SUBTHS

NEED FOR SPEED MOST WANTED

UNOFFICIAL: GUIDE TO RACING

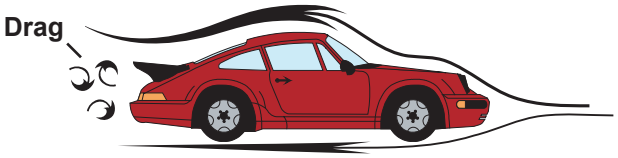
This is an unofficial guide so it is in no way affiliated with **EA Games** or **Need for Speed** . The only thing it has to do with **Need For Speed** is that all of the tips and tricks herein are in reference to the game **Need for Speed: Most Wanted** . This guide is free and is not intended for sale, if you wish to distribute the guide feel free as long as you do so with out altering the content. Give credit where credit is due. Got it? Good. Lets get started.

BASIC CONCEPTS

Before we get started with the fundamentals of handling the car there are a couple basic principals you should understand that may help you understand the car better. These are **Aerodynamics**, **Inertia**. We'll go over these in very brief detail and if you like to learn more there will be references at the end of the guide.

Aerodynamics: Down force and **drag** are arguably two of the most important aspects of a cars aerodynamics when it comes to racing. As cars reach higher speeds their potential for generating **lift** is much higher, they can become unstable and lose control or even leave the roads surface. Adjusting for more **down force** will help the car stay on the ground and achieve better **traction** but can also produce more **drag**.

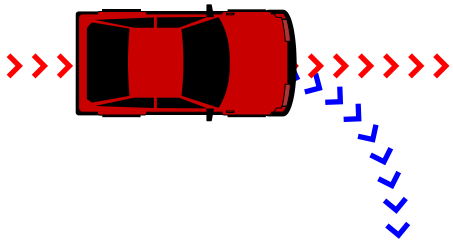
Drag is an aerodynamic force that opposes the cars motion and can hinder the cars ability to accelerate quickly and efficiently. As more **drag** is produced the car must generate more power to reach it's top speeds. Race cars are designed to produce minimal **drag** and street cars can be modified to do the same but as a general rule most street cars are designed with little concern for **drag** efficiency or **down force**.



In the game you can purchase parts like body kits and tails or "rear wings" that will give your car the option for adjustable aerodynamics. As far as we can tell the different parts do not have an effect on the efficiency of the aerodynamics of the car. Having both a body kit and a tail doesn't seem to make much difference either. This means that using a carbon fiber tail will be no different from using a normal tail and adding a tail to your car that is already fitted with a body kit will not increase **down force**. In **Need For Speed: Most Wanted** the only change will be in style.

Inertia: "*An object at rest tends to stay at rest and an object in motion tends to stay in motion with the same speed and in the same direction unless acted upon by an unbalanced force.*" That's Isaac Newtons first law and it's tried and true.

As the car moves forward at it's center of gravity it creates **inertia**, **inertia** is the resistance an object in motion has to any change in it's motion. The more weight a car has and **speed** the car maintains, the more inertia it develops. When a car tries to change it's directional velocity it has to fight it's own **inertia**.



In the diagram the red line represents the cars forward motion and **inertia**, the blue line represents the turn the car will make. We can see that even though the car turns, it's **inertia** maintains the forward momentum.
The car must effectively resist and change it's **inertia** to complete the turn with out losing control.

TURNING & BRAKING

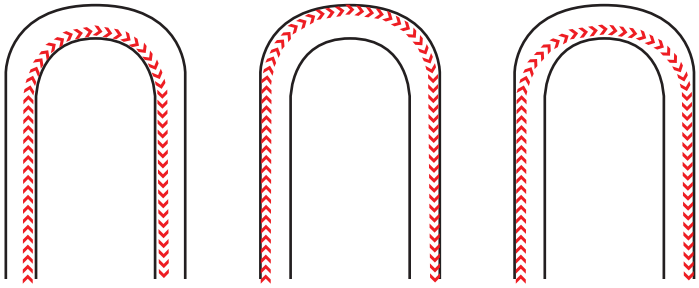
"Wide on the walls, close on the curves"

Resisting it's own **inertia**, especially at a high rate of **speed** is easier said than done. As the car turns, it's weight will shift in the direction of it's **inertia** and pull the car away from it's turn. If this isn't countered the cars weight and **gravitational forces** or (*g*-forces) will pull the tires in a direction opposing their rotation and the car will lose it's **traction**.

