

# **Full Throttle**

## **Track Orientation Manual**

**An introduction to road course driving**

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## 1. ORIENTATION SESSION

The track orientation is an informal, friendly, open way to get you acquainted with the track, each other and introduce you to the world of track driving.

There is a logical and predetermined sequence of exercises that each step relies upon to enhance your driving experience here at RPM. There may be things you already know and there will be many you don't. Be patient and considerate as others may not be at your level.

Passing this track orientation successfully will entitle you to a "Full Throttle Certification" which will be designated by the instructor signing you off as a solo driver.

The session in the class room will take about one hour discussing terminology, the start, each corner, passing, pit in, pit out, and the overall facility. Questions are encouraged. Do not be embarrassed to ask anything, there are no "dumb questions" and please don't assume you know the answers simply because you know how to drive your car on the street. This is a new environment for everyone and you should feel comfortable about all its aspects.

This manual must be read and understood in its entirety by all participants before they will be allowed to drive on course. This is a basic "Rules of the Road Course" program that everyone must follow to ensure everyone's safety.

**There are two goals you are required to ALWAYS keep in mind:**

**FUN AND SAFETY!**

## 2. INTRODUCTIONS

The purpose of this exercise is for us to get to know you and learn about your expectations of the orientation.

- Your name
- Home Town
- Profession
- How You Heard About The Track
- Driving Experience?
- What do you drive?
- Your Goals for this RPM Track Orientation

Be brief and truthful, we're not putting you "on the spot". We just want to make sure that everyone is here for the right reasons, and that your expectations are not unreasonable. After all, this is a not a competition and we want everyone to really get to know each other personally. It will make the whole experience more enjoyable.

### 3. SOLO DRIVER

Your "on track" orientation will begin with a parade lap with caution placed in each corner area. This will be your first look at the track so use this chance to find and recognize all the corner stations.

Your instructor will coach you through each corner and show you the proper way to enter and exit the turn. Concentrate on being smooth and consistent on each lap. You are learning the best line around the track and not simply how to drive fast. Speed will come with experience. Please remember the best line to drive may be different from car to car.

As you progress, use the information your RPM instructors suggest and then tailor it to your vehicle and your style of driving when you become comfortable. You will soon know the limits that you and your ride have to offer. RELAX! You should keep a loose and comfortable grip on the wheel, gripping it with all your might serves to give you stiff shoulders and jerky movements while driving. Relax your shoulders, and remember to breathe.

Remember, you are bonding with your vehicle & learning the limits. Tires squealing sounds cool, but it's caused from a lack of traction. **Traction is your friend.**

Below are the items your instructor will judge to decide if you are to be approved for solo driving.

- Judgment
- Technique
- Attitude
- Reactions
- Courtesy
- Flag recognition
- RPM Rules and regulation knowledge
- Vehicle Safety Awareness

**If you do not meet all of these qualifications, you will have a chance to return under the supervision of and instructor until you become more acclimated and more comfortable.** This does not mean you "failed" it simply means that you need a little more time to absorb the numerous elements of this demanding sport. If you are not signed off the first visit, come back and learn some more. You will drive just as much as the other participants, but will get to utilize the skills of an instructor a bit longer. Very few do not pass.

**In class you will receive a combined Tech form that you and your instructor will review with your car.** You will go over both the health of your car and your driving skills. If you have passed this list of requirements, an instructor will sign you off and you will be cleared for solo driving. Upon passing these requirements, your instructor may also recommend a run group to be used at future track days, based on your comfort level, your car, and a lot of other factors.

The most common mistake made by newly released drivers is that to go out and drive their cars harder than when they had an instructor in the car. **THIS ALMOST ALWAYS RESULTS IN SPINS AND BLACK FLAGS.** We recommend you actually take it down a notch and work your way back up slowly. You will not have a knowledgeable voice guiding you.

## **4. TRACK RULES & REGULATIONS**

### **PADDOCK**

**New for 2015 - all signs must be obeyed. There will be no transport vehicles, trucks, motorhomes or trailers of any kind NORTH of the concession building. This is a newly paved area and will be policed heavily to protect the newly laid surface. This area is for racecar traffic only!  
NO EXCEPTIONS**

- All motorized vehicles are to be operated by licensed drivers only. This includes pit bikes, scooters and mopeds.
- No skateboards or rollerblades. Skateboards operated by children will be confiscated until departure.
- Pit speed limit of 10 MPH applies to ALL vehicles.
- Spectators are only allowed in designated areas.
- No support personnel in hot pit or staging area unless approved and appropriate waivers signed. The paddock is the place to make changes to your car.
- TRACK IS NOT RESPONSIBLE FOR LOST STOLEN OR DAMAGED ITEMS.
- No alcohol is to be consumed by drivers or ANYONE in the paddock area until all driving sessions have ended. Drivers will forfeit their day by exchanging their wristbands for an alcoholic beverage at concessions before the end of sessions.
- The use of any illegal drugs, firearms or fireworks will NOT be tolerated on RPM grounds.
- Please no glass bottles.
- Please place all trash in marked barrels.

