



Welcome to The HPDE. Use this manual to get an idea of what happens when you show up at the track, and what you need to know to participate in this event. Officials and instructors will be on-site to answer any questions and guide you through the day.

Remember, always listen to the officials and track workers, be safe, keep your eyes and ears open, and most of all HAVE FUN!

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Welcome to The HPDE

Shift up, shift down, turn-in points nailed, apexes clipped, downshifts rev-matched, trail brake mastered, the perfect lap is a never forgotten, lifelong experience.

Our Method, your perfect lap

Since 1972, at places such as Daytona, Le Mans, and Sebring, The High Performance Driving Experience coaches have developed a very specific method of training, effective for teens to professional drivers. Our method aims to safely push your abilities and discover that your own limits, and the car's, are higher than you'd imagined.

What it's about

You'll be driving your car at speed on a track, learning to better control your car and understand how it responds to your inputs. You will learn, or refresh your memory of, the basics of driving at speed and techniques that will help you improve on those basics. This will help prepare you for emergencies, both on the track and on the street. While you will explore both your and your car's capabilities, you won't be pushed or encouraged to go any faster than is comfortable for you.

****You are not attending a racing school – outright racing is strictly prohibited. This is not practice for any racing or speed competition****

At your first High Performance Driver's Education event you'll learn skills that you can use in your everyday driving. You're probably excited and maybe anxious. As you study this guide, remember that everyone at the track was new once and probably felt just as you do now. This is not a racing school. Your instructor will help you learn at a comfortable and enjoyable pace.



HOW TO PREPARE & WHAT TO BRING

What you need to bring:

- Valid US Drivers License
- Completed Technical Inspection For
- Helmet that meets certifications outlined on the Technical Inspection Form
 - *A limited number of rental helmets are available, please contact us prior to the event to reserve a rental helmet if desired*
- A vehicle that meets the requirements outline on the Technical Inspection Form

Preparation & Attire:

- If you are planning on driving to the track in the morning, be sure to allow enough time to arrive promptly when registration opens
- Check the weather forecast and adjust your clothing as appropriate. This event runs regardless of the weather, even in pouring rain, freezing cold or broiling heat.
- Sunglasses, hat, sunblock and a poncho/raincoat are a great idea
- ***WEAR CLOSED TOE SHOES APPROPRIATE FOR DRIVING ONLY. FLIP FLOPS OR ANY OTHER TYPE OF OPEN TOE SHOE ARE STRICTLY FORBIDDEN ON TRACK!***
- For safety reasons rubber soled shoes are highly recommended. Leather soled shoes are a bad idea.
- Review this manual in its entirety

When you arrive:

- Enter the track, report to the registration trailer
- Sign-in, present your drivers license and completed Tech Inspection Form
- ***PLEASE HAVE YOUR TECH INSPECTION FORM PRINTED AND COMPLETED/SIGNED IN FULL – WITHOUT IT WE CANNOT LET YOU ON TRACK!***
- Make sure you receive your run group sticker and arm band
- Report to driver meeting – refer to schedule distributed prior to event for timetable
- Novice drivers will be paired with their instructors after the meeting
- Instructors report to Instructor meeting
- Familiarize yourself with this manual

Prepare yourself for an exciting day at the track!

Run Groups

Group 1 - Advanced Solo / Licensed Racers

Experienced drivers who have completed multiple high performance driving events at the solo level (documentation of experience is required) or drivers with current competition licenses.

Expected to know the basics and advanced techniques of car handling, driving in traffic, track awareness including flags and worker stations. Experienced in safely handling unexpected situations. Possess the required professionalism of driving at the limit with safety as the number one priority. Drivers must be experienced in unrestricted passing zones. A “point by” is required so drivers are aware of all passing situations. This is the ideal group for racers who need practice, additional seat time, testing, shake-downs, or the advanced HPDE driver that is ready to move to the next level!

Group 2 - Intermediate Solo

Participants that have driven many track-day or HPDE events, or drivers that have been approved to advance from Novice to Intermediate Solo group.