While lowering the center of gravity can help reduce the drastic effects of **inertia** on the car and while **down force** through superior aerodynamics can help the tires maintain their **traction**, the most efficient way to counter the effect, is to redirect the cars **inertia** towards the direction we would like the car to travel.

Changing a cars **inertia** is a tricky task, first the car must be able to resist the momentum of it's own weight, at high **speed** this is almost impossible so the car has to slow down. As the car slows down it's weight shifts in accordance with it's **inertia**, it is transferred to the front of the car. Because of this the front tires gain more **traction**. With this improved **traction** the front tires can be used to gradually shift the **inertia** of the car by turning and manipulating the transferred weight in a new direction, in this case, the direction of our turn.

In racing a turn must be broken down and analyzed in order for the driver to understand the most efficient way to enter, traverse and exit the turn.



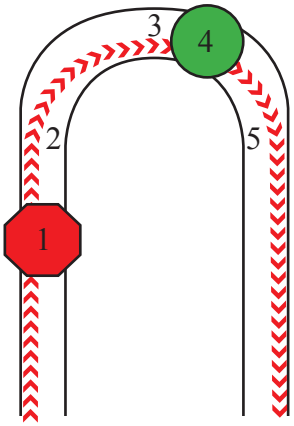
Here we have three turns and the paths that a car could theoretically take around them. The first turn shows the car taking the tightest path around the turn, while this path is the most efficient in terms of distance travelled it would also require the car to slow down considerably in order to effectively resist **inertia** and redirect itself successfully.

In the second turn the car takes the widest path around the turn, this would allow the car to maintain a higher **speed** while turning since it is not resisting it's **inertia** as dramatically as it would in turn one. However this turn also requires the car to traverse more ground and take a longer route through the turn.

In the third turn we see that the car is taking the same high **speed** path arch as it would have in turn two but it is meeting the turns apex at the same point that it would have in turn one. This is the ideal path to follow since the car maintains a higher rate of **speed** as well as traversing less distance through the turn.

In order to better understand how this is properly executed, lets break the turn down. There are 5 parts to every turn they are:

1. **The Corner Entry**
2. **The Cut Zone**
3. **The Middle**
4. **The Acceleration Zone**
5. **The Exit**



1. At the **Corner Entry** the driver begins applying the brakes and slowing the car down, this shifts weight to the front of the car, pushes the front end down and gives the front tires more **traction**.

2. As the driver enters the **Cut Zone** they release the breaks and begin turning the car towards the inner apex of the turn.

3. The **Middle** or **Apex** of the turn is a very short distance and for only a split second the car should be rolling with neither brakes or throttle applied.

4. The **Acceleration Zone** is just past the **Middle**, at this point the driver applies the throttle and begins to accelerate out of the turn and towards the **Exit**.

5. At the **Exit** the driver completes the arch while accelerating out towards the wall and leaves the turn.

ANALYZING A TRACK

Now we need to keep in mind that **Need for Speed: Most Wanted** is an "arcade style racer" and not a driving simulator, what this means is that while the principles may be the same the actual application of the physics differ. Generally arcade racers are a lot more forgiving when it comes to things like ***g*-forces**, they also tend to give the cars a bit more **traction**. So while you should concentrate on executing a turn properly, you don't always have to be precise and in some cases you can just flat out gun it. You'll also need to be the judge of which turns to take at high **speeds** with little to no brakes applied and which turns to slow down for dramatically. You can do this by analyzing the track and practicing the turns. Below is a track analysis for a real world race track. Have a look at it and lets decipher what it says and why.

The Line: in our analysis we'll be following the white line. There are a couple detours in this map for light weight and heavy cars but we'll be focusing on the standard racing line. Also take note of the yellow and black bars along the outside, these are areas where poor driving will lead cars off of the track.