### **PETS**

- All pets must remain on a leash at all times.
- No pets are allowed in the pits.
- Please clean up after your pet.

### **PITS**

- Please do not climb, sit or stand on pit wall or fences.
- Please dump all oil, coolant or filter waste in appropriately marked waste barrels.
- Please report all fuel or oil spills to track officials immediately.

**NO MINORS ALLOWED IN THE HOT PITS AT ANY TIME!**

## **5. FACILITIES**

To help you fully appreciate our facilities, we built a real driving facility, not just a track. Here are some of the highlights of what is destined to become a world-class motor sports venue:

1. Built on 217 acres, RPM includes a 2.23 mile Road Course and an 1/8<sup>th</sup> mile Drag Strip "I-80 Dragway". Each one has a sanctioning body that records points on certain events to find regional and national champions.
2. Race Gas is provided by an on-premise SUNOCO Station. Please enquire with the track personnel regarding the purchase of fuel. AIR – Is free, and located near the Tech shed.
3. Rest Rooms & Showers – Located in the FINISH LINE building.
4. The FINISH LINE – Full service track eatery.
5. The training rooms are located either on the second floor of the tower or perhaps the pavilion near concessions. During our transition we will need patience as our facility goes thru some new growing pains as to this location.

## **6. THE ROAD COURSE**

1. The track surface at Raceway Park of the Midlands was constructed using the highest quality polymer asphalt. The advantage of this new surface is increased tire adhesion and decreased tire wear. These two big advantages will make your experience more memorable, and will allow you to repeat it more often.
2. RPM is a flat track that allows you the opportunity to see every corner and straightaway from every angle of the facility, you have the ability to see any incidents at anytime and be able to keep ultimate control on this very fast paced track.
3. The track width is 40 feet vs. the industry standard of 36 ft. This allows a few extra feet for recovery or just to make the lines as straight and fast as possible.
4. RPM has rubber wall barrier systems in place, and long runoffs that reward the driver with second chances vs. the concrete walls found at other facilities. Our barrier systems follow designs that have been tested at 150mph on Formula One cars. Safe is Good!
5. It is safer to be at RPM than the average highway.

## 7. YOUR INSTRUCTORS

1. Full Throttle Instructors have many years of actual track experience taken from the most famous and intense tracks in the United States. They will share their experiences and knowledge with you in order to make your experience a fulfilling one.
2. **TRACK ORIENTATION IS NOT A RACING SCHOOL OR DRIVING TECHNIQUE COURSE.** It is designed to guide and help novices and experienced drivers alike, be familiar with our track. We will be glad to help you one-on-one with any specific questions regarding technique after you have completed your track orientation.
3. The Instructors will keep a continuous watchful eye on you as you learn the course. We will keep you grouped in the most comfortable groups of drivers and let you advance at your own pace as you become more acclimated to the track and the other cars.
4. We will adopt a friendly and approachable relationship with you and listen to your needs as well as the needs of your vehicle. However, our staff will be wary of any potential problem students and will reserve the right for disciplinary action if the circumstances warrant.

Private Instruction is available by contacting Natha Waldbaum thru her web site [www.DriveFullThrottle.com](http://www.DriveFullThrottle.com) or emailing her at [Natha@drivefullthrottle.com](mailto:Natha@drivefullthrottle.com).

## 8. DRIVER PREPARATION

**Awareness** – Students should be aware that there will be other vehicles on the track during the orientation. Students should always be aware of the state of their vehicles. Check gauges and pay attention to the feel of your brakes and tires.

**Consistency** – Students should concentrate on consistently following the same driving lines taught by their instructors. It is much easier for us to evaluate, critique, and offer constructive feedback, and easier for you to become familiar with the track. One key to consistency is driving at a speed that allows you to perfect your technique. Trust us... the speed will increase, as you get smooth.

**It's not how fast you drive... It's how you drive fast...**

**Anticipation** – This is a major part of high speed driving and street driving. Anticipation gives you the edge to react when a split second is between you and the other vehicle. Watch for signs of loss of control and be able to differentiate your style from other drivers.

