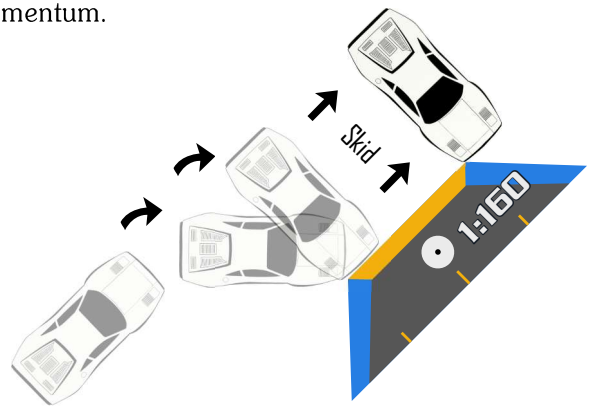
By now you should have a good idea of how to drive. It's time to do some of the fun things all the authorities and insurance people grouse about.

Slides. A power slide is a very tight turn where the back end of your vehicle slides out so the front end can turn tighter. To do this make a full normal turn, but at the end of it slide the tail of your vehicle out so that your vehicle is now parallel to the blue edge of the razor. Tell the CM, "Slide."



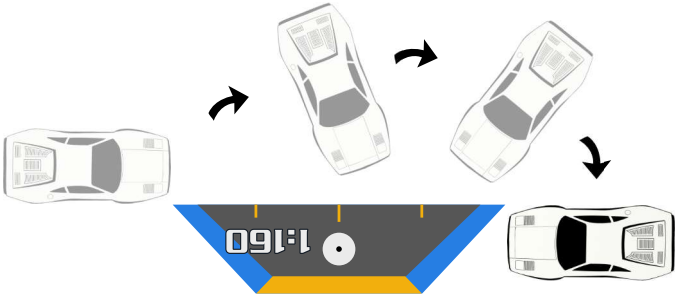
A power slide is a **1dh** maneuver that causes **DCL 10** and does **Light Tire Damage** to your rear tires. The whole thing is considered 1 car length of movement.

Skid. A skid is essentially a power slide where instead of powering forward in a new direction you continue to skid sideways along the path of momentum.



Each car length you skid after the slide will add **1dh** to your haz track, cause **DCL 20** and do **Medium Tire Damage** to the skidding tires. You can continue skidding along the path of momentum (and across multiple turns) until that deceleration takes you down to 0 MPH. Something known as making a *T-Stop*. Or you can power forward and continue driving.

Bootlegger Reverse. A Bootlegger is a daring move that lets you swing your back end around a complete 180 before powering forward again. You will need at least **4 Car Lengths** to perform it. The easiest way to do this is to use the long side of the razor like so:



The entire thing is a **1dh+2** maneuver that will cause you to **DCL 40,** take **Heavy Tire Damage** to your rear wheels and **Light Tire Damage** to front wheels.

Careful! The perfect speed for a bootlegger is 40 **MPH** which will leave you at 0 MPH at the end of it. Every 10 MPH over 40 will drag you backwards **1 car length**, cause **h1**, **DCL 10** and do **Light Tire Damage** to all tires until you eventually hit 0 MPH.

Jumps. A jump will catapult you into the air and hopefully catch you on the other side. Arena ramps should have a beginning and end ramp, both defined by a *Speed* and *Steepness*.

Speed is the minimum speed a vehicle needs to be traveling to reach the other ramp. Fall short and you slam into the ground before reaching it. *The CM will tell you where*. Every **10 mph over** a ramp's speed limit will cause the vehicle to land **1 car length beyond** the end ramp's closest edge. If this causes you to miss the ramp entirely your vehicle will slam into the ground beyond it. Treat both slams like a *Flip* on the *Crash* table.

Steepness comes in three pitches: low, medium and high. These tell us what to roll for the hazard of the jump, and how steepness will modify any collision damage which comes from slamming into the ground when a jump goes wrong. This includes crashing in mid-air from the hazard of the jump with a **Skid Stop** or worse.

> **Low** causes **1dh**. Ram damage halves.
> **Medium** causes **1dh+2**. Ram damage doesn't change.
> **High** causes **1dh+4**. Ram damage doubles.

Obviously you cannot steer or change speed while in the air, but your vehicle will **DCL 10**. Weapons can be aimed and fired in the air but suffer a **-30** penalty.

Humps. Humps are jumps with a middle section between the two ramps. Hit it with less than the speed limit and you simply drive over it, maybe your stomach will lift into your chest. Hit the hump at speed and your vehicle will be launched into the air like a normal jump.

Burning Rubber. Rapidly accelerating from 0 MPH will cause your vehicle to burn rubber. While this may sound and look cool, it can damage your drive wheels during that first round of movement.

ACL 15 = LTD Rear.
ACL 20 = MTD Rear.
ACL 25 = HTD Rear.

Popping a Wheelie. You may pop a wheelie by rapidly accelerating a rear-wheel drive vehicle from a dead stop. The chance of getting those wheels off the ground depends on your total acceleration rate:

ACL 10 = 30%, 1dh-3.
ACL 15 = 45%, 1dh, LTD Rear.
ACL 20 = 60%, 2dh-3, MTD Rear.
ACL 25 = 85%, 2dh, HTD Rear.

The hazard and tire damage only happen once when the wheelie has been successfully popped. The wheels will stay up until the vehicle slows its acceleration rate. The vehicle's **frame** will take **2d-6** points of damage when its front comes crashing back down. There is no real point to popping a wheelie but the crowds love it!

Tires

Tires are where the rubber meets the road. Luckily, no matter how much damage they take, they work perfectly until all damage points are gone. Aside from weapons fire, the most common way tires are damaged is by tearing about with skids, slides, fishtails and the like. Known as Tire Damage it comes in three forms: Light, Medium and Heavy.

Light Tire Damage = LTD = 1d-4
Medium Tire Damage = MTD = 1d-2
Heavy Tire Damage = HTD = 1d

These are often abbreviated as LTD, MTD and HTD and followed by a position such as Front, Rear, All or Skid. When you take tire damage, roll one die per TD and use that amount with all tires effected by it.