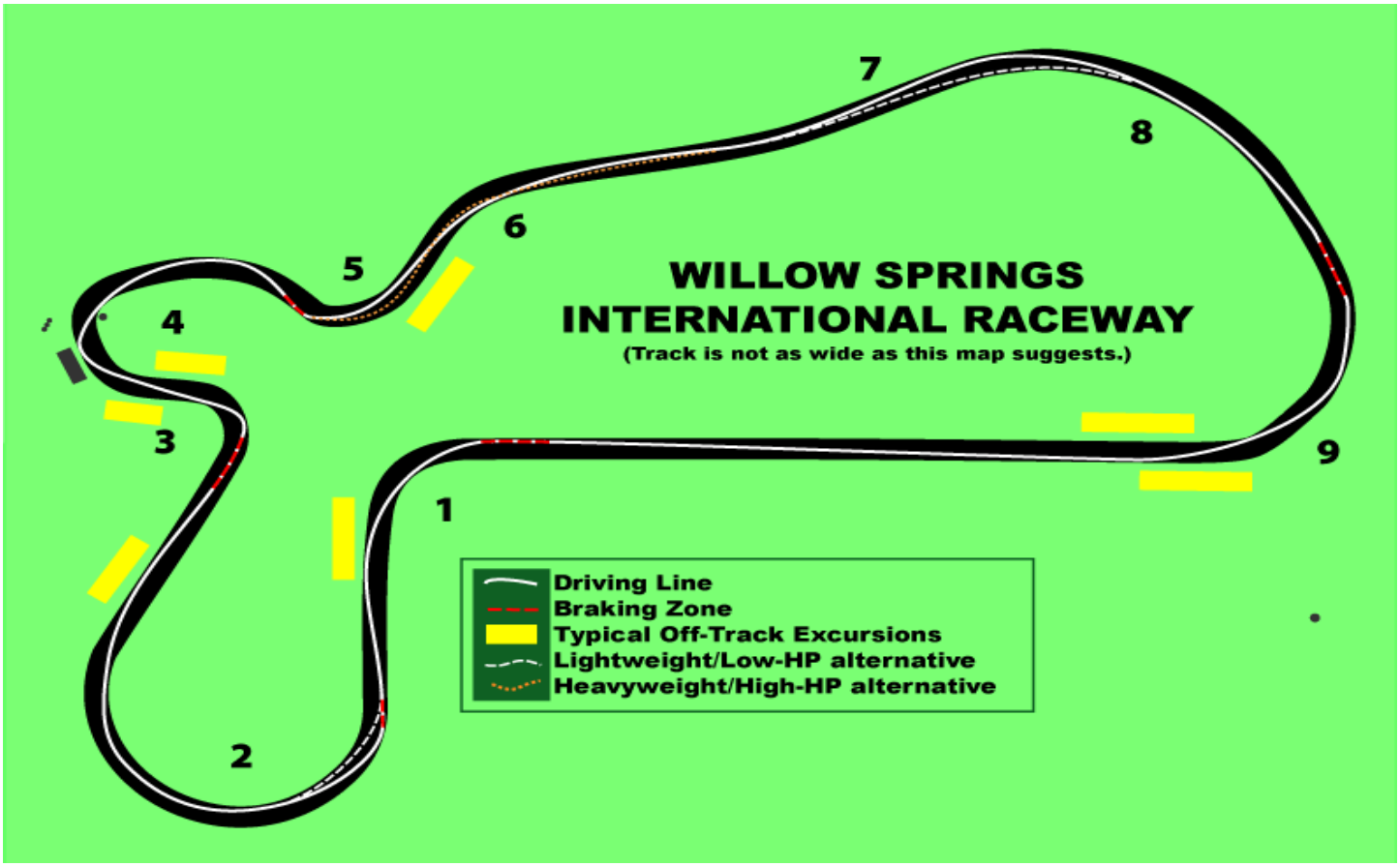
Turn One: As you can see the most efficient plan of attack is to brake at the start of the turn or **corner entry** and begin "**wide on the wall**", as the car traverses the turn at it's apex the driver should maneuver the car towards the center of the turn, "**close on the curve**", arcing wide again at the **exit**.

Turn Two has a slight deviation just past the **apex** where we would normally see the **acceleration zone** but isn't too drastic. Since it's better explained in turns eight and nine we'll move on to turn three.

Turn Three is taken a bit differently, almost the opposite of what we've discussed on the previous page, this is due to the "S-curve" ahead into turn four and then again through turns five and six. As you can see the car still breaks before going into the turn, as indicated by the red dashed line, but this time the car goes wide at the apex of the turn and angles itself to move straight through the S and reaches another sharp turn at the corner entry of turn four.

Turn Four: Since the car probably hasn't reached too high of a speed by the time it nears the wall at turn four the driver should be able to ease off the gas just enough to make this turn without applying the brakes, this would change if the distance between the two turns was greater and the car had enough room to reach higher **speed**.