**Smooth is Fast – Fast is Smooth**

**Vision** – You should look as far down the track as possible, look where you want to go as opposed to where you don't want to go. This will train your eyes to watch for signs of trouble or flags ahead and let you concentrate on the road.

We recommend that you begin slow and work yourself up in confidence and vehicle control. Each Corner at MAM has been designed to give a different type of challenge at various speeds in various vehicles.

### **DRIVER TIPS**

1. **Adjust your seat so it is comfortable.** Your elbows should be slightly bent when your hands are at the 9 and 3 position on the wheel (which is where your hands should be the MAJORITY of the time). NO RADIO, A/C AND **ALL** WINDOWS MUST BE DOWN!
2. **Assume your clutch pedal and shift knob are red hot,** and that you will burn your hand and foot if you rest on them too long. Make your shift and get your hand back on the wheel! Your left foot should be on the dead pedal, or the floorboard, at least 90% of the time during each lap. This will save your clutch, and will allow you to brace yourself within your car, especially if you do not have a harness.
3. **Move slowly in the car.** All your movements should be fluid, slow and precise. Using "power shifting" and jerky motions will be sure to help you lose control of your car. If you need to correct a slide or improvise a line, do this SLOWLY, work with your car, not against it.

4. Until you master the lines, **do not attempt any trail braking, late braking or left-foot braking techniques**. Get your braking done in a straight line BEFORE the corner. Enter slow, exit fast... this is your key to quick laps. Going into a corner too slowly, will serve to teach you a good line. **IN SLOW – OUT FAST**
5. **NEVER DOWNSHIFT TO SLOW DOWN**. Use your brakes! If interested, ask your instructor for help with “heel toe” braking and shifting. When mastered, this is an important technique for smooth driving and longer lasting drive trains.
6. **Apply the brakes firmly and smooth**. “Slamming” the brakes will almost always result in overheated brake fluid, shorter brake life. If you do not have ABS, modulating your brake pressure is something you will need to learn in order to leave yourself a “safety margin” in your brake zone. At the end of braking, melt off the brake pedal. Popping off the pedal will upset the balance of the car, then be gradual and smooth with the gas pedal.
7. **Make sure you are comfortable....** If your seat is wrong, your harness hurts, you need sunglasses, or there’s something about the car that isn’t right, pull into the pits, get comfortable, and then return to the track.
8. Remember to **“DRIVE THE TRACK”**. Hold your lines, remember your brake points, and do not try to go faster just because the guy in front of you can. Drive the track, watch for others, but do not let them dictate your pace.
9. If you are faster than the person in front of you, be extra aware. The other driver’s initial reaction is to usually pick up the pace and try to go a little faster as you close in. This can often lead to them over-driving their limits and a spin or other mistake can easily occur. Do not “fill the mirrors” of a driver you do not know. They will not appreciate it, and it may save you from having to avoid a car sideways in front of you. Wait for your signal and pass safely.
10. If cars catch up to you in the corners, WAVE THEM BY at the next passing zone, they may be better drivers. **Outrunning someone on the straightaway does not always mean you are the faster car**. POINT AND LIFT, give them space, and they will soon be gone.
11. Be very aware of people “filling your mirrors”. Make your brake points a bit sooner while they are behind you and maybe light the brake lights a bit sooner. DO NOT let them push you to over-drive your limits. Keep your head, and point them by at the next legal passing zone.

12. Once every lap on the straight, **scan your gauges** for engine condition. This will become automatic if you do it in the same place every lap. This can save you a lot of headaches, especially as engine temperature rises during hot days. If your car is running hotter than normal, try slowing on the straights and letting it get some cool air. This is also a good way to let faster cars pass.

## 9. CORNER STATIONS

Each corner shares a safety area called a corner station. These corner stations are a key to your safety for these open track events, and they are your first line of defense when things don't go exactly as planned.

The people that staff the stations are specialty trained to be the first response to any possible incident that you get into on or around the track. Each corner station is marked with the corner station number, the number corresponds with the track corner number.

It is IMPERATIVE that you learn where all these stations are, and that you keep an eye on each one of them, every lap of every session. They are there to warn you of oncoming trouble and to help you when things go wrong.

The corner workers will be the ones displaying the flags explained in the next section; **MEMORIZE THESE FLAGS AND THEIR MEANINGS!**

### **HAVING A MECHANICAL ISSUE WHILE ON TRACK**

The corner workers are trained and have the proper tools to help you if you become disabled while on track. The most important rule is for you to stay in your car, with your helmet on, and seat belt on! It is very dangerous for you to be out walking around your car with the fast traffic of the track. PLEASE STAY IN YOUR CAR! The staff will see that you are not able to continue and will communicate with their radios to the Course Marshal and appropriate actions will be taken. The track will be cleared of traffic and a tow vehicle will be sent out to you.