So a vehicle slamming on its brakes and taking *MTD Front, LTD Rear* would roll 1d-2 for the MTD and 1d-4 for the LTD. If the MTD results in 3 points of damage then each front tire will take 3 points of damage.

Front and *Rear* are self-explanatory. *All* means that all of a vehicle's tires take the same amount of damage. *Skid* means that damage is only taken by the tires leading into a skid and getting pinched by it.

Tire damage mainly happens on pavement. Slippery surfaces and off-roading take a **-3** off the damage roll. You can ignore LTD rolls. Slick surfaces such as oil and ice do no tire damage whatsoever.

Lost Steering Wheels. Lose the wheels you turn with and you can no longer steer. The front of a vehicle will crash to the ground and take **DCL 20** at the start of each turn.

Lost Drive Wheels. A vehicle without drive wheels cannot accelerate. Lose one drive wheel and acceleration drops by **5 MPH** to a **minimum of 2.5**. All-Wheel-Drive vehicles suffer this way when any wheel is lost but they will not stop moving until all wheels are gone.

Dragging It. When the rear wheels of a vehicle are shot the back end of the car will drag on the ground causing the vehicle to take **DCL 10** at the start of each turn.

Motorcycles. When not popping a wheelie, a motorcycle needs both tires to remain upright. Losing a wheel will cause it to automatically crash with a Flip result.

At any time while moving - from before your first car length to just after the last one - you may attack. Use the boom stick to draw a line of fire between you and your target. Add to this any modifiers that may apply and tell the Crash Master your total Hit score, saying something along the lines of, "I fire my vulcan machine gun with a ***hit 60***," as in a 60% chance to hit. Say that number out loud and there is no taking it back. *It's just like pulling a trigger!*

The CM will roll **1d100** and if the dice roll equal to or under the score it's a hit. Above it is a miss. A roll of 01 is a critical hit doing double damage. A roll of 00 is a weapon jam. Draw an X next to the weapon's name and it will not fire again until it's been unjammed.

Roll Under = Hit
Roll Over = Miss
Roll 01 = Critical Hit
Roll 00 = Weapon Jam

With a hit the CM will also roll for the amount of damage done and may even throw in a few sound effects for weapons fire when in the mood. Be sure to record the ammo expenditure while your opponent is scratching down damage.

Rate of Fire

Any driver or gunner in a vehicle can fire one weapon or one set of linked weapons once per round. This is known as making a **firing action**. The weapons themselves can only fire once per round. *A round is just 1 second after all.*

Drivers. The driver of a vehicle can fire forward-facing weapons without problem but suffer a **-10** when firing in any other direction.

Gunners. Gunners will have no problem firing in any direction that is not directly behind them. In that direction they suffer a **-10**.

Turrets. Turrets can fire in any direction without problem but require a dedicated turret gunner. Without one a turret will take a **-10** no matter which way it is pointing. A dedicated turret gunner will suffer a -10 when trying to fire any weapon which is not their turret.

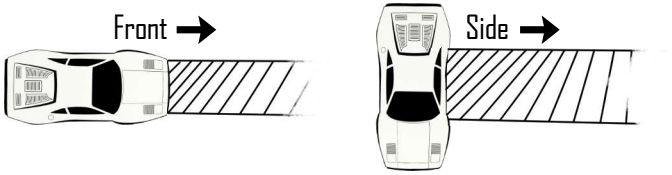
Pintels. A pintel mounted weapon needs someone standing behind it to fire it. No one can simply punch a button and have it fire. Likewise, the user of a pintel weapon cannot fire any other weapon in the vehicle while at the pintel.

Passengers. Passengers can use hand-held weapons and pintel-mounted weapons but they do not have access to vehicle weapon systems.

Linked Weapons. Linked weapons fire together like one weapon. They always fire at the same target but with separate hit and damage rolls.

Line of Fire

Weapons that are not in a turret or pintel mounted or fired by hand have a **fixed** direction. They can only fire straight, perpendicular to the side they have been mounted on. Think of a beam projecting forward from between ones headlights when firing forward, or from between front and rear tires when firing to the side. Unlike Car Wars, *fixed weapons do not have arcs of fire.* This includes trikes.

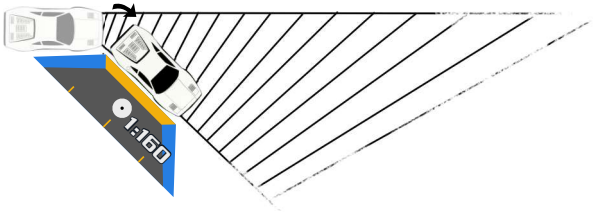


Use the boom stick to draw a line of fire from that side of the vehicle to your target. If you cannot do this or if something gets in the way you cannot make the shot.

Weapons in a turret can point in any direction but they still need to establish a clear line of fire between turret and target. The same goes for pintel mounted weapons which are usually limited to an 180° arc.

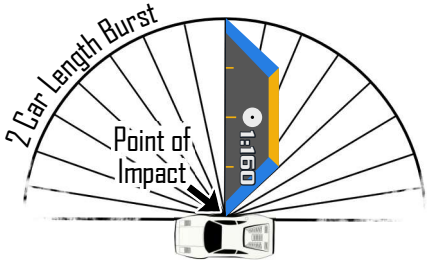
Line of Fire also shows us which side of a vehicle will be hit. When given the choice between two sides, go with whatever presents the larger target. Settle any disputes over the matter with a TOS between combatants.

Area Weapons. Weapons bearing the **A** effect fire like machine guns. They can strafe a blast across the arc of a turn. Turret and pintel-mounted area weapons can also strafe an area without the vehicle turning but are likewise limited to a 45° arc.



The Crash Master should make a hit and damage roll for each target caught in the area. *Range does matter!* The catch is that strafing waters down your attack and only does **half damage** to what it hits.