At **Turns Eight and Nine** we can see a more dramatic example of the driving path seen in turn two. Rather than approach this as one turn the car executes the first half of the turn like an individual turn and then applies the brakes just wide of the **apex**, drawing a new turn line out of turn nine. This may seem inefficient but in application it allows for slightly more **speed** and allows the straight path to turn one to be lengthened, giving the driver more time to accelerate and reach faster **speeds** before the next corner entry.



STEERING & HANDLING

Steering and handling in **Need for Speed: Most Wanted** is a bit tricky at first but a few tips should help get you on your way. For PC gamers it's recommended that you use an analog controller. There are several manufactures make good control pads for the PC like, Logitech, Saitek and Microsoft.

Ideally steering is done by gently turning the wheel in the direction that your car needs to turn. Turning the wheel further than needed can often times lead your car into an unwanted slide or "**drift**".

Drift is caused when the car tries to turn to fast. The cars own weight and inertia resist the turn and can pull the cars tires away from the road, decreasing **traction** and causing the car to slide in the direction of it's **inertia**.

Since there are no **drift** style races in **Need for Speed: Most Wanted** this is undesirable. When a car **drifts** it is losing valuable traction that could be put to better use by moving the car forward and closer to the goal.

If you feel or hear your car starting to **drift**, correct for this by gently easing off the gas and turning in the direction your car is sliding, then using another gentle movement turn your car back into the direction you were originally travelling. You can also use your **N2O** to save the car from a **drift** if the drift isn't too bad, do this by hitting the **N2O** and then immediately turning in the direction you want the car to go. However if the car has already **drifted** and turned to far away from the direction it needs to be moving , **N2O** may only help to slam your car into a wall.

Watch out for **drifting** in dirt or grass, most cars will slide uncontrollably and sometimes in these situations even **N2O** and good driving cant help you. Almost total loss of **traction** at high speeds will leave you at the mercy of the car and it's inertia.

Note: If your controller seems to pull your car in one direction even when the analog stick is centered, try moving the steering slider a few clicks to the left. This may help correct the issue of an over-sensitive controller.

N2O

Nitrous Oxide or **N2O** was originally used as an anesthetic by doctors and dentists. However when induced in the combustion chamber of a car it produces more efficient use of fuel and gives the pistons a boost as well as a few other advantages. All of this amounts to more **speed** and **power**, which can help us achieve our goals of world domination! ;) The most important thing to understand about **N2O** usage in the game is when and where to use it.

At the start of a race you'll be given a 3 second count down, this is where drivers will be trying to keep their speedometers needle in the optimal position for a "**Perfect Launch**" once the word "**GO**" flashes in your screen it's time to floor it and hit the **N2O**. Using your **N2O** here gives the car the extra power to quickly accelerate through gears and reach it's top **speed** faster. Most of the time it's best to use all of your **N2O** right off the start to get the car to top **speed**, but again you'll need to analyze the track to determine the most effective use of the **N2O**. In tracks that start at an uphill or windy road and are immediately followed by a long stretch of downhill or straight road you may want to conserve some **N2O** so you can maximize your **speed** through the straights.

N2O recharges as you drive so you'll have the opportunity to use it more than once in a race, conserving your **N2O** for sections of track where you can get the most out of it is a good idea. Remember also that every car has a top **speed** that it can not go faster than, this is referred to as it's **terminal velocity**, where the car no longer has the **power** to push through resisting outside forces. Once your car has reached it's **terminal velocity** using your **N2O** isn't always appropriate, while holding the **N2O** button down will help the car maintain it's top **speed** it's sometimes best to conserve the **N2O** for the next straight or wide curve to give your car a **speed** advantage when others are still accelerating slowly.

Police driving tactics:

The TVI or **PIT** maneuver has been used for decades by the police. Generally a police car or "cruiser" will try to use their front end to push your rear end to one side, forcing the car to turn sharply. Since we've already covered inertia you can see how pushing the car into a sharp turn at high speeds will cause it to lose control and spin out. As soon as this happens they'll try to pin you.

Evasive Tactics: Outrunning the PC's usually isn't to tough if you've got a fast car, but once they've spun you try to slow down, turn into the direction of your slide, turn a full 180 and drive away.

The Box: As more police cars close in on you one of them may try to get in front of you, when this happens they are usually trying to slow you down and surround you or "box you in" once this happens they will all slow to a stop and effectively trap your car.