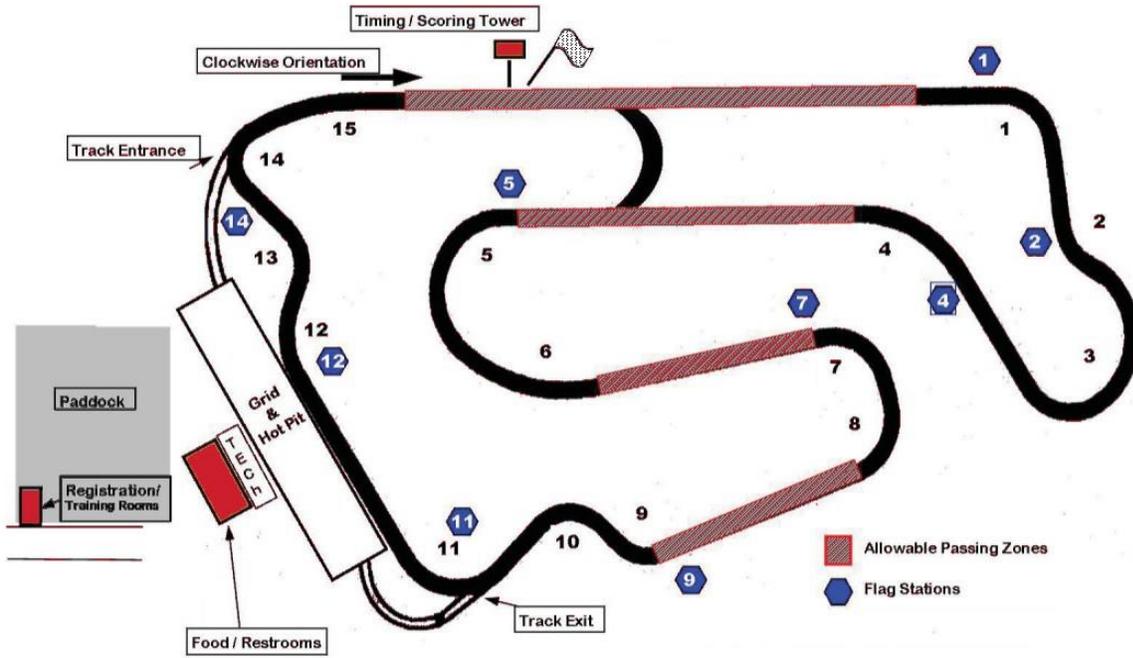
If and only if you are on fire, slow down and pull as close to the nearest corner station as possible and get out of your car. DO NOT CROSS THE TRACK. The corner workers & safety workers are trained to approach you with a fire extinguisher. Follow corner worker instructions. If possible, stop your car on either dirt or the track itself near the corner station instead of onto dry grass.

**CORNER WORKERS HAVE THE RIGHT TO FLAG AND REFER ANY DRIVER TO THE PIT FOR ANY REASON.**

# Track Map



**2.23 or 1.4  
MILE CIRCUIT**



## 10. FLAGGING

This is an essential part of your track knowledge for both your safety and the safety of all those around you. Flags are the only way the Course Marshalls have for communicating with you. Failure to comply with these signals will warrant disciplinary action.

### IGNORANCE IS NOT AN EXCUSE



**Green-** Start of session, course is clear.



**Yellow Stationary**— Caution hazard ahead, no passing. no passing until you are sure there are no incidents between that point and the next flag station.

**Yellow Waving**— Danger, slow down safely, no passing. A situation exists ahead.

**Yellow Double Flags**—Caution, double yellow at all stations. Danger, slow down safely, no passing.



**White**— Emergency, service or slow moving vehicle on the course. Watch for additional flags from corner stations.



**Blue w/Yellow Diagonal**— Information flag. A car may be trying to pass you. check your mirrors.



**Black w/Orange Disc**— Your car may have a mechanical fault. Proceed cautiously to early session exit at turn 15 and proceed to grid for mechanical inspection.



**Yellow w/Red Stripes**— *Caution* slippery surface or debris on the track.



**Black Closed/Furled**— Warning. You are driving over-aggressively or in an unsafe manner.

**Black Open**— Proceed safely to early session exit at turn 11 and proceed to the grid area for driving behavior discussion with event official. Listen to him/her!

**Black Open All Corners**— Run session is halted. Reduce speed safely, no passing. Proceed to early session exit at turn 15. Run session has terminated.