Burst Weapons. Burst weapons explode on impact. They cause an extra **h1** in shock hazard and the number attached to it is the explosion's **radius in car lengths**. Ignore the blast radius if there is nothing near-by, otherwise designate a point of impact on the target and use the backside of the razor to measure out around it.



Anything caught in that area will **automatically be hit** but only takes **half damage** from the blast. Things like tires and turrets may fall inside a burst or area attack but they need to be specifically targeted and cannot be hit indirectly. Keep in mind that you can damage your own vehicle by getting too close to a target you are firing a burst weapon at!

Top Armor. To attack a vehicle's top armor you need a clear line of fire between the two vehicles and the attacking vehicle needs to be taller than its target and able to aim down at it. Whether this can be done or not is left up to the CM to decide.

Range

Don't put away the boom stick just yet! How far away your target is will give you a hit modifier. If the distance is too far for the boom stick to measure, use a pocket tape measure and the following table. Distances are in inches at 1:160 scale. Triple them for 1:64 scale minis.

0": Close +40
1": Short +20
3": Medium +0
10": Long -10
20": Extra -20
30": Far -30

So with less than an inch of space between the sides of the vehicles you get a Hit +40. At 1 inch away this drops to +20. At 3 inches away it becomes a +0. At 10 inches away it takes a -10 and so on. Every 10" past Far is another -10.

Max Range. Some weapons have a maximum range effect, the letter **M** for Max followed by the first letter of a range. For example, flamethrowers have MM and max out at Medium range. They can burn all they way out to the very edge of Long range.

Targets

Hit scores are built around what it takes to hit the broad side of a typical passenger vehicle at medium range. Other smaller targets will be harder to hit depending on whether you are aiming at its front or side:

Vehicles	Front	Side
Normal Cars	-10	-0
Small Cars	-10	-10
Trikes	-15	-10
Motorcycles	-20	-10
Cycles with Sidecars	-15	-10

Normal cars and most other vehicles use the front modifier for the rear of the vehicle as well as its top when targeted from above (such as by helicopter). The side modifier usually means the left and right side but can also mean the under side of a vehicle when it has been flipped up on its side. Small cars are essentially anything with four wheels and 6 to 10 spaces.

Smaller than 6 spaces (a go-kart perhaps?) takes a -15 on all sides. Trikes take a -10 to hit on all sides except for the one with a single wheel, usually the front. Targeting that side takes a -15.

Motorcycles take a -20 from the front and a -10 from the side. Except when carrying a sidecar, this drops the front modifier to -15. What is hit when the vehicle is attacked depends on the hit roll itself. An **even** hit roll hits the front of the **bike**. An **odd** hit roll hits the front of the **sidecar**. When targeted from the side, the sidecar will always be hit before the motorcycle is.

Specific Targets. Turrets and tires need to be specifically targeted to be hit. Succeed and you hit it. Fail and you miss the vehicle entirely.

Turrets. The penalty for targeting a turret depends on its size.

0-Space Turret = -50
1-Space Turret = -40
2-Space Turret = -30
3-Space Turret = -20
4-Space Turret = -10

Turrets are protected by a vehicle's top armor so you need to blast through that before being able to hit the weapon inside it. Do enough damage to destroy the turreted weapon and excess damage will go sideways leaving the vehicle with a nice new sunroof to admire.

Tires. Tires may be individually targeted at **-30**. Some vehicles have multiple wheels placed side by side or inside and out.

Side by side mounted tires drops the penalty to **-20** but only one of the tires will be hit. Once destroyed any excess damage goes to that side's armor.

Inside and out mounted tires take the standard **-30**. The outside tire will take damage until destroyed. Excess damage goes to the inside tire. After that any remaining damage will go to the side armor.

Some vehicles have armored wheel guards and hubcaps. These provide armor protection against weapons fire but will not protect your tires against spikes, mines, flaming oil jets and other dropped weapons. Once gone the tires behind them will be hit by any excess damage.

Combatants. Unless your car is manned by total heels, it is considered bad form to attack any crew that has left their vehicle. Of course, if they are returning fire with hand weapons? *That changes everything.* When it comes to movement, combatants can walk and fire at **5 MPH** or sprint and not fire at **10 MPH**. For targeting them:

Standing = -20
Half Cover = -40
Lying Prone = -50
Full Cover = -60
Total Cover = -80

Standing is someone just standing there looking to get themselves killed. It is the normal penalty for combatants.

Half Cover comes from having at least 50% of ones body covered by something substantial such as an open car door.

Lying Prone means lying flat on the ground. It provides some decent quick protection but the character cannot move without losing it. It takes one round to stand up after lying prone.

Full Cover comes from having 75% to 90% of ones body covered. Characters with full cover return fire with a -20 penalty.

Total Cover leads a character to believe they are totally covered. They will not return fire so as to maintain their cover.

Hit & Damage

To hit a target the CM needs to roll equal to or under your hit score with a **1d100**. One point over and the shot goes wild. A roll of **01** does **Double Damage**, roll double the number of damage dice and treat it like one big roll. A roll of **00** is a **Weapon Jam**. Put an X next to its name. No ammo is lost but the weapon will not fire again until you unjam it. Attempting to unjam a weapon is a firing action and has only a **25%** chance of success each time. Weapons that cannot jam do a close equivalent. The computers that run lasers are notorious for stopping to update their operating systems at the worst possible moment.

Armor. Often the first thing damage hits is vehicle's armor. There are different kinds of armor which may effect the way this works.

Laser-Reflective armor is naturally reflective and reduces laser damage by **half**, just as if every die had rolled half of what it rolled. LR Armor lights up the arena like a disco ball when hit, a real crowd-pleaser.

Radar-Proof armor cannot be seen by radar nor targeted by anything radar-guided. It comes in any color just as long as that color is black.

Fire-Proof armor cannot be damaged by fire or set on fire. Flamethrowers are useless against it. Other incendiary weapons will do damage like a normal weapon.

Metal armor does not disintegrate like plastic armor. It stops what it can and the rest enters the vehicle. The only time metal armor loses a point is when a damage die rolls a 6, or a 5 or 6 if it's a burst weapon. Metal armor damage should always be taken **after** the armor protects the vehicle from attack.