Group 2 drivers are expected to know the basic techniques of car handling, handling traffic, track protocol, track awareness, including flags and worker stations. Drivers must exhibit the ability drive at or near the limits of their car in a safe and controlled manner. Passing is restricted to designated straights with “point by” only.

Group 3 – Novice

Participants that have never driven on a road course, or drivers with limited experience at track events.

Group 3 drivers will learn the basic techniques of:

- Physics & Vehicle Dynamics
- Driving at speed
 - Braking & Accelerating – The basics
 - Shifting
 - Driving line
 - Corner Negotiation – Approach, Apex (mid-corner), Exit
 - Advanced Braking Techniques
- Track worker protocol & flagging
- Managing Traffic & Track Awareness

Novice drivers will be assigned an instructor at each event. When an instructor feels that a novice is ready to drive alone, they will recommend an evaluation by a Senior Instructor. Classroom instruction will be provided by one of our Chief Instructors, and is a requirement for all Group 3 drivers. Passing is restricted to designated straights with “point by” only.



Run Schedule & Timetable

The day will be divided in 25-minute sessions. Each run group will alternate throughout the day, with one break for lunch.

*****EVENT TIME TABLES WILL BE DISTRIBUTED PRIOR & DAY OF EACH EVENT*****

The HPDE Track Rules & Safety

The HPDE is a provider of weekend track days where drivers get the opportunity to bring their cars and drive at high speeds legally in a predictable controlled environment.

Overall SAFETY and SAFE DRIVING is the paramount priority for The HPDE, its officials and staff, and all safety and track personnel. Anyone driving in an unsafe manner as deemed so by The HPDE officials, staff, safety and track personnel will be removed from the track.

ALWAYS DRIVE WITHIN YOUR ABILITIES AND EXERCISE GOOD JUDGEMENT

REMEMBER - SLOW IN, FAST OUT

- Drugs and alcohol are strictly prohibited.
- *You must obey these rules, the rules covered in the driver meeting and classroom, the direction of The HPDE officials, staff, safety and track personnel at all times. Anyone can be expelled from the event anytime at their discretion.*
- Be familiar with what the track flags look like and what they mean. Study the track map and track worker station positions.
- PIT LANE SPEED LIMIT IS 5-MPH. STRICTLY ENFORCED.
- You are liable for any damage you cause to the track, facility and other vehicles.
- You must only enter the staging area and hot pits when completely ready to drive (helmet, belts, gloves, onboard equipment and settings good-to-go). Present your wristband to the Pit Exit Official when he signals you onto the track. Always check your mirrors before pulling into pit lane.
- Only vehicles with run-group stickers will be allowed on track. Do not lose your sticker.
- It is recommended to run the first lap of your session at a reduced speed to bring the car up to operating temperature (brakes and tires don't work as well when they are cold).
- Be mindful of your mirrors and the traffic behind you. If there is a car right behind you it is probably faster, consider giving a point-by in the next passing zone.

(Track Rules & Safety, cont.)

- If you have a high horsepower car, and get passed in turns but can easily blow-by again on a straight, consider lifting to create some space, as this can get very frustrating for lower-hp cars with track oriented setups that constantly end up behind the same car through the twisties.
- Don't feel pressured to let people pass. Only give the point-by when you are in a designated passing zone and are able to do so safely.
- Strictly adhere to passing protocol. Passing is only allowed in the designated areas discussed in the drivers meeting, and only via point-by from the driver ahead.
- **NO PASSING IN THE TURNS AND ONLY IN DESIGNATED PASSING ZONES**
- A point-by shall be given by any car being passed, and the trailing car will only pass unless given a point-by. A point-by is given for each car to pass by extending the left arm out of the window and pointing towards the passing side (ex. 3 cars 3 point-bys). Anyone spotted in violation of passing without a point-by or in a forbidden zone will be black flagged immediately.
- The car being passed should stay on-line and a courtesy lift given (if safe) so that the pass may be completed safely. Do not "jerk the car over" to let the car by. The predictability of the slower car is the only thing the passing car has to rely on.
- It is the responsibility of the passing-car to execute the pass safely. If at any point the pass becomes unsafe, the passing car's driver is to back off and wait until given another point-by.
- The car being passed should never race the car to the next corner as it is vital that the overtaking car have time to be safely in front before the turn.
- When you see the track workers waiving the checkered flag your session is over. Decrease speed to cool your car and drive to the pit exit. Do not speed in the pit exit area.
- When exiting the track the driver will extend the left arm out the window straight up in a fist to indicate he/she is exiting the track. Give the cars behind you enough notice to be able to anticipate your actions.
- **IF AT ANY POINT YOU SPIN, SOMETHING BREAKS OR YOU LOSE CONTROL OF THE CAR – DO NOT PANIC. DO NOT IMMEDIATELY MOVE THE VEHICLE. ASSESS THE SITUATION AND IF THE CAR IS DRIVEABLE BEGIN MOVING AGAIN ONCE YOU HAVE ASSESSED YOUR SURROUDINGS AND DETERMINED IT IS SAFE TO DO SO.**
- Always look for the nearest Track Personnel to ensure they are aware of your position on track and have issued an appropriate Track Flag.
- If your vehicle becomes stuck on track, **DO NOT EXIT THE VEHICLE** unless you absolutely must for your safety. Wait until a track worker comes to provide you with instruction.