**Red**— Slow down safely but immediately and pull to the side of the track and wait for instructions / directions.



**Checkered Flag**— End of run session.

## **11. VEHICLE REQUIREMENTS**

We will count on you to know the limits set forth by the manufacturer for specific redline & braking situations of your vehicle. This information can be found in your owner's manual or many specialty magazines. Any aftermarket items that you may have added may alter the factory specifications. Please be smart and don't over drive your vehicle. Impress yourself first.

We want you to become "one" with your machine. This includes a pre-inspection and a post inspection done by you. This will keep you aware of the changing needs of your vehicle.

Your vehicle will need more frequent routine maintenance to keep you safe on the track and the every day road. Feel free to ask others what they use for fluids, brake pads, tires, and suspension items if you want more performance from your vehicle. We recommend that before you modify anything, you start with a baseline and then improve from there. Although additional horsepower comes in a box, it helps you very little without good driving skills. Improved driving comes with repetition and control.

### **VEHICLE REQUIREMENTS:**

1. Pollution control equipment need not be operational.
2. Suitable and safely mounted driver and passenger seats.
3. A full-size, street legal windshield. No cracks. Must be clean.
4. Removed hub caps
5. Targa or T-top vehicles must either bolt the removable panels in place, or remove them entirely.
6. Open cars must run with the top lowered and safely stowed.
7. All cars must run with both front door windows fully lowered.
8. Brake fluid - Less than 6 months old, reservoir full. (If your fluid is dark, a change is recommended)
9. Brake Hoses and Lines - Dry and in good condition
10. Brake Pads - 1/4" thickness or greater. New pads recommended.
11. Brake Pedal - Must be firm and release freely.
12. Brake Lights - Fully functioning
13. Battery - Securely fastened, good condition, no leaks corrosion, or exposed terminals.
14. Engine and Transmission - No fluid leaks. Reliable throttle return springs, no binding, returns freely.
15. Exhaust - Securely mounted.
16. Front Suspension - No looseness permitted. Bearings and joints in excellent condition.
17. Rear Suspension - Drive train and components in excellent condition. Suspension secure.
18. Wheels - No cracks or bends. Lug nuts torqued after each session. No hubcaps.

19. Tires - Good condition. No cracks, bulges, flat spots, or cords. Minimum 2/32" tread.
20. Mirrors - At least 2 securely mounted mirrors
21. All loose items inside and outside car must be removed. Passenger seat back and cushion must be secured.

### **SAFETY GEAR and APPAREL REQUIREMENTS**

1. SA2000 or newer helmet will be **required** after the completion of this course. RPM has M rated helmets to loan for the Orientation Course.
2. A restraint system meeting federal standards for the year of manufacture of the vehicle in each of the front seating positions. At a minimum, a 3-point system (Shoulder and lap belt) must be in place. Competition style 5-point systems are highly recommended. Mounted metal on metal
3. Flat sole leather shoes
4. Long cotton pants
5. Long sleeve cotton shirts
6. Fire Extinguisher - 2.5 lbs. minimum, ABC rated, securely mounted within easy reach of the driver.

### **VEHICLE PREP TIPS:**

1. Torque your lugnuts after each session. This is actually more than just a tip...you'd be amazed how quickly a lug nut can come off after driving at speed with hard repetitive braking.
2. Check and adjust tire pressures immediately after each session. Ask experienced drivers with similar cars for advice on proper pressures.
3. Bleed your brakes after any session where your pedal got spongy or felt different.
4. Check tire condition, fluid leaks and fuel level after EACH session.
5. Avoid engaging the parking brake after a fast session. Your pads can bond to the rotors when extremely hot. This does not mean that you leave your car freestanding in the paddock. Put your car in gear or use wheel blocks.
6. Vacuuming the car is not a bad idea. Dust and sand will fly when you're hitting 100+ mph with open windows, and debris can easily get into your eyes.
7. Clean everything out of your vehicle including the floor mats. Chasing pop cans or cell phones is very dangerous while driving.

## 12. TRACK OVERVIEW

MID-AMERICA CAN ONLY BE RUN IN THE CLOCKWISE DIRECTION. The track is not designed for reverse rotation. **UNDER NO CIRCUMSTANCE**, should a vehicle travel in the opposite direction. This includes spun cars and cars requiring corner worker assistance. Pit out is an entrance **ON** to the track, Pit in is an exit **OFF** the track. Please use them as such. Reverse traffic on these lanes can cause a serious situation.