So if a car with 5 points of metal armor is hit by a rocket attack rolling 3 and 4 on its damage dice? 2 points of damage breach the metal armor but the metal armor itself stays at 5 points. *Rockets are burst weapons.* Had the dice rolled 2 and 5? Still, 2 points would breach the armor but **afterward** that roll of 5 would reduce the metal armor by one point.

Internal Damage. Once the armor of a vehicle has been destroyed, any excess damage will enter its cabin. Where it goes and what it hits is left up to the player of that vehicle but it should logically progress across the schematic, destroying whatever components are in the way.

Shock Hazard. If this van is a rockin it could be because somone just hit it with an anti-tank gun. A vehicle's **Shock** score is the amount of damage needed to cause a **1h**. Keeping track of it is left up to the CM and described in *The Grid* section back in *Ignition*.

Crew Damage. Crew members have 3 DP, 6 when wearing armor. Once the armor is gone and a point of damage has been taken, an injured crew member will need to **roll twice** for any roll they make (aside from damage rolls) and use the **lesser** of the two.

Fire! Fire! Fire! Incendiary weapons such as flamethrowers and lasers stand a chance of setting whatever they hit on fire. Each damage die that rolls equal to or more than a weapon's **F#** will **add 1 point of fire** to that side. Fire points do their amount in damage to that side whenever the game recoils. This includes the round in which the attack was made.

So a laser has F5. A roll of 4 4 4 does 12 points of damage but does not set anything on fire. If the dice had rolled 1 5 6 it would still do 12 points of damage but also add 2 points of fire to that side, one for the roll of 5 and another for the 6.

Once the armor of a side is gone the fire will spread through the vehicle and start damaging components. Inside or out, large amounts of fire damage will cause a shock hazard when it hits.

Internal Explosions. Power plants, batteries and weapons with unspent ammo stand a **50%** chance of exploding once they lose all their DP. This jumps to **80%** when they lose it to fire damage. Mix fire damage with flammable materials such as napalm or gasoline and the chance jumps to **100%**.

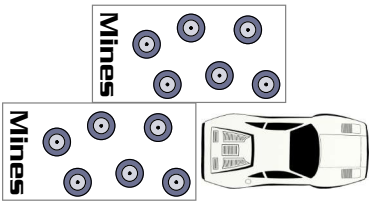
Such explosions rip through a vehicle, setting off a chain reaction of other explosions that will destroy it utterly. Roll **4d** and anything caught within 1 car length takes full damage. At 2 car lengths this drops by half.

If you truly need to know just how much damage internal explosions do. Each shot of ammo in an exploding weapon will hit the vehicle for a roll of damage. Destroying a power plant or battery will cause the vehicle's power supply to explode and do **1d** of damage for every **3 Power Units** left in it.

Dropped Weapons

Dropped weapons are different from other weapons. No hit roll is needed. Each shot lays one chit of mines, oil, smoke, etc beside the vehicle. Hold down the trigger and you will lay out a **stream** of chits with the car dropping another one every time it moves a full car length forward. Careful though! Each chit is a separate shot of ammo. Streaming an attack is a good way to empty out your ammo reserve.

Dropped weapon chits are ½ car length wide and 1 car length long. When mounted on the left or right side of a vehicle they will appear halfway down that side of the vehicle. When mounted on the rear of a vehicle they will appear directly behind it. Anyone running over one is in for a world of hurt.



Mines. Mines do 2d to the underside of a vehicle and 1d to any tire that crosses it. Roll separately for each tire and remove the mine counter afterward. Mines are manufactured to explode on their own ten minutes after being deployed. Most battles will not last long enough for that detail to matter.

Spikes. Spikes do a separate roll of damage to each tire that crosses its chit. No hazard comes from this unless the tire itself has been shredded. **Solid** tires do not take damage from spikes. Because spikes do stick in tires and tend to get bent up, spike counters should be removed after they are run over.

Smokescreens. Smokescreens bring a **-30** to anyone trying to draw a line of fire through one. Lasers have their damage reduced by **half**. Smokescreens produce a super dense cloud of smoke that cannot be seen through. While flamethrowers, flaming oil jets, and burning vehicles will produce some smoke they do not produce enough to replicate a smoke screen.

Paint Attacks. Paint Sprayers produce a colored cloud chit that works just like a smokescreen but with the added benefit of painting the **front and sides** of anyone who drives through it. Roll **1d*-5**, aka *1d multiplied by -5*, and add that penalty to the front and sides of a vehicle, or possibly just one side if the vehicle only skimmed the cloud. Next remove the counter. Unlike smoke, driving through a paint cloud causes it to dissipate.

A painted vehicle will take that penalty any time it aims out that side. Paint penalties can accumulate until -30 is hit which is essentially firing blind.

Vehicles come standard with windshield wipers on front and back sides. These will work until half of that side's armor is gone. It is a firing action to activate/deactivate wipers and they remove a -5 per round. However, they also cause a -5 penalty while working which is why they need to be deactivated after they are done. Enhanced paint cleaning systems are available in the *New Equipment* section.

Spill Attacks. Anyone driving over an oil chit will take **1dh**. Ice increases this to **2dh**. These hazards only happen **once** per round. It doesn't matter how many oil chits a vehicle crosses during that round collectively they all do 1dh to the vehicle. If the car is still on an oil chit at the start of the next round then it will take another 1dh as well.

Removal Roll. When a round recoils the CM should roll **1d** and remove any chit with that number on it or less. Namely:

Paint Cloud = 4
Smoke Cloud = 2
Dropped Ice = 2
Flaming Oil = 1

Either the cloud has dispersed, the ice sheet has broken up or the flaming oil has burned itself out. A normal oil spill doesn't have a removal die and will last until the end of the battle when the arena's zamboni-like cleaner comes out to sponge it up.

Hand Weapons

Hand weapons are highly over-rated. The armor on vehicles is thick and windows do not roll down. To fire a hand weapon at another vehicle you need to either have a big gaping hole in your armor or spend one round opening a door, one round firing out the door, and another round closing it. While the door is open that side's armor will not protect the vehicle.