Track Flags



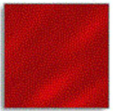
Green Flag – The GREEN FLAG indicates the track is open, clear to run



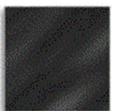
Yellow Flag - The YELLOW FLAG indicates trouble on the track, either on-track incidents or other conditions that threaten the safety of the event. No passing and slow down in the area in which the yellow flag is displayed.

A WAVING YELLOW FLAG indicates immediate danger – the more vigorously waved, the greater the danger. No passing. Be prepared to stop. The waving yellow flag is the first and immediate response by corner workers to any incident.

A STANDING YELLOW FLAG may also be used to indicate no passing on the warm-up and cool-down laps.



Red Flag - The RED FLAG is waved to indicate serious trouble on the track. All cars must promptly come to a controlled stop. It will be displayed at all flag stations simultaneously. Do not slam on the brakes, but rather first check your mirrors for cars following closely behind you and bring your car smoothly to a stop offline and within sight of a flagging station.



Black Flag - The BLACK FLAG is used as a warning to a particular driver. Upon direction from Control, certain designated flagging stations will display the black flag and point it at the offending car. If you receive the black flag, acknowledge with a hand wave, proceed to Pit Road and report directly to Control. The black flag may indicate either mechanical trouble or incorrect driving. Extremely careless, unsafe behavior or failure to respond to a black flag may result in ejection from the event. Flag stations must report all safety problems to Control.

A STANDING BLACK FLAG is also used to indicate that all cars must smoothly and safely exit the track, usually to clear an incident.



Debris/Slippery Flag - The DEBRIS FLAG indicates that there is an obstacle on the track you should avoid, such as slippery fluids, a cone, car parts, dirt, or an animal. No Passing. Slow Down. Reduce speed until you understand the obstacle. This flag may be pulled in after you've seen it, yet the obstacle remains. If you see the debris flag again, it may be a different obstacle.



Passing Flag – The PASSING FLAG (Blue with Diagonal Yellow Stripe) indicates that there is faster traffic behind you and you should consider letting them pass. This is not a mandate to let the car behind you pass, as the ultimate decision regarding safety rests with you. If you decide to let the car behind you pass, begin to execute a safe passing maneuver, including appropriate point-by, at the next safe opportunity in a designated passing zone. Use a distinct point-by for each individual car you want to let pass. Stay on line and lift if necessary to help faster vehicles pass safely.



Checkered Flag – The CHECKERED FLAG will be displayed at designated flagging stations at the conclusion of the Run Group's track session. After receiving the checkered flag, you may see a standing yellow flag at every flag station you reach. Do not pass other cars and do not try to squeeze in an extra lap. Proceed around the track at reduced speed to cool your brakes and report to the pit area.

Terminology

APEX (Early / Late)

The point during the corner where the car comes closest to the inside edge of the turn. This can occur early or late depending on the specific turn or series of turns, driver style, conditions, and track configuration. Usually an early apex is not desired, with late apexing being a commonly employed method to gain speed.