### Turn-by-turn drive around:

Pit out – If the light is green, you have permission to enter the track. You will be entering the track in turn 15. You will NOT be able to see oncoming track traffic as you enter. **ONLY ENTER IF YOU ARE WAVED ON BY AN OFFICIAL OR A GREEN LIGHT, DO NOT ENTER THE APEX OF TURN 15 - STAY TO THE FAR LEFT - BE VERY ALERT.**

Turn 1 - At the end of the straightaway you will see your first corner. Brake hard and in a straight line before you start your turn. Turn 1 is a basic right-hander but requires proper set-up for correct exit position.

Turn 2 – A simple left hander connecting 1 and 3. Not a hard turn, but exit position is crucial.

Turn 3 – This corner will take the majority of drivers a lifetime to master. It's a decreasing radius turn that rewards careful drivers with incredible exit speed. It also punishes drivers with too much entry speed. Make your apex very late.

Turn 4 – A high-speed transition to the "return straight". **This is the beginning of a passing zone**, remember point faster drivers by you here.

Turn 5 – A relatively tight left-hander. Again brake firm and in a straight line before this turn.

Turn 6 – Graphically, this is a continuation and elongation of turn 5's exit. It's an increasing radius turn that will award you a lot of exit speed if done correctly. **This is the beginning of a passing zone.**

Turns 7 and 8 – This series of two almost identical right-handers, is connected by a "squirt" which makes finding the correct line somewhat tricky. Beware of your speed into 7, as it tends to sneak up on you.

Turns 9, 10, and 11 – Have Fun! These 3 turns are very tricky, and are all very dependent on each other. Make a mistake on one, and the whole series will be slow. It's slower than you think... if you've been "on the edge" to this point, you will probably spin; be careful.

PIT IN – The pit-in road is located on the outside of turn 11.

**WHEN YOU ARE HEADING TO PIT IN, YOU MUST SIGNAL CLEARLY WITH A HAND GESTURE. START SIGNALING AT TURN 8.**

Turns 12 and 13 – These turns are designed to slow you a bit before pit out. Also a tricky series, and a great deal of fun if hit right.

Turns 14 and 15 – 14 is a tight right hander that feeds into the more open 15. You will feed back onto the main straight so for small-cube cars, a fast exit is critical. This is your key to getting the most out of this extremely long straight. **This is the beginning of the longest and safest passing zone.** Signal anyone from behind you who is faster to pass.

### **13. PASSING**

Passing zones are designated between the following corners:

Zone 1 – Between turns 15 and 1

Zone 2 - Between turns 4 and 5

Zone 3 - Between turns 6 and 7

The following Passing Zones are for EXPERT drivers only:

Zone 4 - Between turns 8 and 9 (Group 5 only)

Zone 5 - Between turns 11 and 12 (Group 5 only)

If you come for an open track session after this program please make sure you review the passing rules with the Course Marshal before your first session. This insures everyone's safety!

1. The car in front (the one being passed) must "point and lift". This means you lift off the gas, move to the right, and give a visible passing signal out of your window.
2. Pass on left only. Passing on the right is strictly forbidden and very dangerous.
3. The car DOING the passing is responsible for a clean safe pass.
4. You are required to point and lift at the next passing zone when you are shown the Blue Passing Flag.

#### **DISCIPLINARY ACTIONS:**

- If you are shown 3 passing flags, and still have not given a signal, you will be Black Flagged for the session.
- If you receive 2 black flags for failure to signal, you will forfeit your night with no refund.
- Passing in other than a passing zone will get you a black flag, a rest for that session and a chat with the Course Marshal / Instructor.

## **14. SPINNING OR POOR CONTROL**

You will be required to consult the Chief Instructor if any of the following happens:

- You spin your car
- 2 or more wheels leave the track – (you will be black flagged, pull into the pits and see the Chief Instructor)

### **DISCIPLINARY ACTIONS:**

- IF YOU SPIN YOUR CAR TWICE IN ONE SESSION, THE COURSE MARSHAL WILL DETERMINE ANY DISCIPLINE OR FORFEITURE OF YOUR REMAINING SESSIONS.
- IF YOU ARE TERMINATED FROM 3 SESSIONS DURING THE COURSE OF ONE SEASON, YOU WILL BE REQUIRED TO PAY FOR AND ATTEND ANOTHER TRACK ORIENTATION SESSION.

If you happen to spin out and your car will not start PLEASE remain in your car with your helmet and seat belt on! This is the safest place for you to be when the track is hot. Corner workers will assess your situation and either end the session and send out a tow or approach you for information.

If you happen to notice that your car could possibly be on fire, cockpit filling with smoke, please park your car on the surface near the edge and exit the car entering the field to get away from your car. DO NOT CROSS THE RACE TRACK!