Evasive Tactics: Avoiding a box is relatively easy, simply not driving behind the lead cruiser can help to avoid the box. Weaving back and forth will cause the lead cruiser to lose you and allow you to pass. If you can't pass the cruiser continue weaving until you can find another way to evade, such as a sharp turn or pursuit breaker. You can also perform a TVI maneuver on the leading cruiser by nudging the cruisers rear end with your front fender, once you've got the rear end of the cruiser angled enough to where it starts drifting, accelerate or use your N2O to maximize the effect and spin the cruiser around.

The Rolling Block: The rolling block is a situation where three or more PC's will get in front of you and simultaneously slow to a stop. Once stopped more PC's will close in behind you and end your reign of vehicular terror.

Evasive Tactics: The best way to avoid a rolling block is to not be around it, if you see PC's trying to pass you it may be time to take a sharp turn onto a different street or try to perform a PIT maneuver on the PC's in front of you to get them out of your way. If the PC's manage to stop you immediately try a J-Turn and see if you cant escape going the other way.

The Road Block: In a road block, multiple cruisers or Rhino SUV's will line up and try to block off the road. Slamming into a road block at the wrong angle can bring you to a complete stop or even cause your car to flip. Listen to the radio since police will notify other cruisers of a road block set up ahead.

Evasive Tactics: Look for the weak spot in the road block, using the speed breaker will slow down time and give you a chance to analyze the block. Once you have spotted the weak spot or uncovered area, use your N2O to plow through. If you have no choice but to ram a cruiser, aim for the rear, sometimes this can help spin the cruiser or SUV out of your way.

Road Spikes: Road spikes can end your run immediately. If your car hits the spikes your tires will blow and your car becomes un-drivable, cops will have you blocked in within a few seconds. Police will not only announce a road spike over the radio but they will also indicate whether or not the spikes are on the right, left or center, keep your ears open.

Evasive Tactics: Evasive tactics for road spikes are the same as road blocks. Use your speed breaker to quickly see where the spikes are and navigate around them.

Rhino SUV's: Rhino's will come at you from the front and attempt to slam into your car. If they're successful you'll be brought to a complete stop which increases your chances of being busted.

Evasive Tactics: Try leading the Rhino's to one side of the road and as they get close quickly drive to the other side, alternatively you can quickly shift into reverse and turn 180.

General Tactics:

Practice your "J-Turn", do this by shifting into reverse and turning the wheel just enough to perform a 180. Once your car has turned around, hit the gas and get out of there.

Look for Pursuit Breakers, when you find one make sure that most of your pursuers are close behind you, this insures that you take out as many cruisers as possible.

In "Cool Down" look for hiding spots, indicated by the blue rings on your map. These will speed up the progress of the "Cool Down" meter.

ONLINE

While practicing off-line will help you analyze and better know the tracks, your car may perform completely differently online. Because of this, speeds that you maintain off-line are usually pretty different on-line. This guide will focus on Ranked on-line racing and the issues involved.

Performance Matching: Performance matching
Sounds like an option that might make all cars, regardless of their parts and tuning, perform exactly the same. This is actually pretty far from the truth. It's kind of tough to tell exactly what performance matching does but one thing we can be pretty sure of is that it will slightly de-tune faster cars and slightly upgrade slower cars. This does not mean that the Camaro SS can match the performance of a Carrera GT on-line but it does mean that cars in the same performance range or of the same type will be closely tuned to each other. As far as testing shows there are only a few cars (when driven correctly) that can race with similar results.
Those cars are;
The Porche Carrera GT
The BMW M3 GTR
The Lotus Elise
The Lamborghini Murcielago
Although it's important to note that the Lamborghini's handling is severely decreased during online play and will take some getting used to. While the Lotus can not match the top speed of the Carrera it has excellent handling and can generally perform better on tracks with lots of tight turns.
Most of the other cars cant really compete with a good driver behind the controls of one of these cars and will usually get left pretty far behind when competing against one.
The most popular choice for top ranked drivers on-line is the BMW M3 GTR.

