

# Common Motorsports Terminology

## High Performance Driver Education

### Porsche Club of America - St Louis Region

Just like any sport, motorsports has its own terminology. If you're new to the track or don't follow racing, you may want to spend some time reading through this list of common terms to help bring you up to speed before track day. Rest assured, all of this will be covered in class, but a basic knowledge beforehand can be most beneficial.

#### Driving or Vehicle Related Terms:

- **9 and 3:** This refers to your hands on the wheel and the hands of a clock. In this case, the 9 and 3 o'clock position. This allows drivers to securely hold the wheel, all while allowing them to freely rotate the steering wheel from one direction to the other. By placing your hands here, you can safely navigate a track without having to remove your hands from this position.
- **Cook the brakes:** This phrase is commonly used in reference to an action caused by a driver over using the car's brakes. Essentially, it means that the brakes have been overheated
- **Contact patch:** This is the portion of a car's tire that is physically in contact with the road.
- **Downshift:** A downshift can occur whether you're manually shifting gears or in automatic mode. This is the process of a transmission moving into a lower gear from a higher gear. This happens prior to or while braking, in order to allow the car to utilize power after a turn is executed.
- **Entry/Exit Speed:** This refers to the speed a driver and car are carrying, as it is entering or exiting a turn.
- **Ease off:** "Ease off" is a phrase used to help describe a method of braking, in which the driver slowly releases the brake pedal to avoid upsetting the vehicle balance.
- **Eyes up:** Phrase used to help coach a driver into looking further down the track for upcoming obstacles; such as finding the next turn or looking for a reference point.
- **Hand signals:** Hand signals are sometimes used by an in-car instructor to communicate things like brake, turn, and accelerate.
- **Lift:** Lift has a double meaning in motorsports. One form of lift is when a driver removes his/her foot off of the accelerator. The other form of lift refers to air pressure beneath the car that forces the car upward.
- **Oversteer:** This means the car's rear-end has over rotated during a turn. This can happen due to a shift in balance, or it can be induced by adding too much throttle, causing the rear tires to lose grip.
- **Understeer:** While entering a turn/corner, the momentum leading the car forward must be met by grip from the front tires, and later propelled around the turn while accelerating. If

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the speed and momentum in which a turn is entered exceeds the grip of the tires, this will lead to understeer. This means the car will “push” itself away from the apex of the turn.

- **Point By:** This is a hand signal given by a driver, notifying an approaching driver which side to pass on, and when it's ok to pass.
- **Roll on the throttle:** This is a term often used in conjunction with “smooth inputs” as it refers to your interaction with the throttle/gas pedal. In this case, the interaction is considered to be a “rolling” motion, rather than a stabbing action. This helps build speed and avoid loss of traction. Think of adjusting the volume on your stereo and how you interact with a volume knob.
- **Smooth inputs:** Smooth inputs refers to the method in which a driver interacts with a vehicle's controls. In this case, we're referring to “smoothly” making steering, braking and accelerating inputs, as opposed to quick/stabbing actions.
- **Track out:** while driving the racing line, you will guide your car from the outside to the inside of a turn, followed by the outside. The process in which the car is guided to the outside is called “tracking out” (see graphic at the end of this document).
- **Turn in:** Simply put, this refers to the entry position of a corner or turn. While driving a vehicle on track, your goal is to put your vehicle in the right position to execute a proper turn in as you point toward the apex of the turn.
- **Warm up Laps:** Warm up laps are executed to ensure that a vehicle which intends on driving on a race track, is operating at optimal temperatures of the engine, brakes, tires, and more.