If you happen to already be off track, please just get away from the car as safely as possible without crossing or getting nearer to the track.

One rule to remember, to drop and roll if you think YOU are on fire....Practice safety!

## 15. CONTACT

**THERE SHALL BE NO CONTACT BETWEEN ANY VEHICLES AT RPM!  
THIS IS NOT A RACE!**

If any contact between vehicles were to occur, **both** drivers will be solely responsible for resolution of consequential damages to the vehicles and the facility. **Both** drivers will be barred from participation until both feel the situation has been resolved. RPM will not get involved in determining the fault or resolution of the incident.

Once the issue has been resolved between the drivers, both cars will need to be re-teched and a RPM official will need to be consulted. Incident reports will be filled out, signed by both owners, and kept on file at RPM.

Any physical confrontations between participants or spectators on RPM grounds will result in permanent expulsion from the facility with no refund.

If any property damages occur to RPM you will be responsible to settle with the RPM before returning to the track.

Yes, this policy is severe. It is intended, however, to protect everyone from the cost and aggravation contact will cause everyone involved.

**DON'T LET THIS HAPPEN! WE ARE NOT RACING EACH OTHER.  
WE ARE OUT TO ENJOY OUR CARS AND OUR FRIENDS!**

## 16. PASSENGERS

The only passengers allowed in cars are RPM instructors. This is an insurance issue and cannot be compromised in any way.

**ANY DRIVER FOUND WITH A PASSENGER OTHER THAN THEIR  
INSTRUCTOR  
WILL HAVE HIS / HER CREDENTIALS REVOKED IMMEDIATELY  
WITH NO REFUND**

## **WHERE DO I GO IF I GET A BLACK FLAG???**

### **After the completion of this course**

If you get a black flag, please come to station 14, the Course Marshal will inform you of the infraction. You may cautiously pass thru the hot pits to do so. Someone may be in the hot pits to give you this information or you may check with the Course Marshal at station 14.

If you get a mechanical flag please retire to the paddock to check out your car. If you cannot determine the problem, you may visit station 14 for help.

# **FULL THROTTLE**

## TECHNICAL INSPECTION FORM

EVENT DATE \_\_\_\_\_ DRIVER \_\_\_\_\_  
SECOND DRIVER? - \_\_\_\_\_  
YEAR \_\_\_\_\_ MAKE \_\_\_\_\_ MODEL \_\_\_\_\_ COLOR \_\_\_\_\_

### INSTRUCTIONS

Prior to bringing your car to the track, inspect each item on the car as noted on this Tech Sheet. Consult a tech inspector if there are any questions. Have this form filled out **prior** to going to the tech inspector.

### IT IS YOUR RESPONSIBILITY TO HAVE YOURSELF AND YOUR CAR TRACK-READY

- Suitable and safely mounted driver and passenger seats.
- A full-size, street legal windshield. No cracks. Must be clean.
- Remove hub caps / trim rings / non-bolted wheel covers
- Targa or T-top vehicles must either bolt the removable panels in place, or remove them entirely.
- Open cars must run with the top lowered and safely stowed.
- Brake fluid - Less than 6 months old, reservoir full. (Fluid should be light in color))
- Brake Hoses and Lines - Dry and in good condition
- Brake Pads - 1/4" thickness or greater. New pads recommended.
- Brake Pedal - Must be firm and release freely.
- Brake Lights - Fully functioning
- Battery - Securely fastened, good condition, no leaks, corrosion or exposed terminals.
- Engine and Transmission - No fluid leaks.
- Reliable throttle return springs, no binding, returns freely.
- Exhaust - Securely mounted.
- Front Suspension - No looseness permitted. Bearings and joints in excellent condition.
- Rear Suspension - Drive train and components in excellent condition. Suspension secure.
- Wheels - No cracks or bends. Lug nuts torqued after each session. No hubcaps.
- Tires - Good condition. No cracks, bulges, flat spots or cords. Minimum 2/32" tread.
- Mirrors - At least 2 securely mounted mirrors
- All loose items inside and outside car must be removed.
- Passenger seat back and cushion must be secured.
- At a minimum, a 3-point system must be in place. Competition style 5-point systems are highly recommended. Belts should be mounted metal on metal
- Fire Extinguisher - 2.5 lbs. minimum, ABC rated, securely mounted within easy reach of the driver is "suggested"

### DRIVER EQUIPMENT

- UPDATED** SA2000 or newer helmet (**M-rated helmets are not allowed**)
- Flat sole leather shoes
- Long cotton pants - **REQUIRED**
- Long sleeve cotton shirts - **SUGGESTED**

DRIVER SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

I have inspected the above vehicle and take full responsibility for its condition on the track.