Sun Roofs. Some vehicles come with sunroofs. These take **2 rounds** to open. Anyone except the driver can fire through one with a hand weapon. They will not be protected by the vehicles top armor and can be targeted like a 2 space turret at **-40** to hit.

Damaging Vehicle Armor. Any handheld weapon doing a set number of hits for damage (ex: rifle, shotgun or pistol) will not damage vehicle armor with an **even-numbered** hit roll. Aim a light

pistol at a car and roll an 11? That does 1 point of damage. Roll a 10 and the bullet plings harmlessly off it.

Storage. Space in a vehicle is often tight. Crew members may carry up to 3 pistol/grenade-sized weapons on their person. Passengers may carry up to 6. Anything more than this will take up space inside the vehicle. Cargo can be used to store hand weapons but **1d** rounds will be spent trying to get them out. Each space can hold up to **30 grenades** worth of weaponry.

Grenades. Grenades can be chucked up to **5 car lengths** away. They will detonate **5 rounds** after they are thrown. Gamewise, a chit or die needs to be placed in the arena to represent it. Grenades are burst weapons. They do **2d** damage. Full damage to anything within **1** car length and half damage to anything up to **2** car lengths away.

Just like a weapon with unspent ammo, any character who dies from weapons fire while carrying grenades stands a **50%** chance of exploding and taking the entire vehicle with them.

CHARACTERS

Gear Jammers is more of a miniatures combat game than a role-playing game, but you can turn your vehicle's crew into something more than just another set of vehicle components. To start, each character should be given an index card to keep track of their stats on.

Prestige. Character prestige is made of two numbers separated by a slash: battles won / battles lost. To find a character's **Total Prestige**, double the number of battles won and add it to the number of battles lost. Whether a character has been in a battle or not, everyone gets at least **1** prestige point for being daring enough to climb into a vehicle.

Total Prestige = (Wins x 2) + Losses.

Prize Money! Arenas make some money through tickets, concessions and salvaging wrecks for gift shop souvenirs, but mostly they make money by live streaming events. Prestige brings in viewers which in turn jacks up the prize money the arena can offer its winners.

To find the amount, add together the total prestige of all the characters involved, multiply it by the division number and multiply that by $100.

Prize = (Total Prestige x Division) x $100.

So an Amateur night event with 10 drivers, each with just 1 point of prestige driving Div 5 vehicles will have a grand prize of (10 x 5 x 100) $5,000. Enough to buy a brand new Killer Kart! From the gift shop!

Meanwhile a Professional match featuring two teams of high-profile autoduellists with a combined prestige of 120 driving Div 30 vehicles will have a jackpot of (120 x 30 x 100) $360,000!

Experience Points. Characters gain 1 experience point for each battle they survive and 1 point for every battle they win. These should be added to the character's Driver, Cyclist, Trucker, Pilot, Gunner or Handgunner skills depending on what they did during that battle. Skill XP eventually accrues into a bonus for the character. For Driver, Cyclist, Trucker and Pilot it is an HC bonus.

320: HC +6
160: HC +5
80: HC +4
40: HC +3
20: HC +2
10: HC +1

For Gunner and Handgunner it's a Hit bonus. Gunner only applies to vehicle weaponry. Handgunner is for hand weapons.

320: Hit +30%
160: Hit +25%
80: Hit +20%
40: Hit +15%
20: Hit +10%
10: Hit +5%

Characters can also develop skill in Mechanics. For every vehicle they repair or customize they gain 1 XP. This reduces the price of the equipment purchased for repairs and upgrades.

320: Price -35%
160: Price -30%
80: Price -25%
40: Price -20%
20: Price -15%
10: Price -10%

Note that this does not change the overall cost of the vehicle! Most repairs are made by pulling out the damaged part and replacing it with a new one. A good mechanic can shave some of the cost off this operation by repairing what they can, but it doesn't change the overall value of the item. If the mechanic is not one of your characters, they will pocket the savings and put it towards the purchase of a new fishing boat.

Injuries & Healing. Characters can take up to 3 injuries before dying. Naturally it takes 1d of months to heal each injury. Rolling a 6 causes an injury to scar over and be permanently lost.

Hospitalization can speed up healing dramatically. Roll 1d and that is the number of weeks it takes to heal an injury with no chance of scarring. The cost of this is $1,000 per week.

Super high tech treatment decreases the time to 1d days and costs $10,000 per day. Hospitals providing this level of care can only be found in major metropolitan centers.

Gold Cross Clones. Gold Cross Clones are only available to the rich and powerful. Having a clone made costs $1,000,000 and 1 year of time for Gold Cross to make. They also cost $100,000 per year to incubate and routinely update with a mind scan of the character being cloned.

Gamewise, a separate index card should be made for each clone a character has and on it a copy of the stats the character had when its latest mind scan was made. When activated roll **1d100**. Add to it the number of years the clone has been in incubation (with a minimum of 1). If this rolls 100 or more something has gone wrong and the clone dies while being revived. Otherwise, the cloned character will wake up remembering everything that has happened up until the moment of its last mind scan.

Being a clone should not effect a character's prestige, *unless the world learns about it!* The common man doesn't like the idea of clones and a cloned character's total prestige will **drop by half** if they are discovered.

Legally, a clone cannot be activated until the character it is based on has died. The Gold Cross Corporation ensures its clientele that there is absolutely no chance of this happening whatsoever.

Of course, *rumors abound.*

Cost of Living. If you are going to keep track of characters and wealth you also should keep track of the time between matches and how much this is costing the character. How the character decides to live determines how much money they will lose on a **daily** basis. Whether or not they have day jobs to help support their lifestyle is left up to the imagination. Considering the world of Car Wars? *Probably not.*

$2000 = Top Dog
$1000 = Fat Cat
$500 = Rock Star
$250 = High End Furnishings
$100 = Nice Urban Flat
$50 = Decent Apartment
$30 = Squalid Apartment
$20 = Shared Pad
$15 = Van Down By The River
$10 = Killer Kart In An Alleyway
$5 = Rock Bottom Bus Station Bench

This is a listing of new stuff we created as well as a few older items we updated. While the rules say to always round down any decimal point, this doesn't apply to price, weight and space modifications. These you should always **round off**.