BALANCE

The vehicle dynamics of front vs. rear end grip. In cornering, the aim is to get a balance of front and rear cornering traction. In braking, it is a matter of having the front and rear ends of the car do their appropriate share of braking in proportion to their different downloads.

Proper balancing of the car is essential in high performance road course driving. It is a main factor in obtaining higher speeds in a safe and controlled environment.

UNDERSTEER AND OVERSTEER

The tendency of either the front or rear of the car to lose grip before the other in a turn. The tendency of a car to do one or the other in a given turn will affect how it turns-in, corners (rotates), and tracks out. If the front loses traction first, its understeer (aka. "push"); if the rear goes first, its oversteer (or "gets loose")

"BLIP" (the throttle)

In order to perform a proper downshift at higher speeds, a throttle "blip" enables an increased engine RPM to allow the engine speed to match the driveline speed for smooth engagement of the next lower gear. This is usually done while braking which means; you are using the brake and the gas pedals at the same time. This is NOT something you learn at the track. You should practice this technique, often called "heel & toe" downshifting at lower speeds on a clear highway. You perfect it at the track, but learn it elsewhere. Missing a throttle blip and downshifting while turning can cause you to spin.

BRAKE POINT

This is a specific point prior to corners where you must be on the brakes, slowing the car for the turn. If you go past your brake point at a high rate of speed, you will not make the turn. It is in your best interest, and will be MUCH safer to begin your laps by braking EARLY into a turn and then slowly gaining the skill and confidence to brake later. You also have more to gain by working on your exit speed.

(terminology, cont.)

CORNER ENTRY

This is the area where you are decelerating while making your turn into the corner. Once you begin the corner, you will then slowly begin to apply throttle, all the way through the turn. You may also hear your instructor refer to this as your "Turn in Point".

GOING DEEP INTO A CORNER

This is where you delay your corner entry "turn in" as long as possible. This allows for several things, one of which is a "late apex". Keep in mind however, very little time is gained by braking too late. Usually the fraction or two of a second you may gain is offset by the loss in speed you carry through the turn and subsequent exit speed.

EXIT SPEED

The speed a car can attain at the "track out" point of the corner and consequently the speed carried onto the following straight.

This is one of the most important parts of high performance road course driving, working on obtaining higher exit speeds. This is where you can greatly decrease your lap times.

HEEL and TOE DOWNSHIFTING

This is where you "blip" the throttle in order to synchronize gears while downshifting, and at the same time continuing to have constant pressure on the brake pedal. This is not something you will learn quickly. In fact, it could take a very long time to master it, but if you never start practicing it, you won't get proficient at it.

LIFT

This occurs when you lift off the gas pedal, even if a small amount.

Be cautioned, lifting while in a corner can be very dangerous. It can cause the rear of the car to get light and spin around to the front. Knowing "when to lift" will prevent you from carrying too much speed into a corner.

LINE

This is the "best" path around the course. The "line" can vary with track conditions and the type of car you are driving as well as the type of tires you are using. You are looking to find the "fast line" around the track.

REFERENCE POINT

This would be a point on the track that you can visualize in order to know when to turn in, brake, downshift, etc...

(terminology, cont.)

TRACK CAMBER

Camber is synonymous with "Banking." Negative camber is when the track "leans" away from the inside of the corner. Positive camber is when the track "leans" into the inside of the corner. Negative camber works against you and Positive camber works with you.

TURN IN

This is the point at the start of a corner where the driver begins to turn the steering wheel into the turn.

TRACK OUT

This is the point of exiting the turn where the you begin to turn the wheel to steer the car out of the corner after the apex. You usually want to track out in a smooth arc until car gets as close as it can to the outside of the track to set yourself up for the next corner.

TRAIL BRAKING

Caution: You will hear this term at the track. It is NOT for beginners.

Trail braking is the technique of continuing your braking while turning into the corner. If not done correctly, it can cause you to spin. Do not use this technique until you get more experience!

WEIGHT TRANSFER

Whenever you accelerate, brake or turn you transfer weight around each of the four corners, front-to-back and side-to-side. Managing weight transfer is central to understanding how to effectively and efficiently negotiate the track.