Revised: 3-9-15

# DRIVER SIGN OFF FORM

Driver Name \_\_\_\_\_

In-Car Instructor: \_\_\_\_\_

(Instructor: Ask student to make their own comments then make notes on improvements)

- Judgment
  - Speed
  - Other Vehicles
- Technique proper seat? hand positions?
  - Braking
  - Acceleration
  - Entry
  - Exit
- Attitude
  - Towards learning following instructor?
  - Towards other drivers
- Reactions
  - Contact avoidance
  - Altering Lines
- Courtesy/Safety
  - Passing Signals
  - Attention to Mirrors
- Flag recognition
  - Meaning of flags behavior?
  - Compliance with corner workers
- RPM Rules and regulation knowledge
- Vehicle Safety Awareness – know your car

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STUDENT PASSED ORIENTATION Y / N

STUDENT TO RETURN FOR ADDITIONAL ORIENTATION Y / N

Instructor Signature: \_\_\_\_\_

**Return this form to lead instructor once signed.**

## **GLOSSARY**

**TURN-IN** – The point at corner entry you initially change the car direction to achieve the proper apex.

**APEX** – The point in a corner where a car is closest to the inside edge of the track. Drivers try to "hit" the apex to take the straightest line and maintain maximum speed.

**TRACK OUT/EXIT** – The point you accelerate towards when exiting a corner.

## Cornering

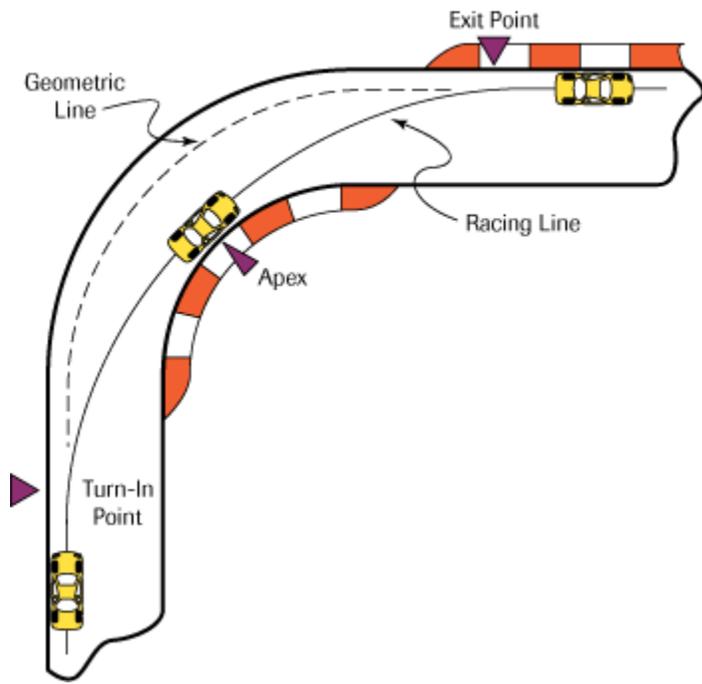
In the end, road racing comes down to cornering. Assuming equal cars, the driver able to sustain the highest speeds through the turns will have the lowest lap times.

To get terminology cleared up first, every corner is made of three parts. We'll call them the entry, the apex, and the exit. The entry is where turning begins. The apex is the point where the car reaches the furthest point on the inside of the turn. The exit is where the car is driving straight again.

The objective in driving through a corner, or a series of corners, is to have the fastest possible speed at the exit of corner, or the last corner of a series. It is not necessarily to have the fastest speed going into the corner, nor even the fastest speed in the middle of the corner. The last corner exit before a straight is the most important segment. The speed of the exit determines the speed during and at the end of the straight. If you can increase the average speed of an entire straight, that will have greater impact than a faster average over the shorter distance of the entry to the turn, or through the turn itself.

The path, or "line" you drive through a corner will determine the exit speed. In general, the fastest line through a corner is the one that allows the greatest radius, or straightest path. As a car can go faster around a large corner than it can around a tight corner, the shortest path around a corner is rarely the fastest.

To illustrate these concepts so far, the classic teaching aid is to look at a 90-degree bend. In the illustration below, the dotted line follows the path of the road. The solid line indicates a path which maximizes the radius of the turn, or attempts to make the turn as straight as possible. As you can see there is significant difference in the tightness of the turn which follows the even the outside of the road compared to one the which utilizes the whole width of the road surface.



## NOTES