If something weighs 9 lbs and the modification reduces it by 85% you basically pop in a decimal point two spaces to the left of the % sign, turning 85% into .85, and multiply the 9 by it to get 7.65 which *rounds off* to 8.

Body Frames

While popular, these body frames are ones you may have to special order through your dealer of choice. Max is the maximum weight its chassis can carry. The (+ space) numbers are for cargo only. The armor amounts are the Price/Weight per point.

Type	Price	Weight	Max	Space	Armor
Sport Pick-up	$800	1,700	5,700	10(+5)	18/9
Muscle Car	$900	1,900	6,000	17	20/10
Muscle Wagon	$900	1,900	6,000	14(+5)	20/10
Minivan	$900	1,900	6,000	20(+4)	22/11

Cycle Windshell

Yes they make your cycle look like something out of the movie Tron, and you cannot fire hand weapons while the windshell is in place, but sometimes a cyclist needs something more than just front and rear armor on their bike. Plus it streamlines your bike, increasing its **Top Speed by 10%**.

A base windshell and the machinery needed to slide it in and out of place costs **$500** and weighs **50 lbs**. This will provide you with **2 points** of **left**, **right** and **top** armor. More armor can be purchased for

these sides at the standard amounts used by your cycle frame, but they must be purchased in equal amounts. Modifications such as fire-proofing and laser-reflective will effect the cost and weight of the base windshell as well as any armor added to it. Sliding the shell in and out of place is a firing action.

Enhanced Paint Cleaner

Nobody gets to paint your car but you! This powerful system of microsprays will quickly wash most paints off all the windows of your vehicle. Like a Paint Sprayer in reverse, each blast removes **1d*-5** from any hit penalties on your vehicle.

Enhanced Paint Cleaner (EPC) – No Hit Roll, Removes 1d*-5, 2 DP, $300, 20 lbs, 1 space. 10 shots ($5 and 5 lbs each). Loaded cost $350, loaded weight 70 lbs.

Extra Tire Mounts

Know what sucks? Being hobbled right at the start of a battle because someone got lucky and shot out a front tire. *Fret no more!* For **$100, 1 space** and the cost and weight of an extra set of tires you can double the support of your vehicle. These tires will always be installed side by side.

Hubcaps & Wheel Guards

These two armor the wheels they protect. Wheel guards can only be used on rear wheels. Unlike Car Wars, any tire targeted with weapons fire will need to cut through an armored cap or guard before damaging the wheel behind it. Caps and guards do not protect against tire damage caused by skidding, sliding and burning rubber or dropped weapons such as mines, spikes and flaming oil jets.

Armored Hubcaps cost **$15** and weigh **4 lbs** per point. Wheel Guards cost **$10** and weight **4 lbs** per point. Both have a maximum weight of **40 lbs**. You may use hubcaps and wheel guards together on rear wheels but not front wheels.

Guards and caps can be put on the front and back tires of a motorcycle but you have to buy equal amounts for each side of a wheel and record their DP separately. Trikes do the same but only with their third wheel.

It's good form to buy armor that matches the armor on the rest of your vehicle (fire-proof, laser-reflective, etc) but this is not essential.

Grain Armors

Grain armors weave strong fine strands of metal in with the fiberglas of normal vehicle armor. The result is a lighter yet more expensive form of armor. When left unpainted they have a grainy look that resembles a candy-flake paint job. Teflon tends towards a darker sparkle while Titanium shows up as a brighter one. The base fiberglas of the armor can be tinted to create different colors.

Teflon Grain Armor increases the cost of the armor by **125%** and decreases its weight by **85%**.

Titanium Grain Armor raises the cost of the armor by **150%** and reduces its weight by **75%**.

So the cost/weight of a luxury vehicle's armor is $20/10 lbs. Teflon grain armor changes this to $25/9 lbs. Titanium grain armor changes it to $30/8 lbs.

Low Profile

Low Profile is a body modification that needs to be made when the vehicle is created. Basically, the design computer chops its top and squishes it down, turning it into a low-rider. Low profile comes in two forms, Low and Ultra-Low.

Low Profile removes a quarter of the vehicle's height. It increases the price of the frame by **50%**. It also reduces the amount of space inside the vehicle by **10%**. But by doing so it drops the vehicle's center of gravity and grants it an **HC +1**.

Ultra Low Profile drops the height of a vehicle almost by half. It increases the frame price by **100%** and reduces its space by **20%**. It too gains an **HC +1**, but in combat it also gains a **-10** hit penalty on all sides except the top.

Paint Guns

Paint Guns are essentially high-powered compressed air guns that shoot a machine-gun like burst of paint pellets to splatter across a vehicle's side. This will cause **1d*-5** in hit penalties to anyone trying to aim through it. Multiple hits will cause these penalties to accrue until Hit -30 is reached. After that you're just being artistic.

While the paint pellets do have some velocity they are not strong enough to do any serious damage. They clean off a car like a normal paint cloud. Combatants hit by them will need to spend 2 rounds

wiping each -5 off of their helmet's visor or sunglasses or whatever they were hopefully wearing.

Paint Gun (PG) – Hit 50%, 1d*-5 to 1 Side, Effect A, 3 DP, $500, 50 lbs, 1 space. 25 shots ($10 and 5 lbs each). Loaded cost $750, loaded weight 175 lbs. Extra magazine: $300, 140 lbs and 1 space.

Pintel Mounts

A Pintel mount is a post with a swivel that a weapon can be mounted on. A person is needed to stand there and fire it. Unlike other vehicle weapons it cannot be fired by a driver or gunner simply flicking a switch. They have a 180° arc of fire. They reduce your Top Speed by 10%. The cost and weight of the pintel depends on the amount of space required by the weapon mounted on it.