## Track Related Terms:

- **Apex:** In motorsports, this term refers to the midpoint of a turn. When “attacking” a corner, the driver's goal is to “clip” the apex, by successfully directing the car to and through the midpoint or apex of the turn.
- **Blend Lane:** The blend line divides the pit lane exit from the cars on the track. This lane is utilized by cars who are entering the track from the pit area. It is imperative that cars on track maintain their distance from the blend lane to avoid collision with slower moving vehicles. It's equally important for cars entering the track to stay within the blend lane to avoid a collision with faster moving vehicles.
- **Brake Markers:** Brake Markers are numbered signs located at various turns on a race track. These typically start with a number such as “4” and go down to “1” as you approach your turn-in point. These signs are meant to indicate you're approaching a braking zone, and the suggested distance to begin and end your braking.
- **Brake zone:** This is a section of the track, leading to your turn-in point, where braking is meant to take place. Oftentimes, this zone can be identified by brake markers, however, this must be managed and understood by the driver and their vehicle.
- **Carousel:** The Carousel is a large, circular shaped turn, featured at many racetracks.

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- **Constant Radius:** The constant radius turn is one that is circular, typically flat/level, and has a long consistent apex.
- **Decreasing radius:** This is a circular style turn with a radius that decreases as you near your track out position. This also influences a late apex.
- **Chicane:** The chicane is usually one of the slowest turns on the track. A chicane is usually in the shape of an S or Z, and involves quick transfers in weight, as the car progresses from turn entry to turn exit of the chicane.
- **Cold Track/Pit:** When the track/pit is not being used by any vehicles (for racing/driving at speed) then the track is considered to be “cold”.
- **Hot Track/Pit:** This is the opposite of a cold track and means that cars are or will be driving on the track at speed and all necessary track personnel (corner workers) are in place. No other vehicles or pedestrians are allowed on the track at this time.
- **Corner worker:** Personnel located at various vantage points around a racetrack. These are track appointed individuals who communicate with race control and those on track via radio and flags.
- **Curbing/Gators/Rumble Strips:** Around corners/turns and sections of the racetrack you will typically see multi-colored strips of raised pavement at the edges of the pavement. Curbing comes in various shapes, sizes and colors, as some are flat, while others have raised and lowered sections giving them texture and structure. You may see advanced drivers using curbing during turn in or track out, it's best to stay off curbing until you are familiar with the track and learn which curbs are meant to be used and/or avoided.
- **Esses:** Are a series of turns on a track that is shaped in an “S”. This turn style requires poise and balance as most esses can be taken at speed.
- **Grid:** Before a race, cars will be positioned in a format known as the grid.
- **Hairpin:** This is typically one of the tightest/slowest corners/turns on the track. A hairpin requires a full 180-degree turn from where the driver enters and exits the corner.
- **Late Apex:** A late apex will occur in situations such as a “decreasing radius turn” forcing the center point of the corner to be further away from the turn in point.
- **On Camber:** A corner/turn is considered ON camber when it's apex is the lower part of the track from the point of your turn in.
- **Off Camber:** A corner/turn is considered Off Camber when it's apex is on a higher part of the track from the point of your turn in.
- **Off track:** Any time a vehicle's wheel(s) comes in contact with anything other than the track pavement or curbing/gators/rumble strips.
- **Paddock/Garage:** The paddock is located beside the pit and race track. Typically this is where participants will park their vehicles and equipment. Garage spaces are always reserved in advance. Participant parking spots are typically established on a first come basis and remain throughout the day since their equipment is kept there as well.

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- **Pit lane:** This is a designated area used by cars and teams participating in an event on track. This is considered part of the “hot track” area, meant to be used by those with the proper credentials. The pit is often used for maintenance of vehicles, driver changes, and other necessary actions related to the event occurring on the track.
- **Driving line:** The racing line is the fastest way around a racetrack. The racing line will continually adjust based on real-time factors; such as the type of car, its tires, speed, and other outside factors.
- **Off line:** The line on the racetrack which is other than the driving line. Cars that are “crippled” during a track session may choose to drive off line while making their way to track exit.
- **Reference point/s:** While driving on the track, it’s best to keep your eyes up and focused ahead or down the track. Fixed points, like a cone, a sign or an asphalt patch can help you establish where to begin braking, when to turn in, or how to get through a blind turn.
- **Sweeper:** This is a generalized term used to describe the sweeping motion of a long and fast turn/corner on a track.