1 Space Pintel, $150, 20 lbs, -40 to Hit.
2 Space Pintel, $200, 40 lbs, -30 to Hit.
3 Space Pintel, $250, 60 lbs, -20 to Hit.

On most vehicles a pintel cannot share a roof with a turret. They are not protected by vehicle armor but up to **10 DP** of shield armor can be purchased for it. This costs **$10** and weighs **4 lbs per point**.

When a pintel weapon is hit, the damage goes Shield → Weapon → Character firing it. Any excess damage will pass over the top of the vehicle. If the weapon explodes, roll for its remaining ammo and take **half** of it to the top of the vehicle. Any vehicle that flips will have its pintel mount sheared off.

The base pintel mount is only 2 to 3 feet tall and typically mounted next to a sunroof or some other portal. Standing pintels are often used in the bed of pickups. These increase the cost by 125% and the weight by 150%. They also consume 4 spaces of cargo space.

Ramplates

Ramplates have a value equal to **half the armor** of the side it's been mounted on and reduces the amount of damage taken from a collision by that amount. A vehicle with 30 points of front armor + ramplate will shave 15 points of damage off of any collision it gets into. Against a 25 point collision only 10 points of ram damage would be taken. Anyone hit by a ramplate will take an extra **+1 per die** rolled. Ramplates do deteriorate. Once your armor is gone so is your ramplate.

Cost and Weight. Adding a ramplate to a vehicle can be a bit of a pain. They cost 1½ as much as your front armor and weigh ½ as much. An easy way to do this is to modify the cost/weight of your vehicle's armor. 1 point of ramplate enhanced armor increases its cost by **250%** and its weight by **150%**. So a vehicle with $20/10 for armor now costs $50/15 for the side with the ramplate ($20 x 2.5 = $50 and 10 x 1.5 = 15).

Reinforced Bumpers. A reinforced bumper is best thought of as a light ramplate. For the armor on that side it increases the cost by **200%** and weight by **125%**. You get the same protection of a ramplate (half front armor) but none of the extra damage.

Side-Mounted Plates and Bumpers. Traditionally, these can only be mounted on the front and rear of a vehicle. You can have them mounted on the sides of your vehicle but few ever do so as it **doubles** the cost and weight of that ramplate or bumper.

Spoilers & Airdams

These are not the dinky things that manufacturers put on their vehicles to make them look cool. A spoiler is a large wing attached to a car's trunk. An airdam is a wind scoop that juts forward from its bumper. Both work to help hold a vehicle to the road. Gamewise they each subtract **25** points from a **Crash Roll**.

Spoilers and Airdams cost **$500** and weigh **100 lbs** a piece. They must match the armor of that side (fire-proof, laser-reflective, etc). Being made of metal makes no difference to its cost, weight or operation. Spoilers & Airdams will continue to work effectively until **half** of that side's armor is gone.

Motorcycles cannot use spoilers or airdams. Off-road vehicles cannot use airdams. Reversed trikes can use both a spoiler and an airdam but a normal trike cannot use an airdam.

Stickies

Yes. *Drag-Race Tires!* This modification can turn any rear tires except Solids and Plasticore tires into big fat racing slicks designed to transmit a maximum amount of torque out of your engine and onto the asphalt.

Gamewise they **triple** the cost and weight of normal tires, target at only **-10**, and cause an **HC-1**, but on the good side they add **5 MPH** to your **ACL**. Armored caps and guards can be used with stickies but they also cost and weigh three times as much.

Swivel Mount

Any weapon given a swivel mount is no longer fixed and can fire in a 45° arc from the side it has been mounted on. In addition to the weapon itself, the swivel mount costs and weighs **$50, 20lbs** and **1 space per space** of the weapon it is being used with.

A machine gun is a 1 space weapon so its swivel mount will cost $50, weigh 20 lbs and consume 1 space. An anti-tank gun is a 3 space weapon so its swivel mount will cost $150, weigh 60lbs and take up 3 spaces.

This extra space isn't consumed by the machinery of the swivel mount so much as the space needed to swing the weapon around and achieve its firing arc.

Targeting Computers

Targeting Computers provide a hit bonus for individual crew members. Put the bonus in the crew member's box and add it when they fire a weapon.

Targeting Computer: +10
High-Res Computer: +20

Single-Weapon Computers, on the other hand, should have their bonus attached to a weapon's Hit score as well as any similar weapon it is linked to and aiming in the same direction. Only one targeting computer can be used at a time. They cannot be used with flamethrowers or dropped weapons.

Vehicular Shotguns

A vehicular shotgun is like a very large sawn-off shotgun that fires a single shell about as big as a beer can. It has a wide spread of shot that makes it easy to hit with but also dramatically stunts its range. Anything at **Medium** range will only take **half damage** when hit. Pellets may fly into Long range and beyond but they aren't concentrated enough to do any real damage.

Vehicular Shotgun (VS) – Hit 60%, 1d damage, Effect MM, 2 DP, $950, 90 lbs, 1 space. 10 shots ($5 and 1 lbs each). Loaded cost $1000, loaded weight 100 lbs. Extra magazine: $100, 25 lbs and 1 space.

SAMPLE VEHICLES

Attila 38 *– Muscle Wagon. Ex-Hvy Chassis. Hvy Suspension. Super PP. 8 PR Tires. 2 Extra Tire Mounts. Driver. Turret Gunner. Passenger. 1 Twin Laser in Turret w/ SWC. 1 Fire Extinguisher. Teflon Grain Armor: F32, B32, L32, R32, T32, U30. ACL 5. TS 101. HC 3. Drive A. Push 6. Shock: 7. Weight: 6,660. Cost: $25,000.*

Copperhead *– Sedan. Ex-Hvy Chassis. Hvy Suspension. Low Profile. Thundercat PP. 4 PR Radial Tires. Driver. Passenger. Sunroof. 2 Linked LL Front. 1 Fire Extinguisher. 2 10DP Hubcaps. 2 10DP Wheelguards. Titanium Grain Armor: F35, B35, L26, R26, T20, U20. ACL 15. TS 188. HC 5. Drive A. Push 9. Shock: 5. Weight: 6,116. Cost: $29,151.*

Death Beetle *– Compact. Ex-Hvy Chassis. Hvy Suspension. Sport PP. 2 PR Tires. 2 PR Stickies. 2 5DP Front Caps. 2 5DP Rear Caps. Driver. 1 Rocket Launcher. SWC. Ramplate. Armor: F50, B30, L30, R30, T10, U19. ACL 15. TS 145. HC 2. Drive R. Push 7. Shock: 4. Weight: 4,420. Cost: $14,647.*

Dreadnought *– Luxury. Ex-Hvy Chassis. Hvy Suspension. Driver. Gunner. Super PP. 4 Solid Tires. 2 10DP Hubs. 2 10DP Guards. 2 RL front linked w/ Hi-Res SWC. 4 VS Right linked. 1 FOJ rear. Fire Extinguisher. Titanium Grain Armor: F44, B44, L44, R44, T30, U33. ACL 5. TS 103. HC 3. Drive R. Push 6. Shock: 5. Weight: 6,452. Cost: $24,995.*

Gila Monster *– Luxury. Low Profile. Ex-Hvy Chassis. Hvy Suspension. Driver. Gunner. Passenger. Super PP. 4 Solid Tires. 2 10DP Hubs. 2 10DP Guards. 2 Linked MG Front w/SWC. 1 RR in Turret w/ Extra Mag and Hi-Res SWC. Fire Extinguisher. Armor: F40, B34, L33, R33, T33, U30. ACL 5. TS 101. HC 4. Drive R. Push 6. Shock: 5. Weight: 6,599. Cost: $24,440.*

Hellcat *– Muscle Car. Hvy Chassis. Hvy Suspension. Super PP. 4 Solid Tires. Driver. Turret Gunner. 2 Linked MG front. 1 VMG in turret. 1 Fire Extinguisher. Front Ramplate. Armor: F30, B24, L24, R24, T24, U24. ACL 5. TS 102. HC 3. Drive R. Push 6. Shock: 5. Weight: 6,600. Cost: $19,200.*

Hotshot Pyro *– Muscle Car. Hvy Chassis. Hvy Suspension. Super PP. 4 Solid Tires. Driver. Turret Gunner. 3 Linked Incendiary MML front. Driver Targeting Computer. 1 Flamethrower in Turret. 1 Extra FT Mag. Armor: F30, B30, L24, R24, T30, U22. ACL 5. TS 101. HC 3. Drive A. Push 6. Shock: 5. Weight: 6,595. Cost: $18,150.*

Killer Kaddy *– Luxury. Ex-Hvy Chassis. Hvy Suspension. Driver. Gunner. Super PP. 4 Solid Tires. 2 10DP Hubs. 2 10DP Guards. 2 RL front linked w/ Hi-Res SWC. 1 MG Left. 1 MG Right. 2 MG linked rear. Fire Extinguisher. Titanium Grain Armor: F32, B30, L30, R30, T20, U20. ACL 5. TS 103. HC 3. Drive R. Push 6. Shock: 5. Weight: 6,470. Cost: $25,000.*

Oiler *– Muscle Car. Hvy Chassis. Hvy Suspension. Super PP. 4 Solid Tires. Driver. Passenger. Sunroof. 1 RR front. 1 OJ Left. 1 OJ Right. 1 MD rear. 3 links for OJs and MD. Fire-Proof Armor: F40, B43, L40, R40, T20, U20. ACL 5. TS 105. HC 3. Drive R. Push 6. Shock: 5. Weight: 6,305. Cost: $19,970.*

Picasso Trigger *– Sedan. Hvy Chassis. Hvy Suspension. Low Profile. Super PP w/ Super-Conductors. 4 PR Tires. Driver. Turret Gunner. 1 Paint Gun front. 1 Medium Laser in Turret, 1 Fire Extinguisher. 2 10DP Hubcaps. 2 10DP Wheelguards. Teflon Grain Armor: F27, B27, L27, R27, T27, U21. ACL 10. TS 121. HC 4. Drive A. Push 6. Shock: 4. Weight: 5,583. Cost: $19,988.*

Scorpion *– Reversed Heavy Trike. Low Profile. Ex-Hvy Chassis. Hvy Suspension. Driver. Targeting Computer. Super Trike PP. 3 Solid Tires. 2 10DP Hubs. 2 10DP Guards. 2 Linked MML Front. 1 ML Rear. Fire Extinguisher. Titanium Grain Armor: F40, B32, L36, R36, T30, U30. ACL 5. TS 96. HC 4. Drive All. Push 3. Shock: 3. Weight: 3,255. Cost: $19,984.*

Snapper *– Sport Pickup. Hvy Chassis. Hvy Suspension. Driver. Large PP. 1 Anti-Tank Gun Forward. SWC. 4 Solid Tires. 2 10DP Front Caps. 2 10DP Rear Guards. Armor: F44, B44, L42, R42, T30, U30. ACL 5. TS 90. HC 2. Drive R. Push 5. Shock: 4. Weight: 5,998. Cost: $14,476.*

ROAD TRIP MIX TAPE

Side A

Gear Jammer – George Thorogood
Born to be Wild – Steppenwolf
Highway Star – Deep Purple
Radar Love – Golden Earring
Thunder & Lightning – Thin Lizzy
Stroker Ace – Ween
Fuelled – Anthrax
Search & Destroy – Red Hot Chili Peppers
Rock in America – Night Ranger
I Can't Drive 55 – Sammy Hagar

Side B

Keep Your Hands Off My Power Supply – Slade
Addicted to Bass – Puretones
Skidmarks On My Heart – The Go-Gos
Barracuda – Heart
Come See, Come Saw – Rocket From the Crypt
Cruisin For a Bruisin – Reverend Horton Heat
Jerry Was A Race Car Driver – Primus
Jesus Built My Hotrod – Ministry
Ghost Riders in the Sky – Dick Dale
End of the Road – Jerry Lee Lewis

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