Rubbing & Ramming: A lot of drivers will tell you that rubbing is a part of racing. This is actually very true for the most part. When two cars try to follow the same line around a track they'll generally bump or rub each other in the process. Depending on the level of professionalism or aggression, one car will be given the opportunity to take the lead while the other will have to look for another opportunity to pass. If both drivers are aggressive, too much rubbing can lead to both vehicles slowing down quite a bit or even losing control. For this reason if your car is not in the lead while rubbing up against another, it's generally in your best interest to slow just enough to get behind the other car until another passing opportunity arises or hit the N2O and attempt to pass them immediately.
Ramming is a different ball game entirely and is usually considered poor sportsmanship. When a car rams another car it is intentionally hitting the other car with the sole purpose of forcing the other car out of control. Since this will almost always slow both cars down and can often times cause both cars to lose control it's not a recommended tactic and is best avoided. A driver that can avoid ramming and keep a cool head while maintaining smooth lines will always beat a driver who swerves around on the road trying to hit other cars.

Cheating: Unfortunately with almost all on-line games there are cheaters and with Need For Speed: Most Wanted this is no exception. Cheaters are usually pretty easy to spot but they are almost impossible to deal with because of the lack of host control and options.
Some cheats that have been noticed are the following;
Infinite N2O: These guys are pretty easy to spot, the infinite N2O cheat gives them the ability to hold down the N2O through the entire race if they feel like it. A quick look at there stats will show that they use a ridiculous amount of N2O compared to anyone else (for a sprint race the average is around 40-55) sometimes these numbers will be in the high hundreds for sprint races and even in the thousands for circuits.
Acceleration Cheat: The acceleration cheat is a bit tougher to spot since it generally wont change to much in the users stats other than average speed. One way to tell if someone is using this cheat is to watch them closely after they crash and or come to a complete stop. The acceleration cheat gives it's user the ability to instantly regain top speed after coming to a complete stop. If someone is crashing a lot and still winning the races against good drivers, this is usually the cause.
Cop Car Cheat: This cheat wont actually give the user a clear advantage over other cars since performance matching will keep them de-tuned. All the cop car cheat does is allow the user to drive one of the police vehicles for a race. If you see a Rhino SUV or any of the other PC's at the start of a race

online (cont.)

then the user is applying the Cop Car Cheat. Again, because this cheat is not a performance enhancing cheat, it's generally nothing to be concerned with.

Dealing with cheaters: Since there's really no way to deal with a cheater yourself, the best things to do are to leave the race or if you are the host, close the race and open your messaging system by clicking the EA logo at the bottom of the screen. Once inside the messaging system find the users name and double click it, this will pull up a list of options related to the player. From this list you can select "Feedback" and then select "Cheating". This will apparently send a flag to EA that someone is cheating online and will encourage them to research and deal with the issue.

Connecting: Connecting to a host can be frustrating for everyone. The interface has multiple icons for the state of everyone's connection. The icons are as follows;


Connecting: this icon indicates that the user is still trying to connect to the host and that a solid connection has not or can not be established.


Great: This Icon indicates a great connection with the host, the race should go smoothly and with out much lag if any at all.


OK: This icon indicates a good or OK connection to the host. There may be some lag, but the race is still playable.


Poor: This icon indicates a poor or below average connection to the host. Racing with a poor connection can result in lag and difficult or hindered play.


Unsure: Indicates that the connection to the host can not be determined. Results could vary dramatically or the user may not be able to connect at all.

Sportsmanship: It's a big word! Nothing ruins a good race like a poor loser or a bad winner. If you find yourself in last place a lot, don't immediately assume that someone is cheating. The reality could be that the person you are racing has done a lot of practicing and really knows the tracks. In situations like this it can be very beneficial to ask the winner for tips or even to try and closely follow their racing pattern. Take note of where and when they apply their brakes and N2O. Find out if they are using shortcuts that you might not yet be aware of. Good sportsmanship and relationships with other racers can help you find new friends to race against, effectively reducing your chances of racing against cheaters and even help you learn to race better through team work and communication.

If you wind up winning a lot of the races take note of what some of the other racers are doing wrong and offer up tips, point out short cuts that they may have missed or let them know that they may be taking a certain turn too fast or too closely. The better the racers you race against the more exhilarating the races will be and the more fun you'll have. It benefits everyone to help each other get better and push each other to race harder.

If you find racers that you enjoy racing against, be sure to add them to your friends list in your messaging system. This way when you're online together one of you can start a race and invite the others to join.

In some circumstances racers are more concerned with their online stats then they are with racing. Occasionally a racer will simply drop out of the race if they aren't going to win so that it has no effect on their overall ranking. Again this is really poor sportsmanship since not only can it deprive a good racer of a well deserved win, but it also doesn't challenge either driver to race better by learning from each other. Not to mention that it just takes the fun and thrill out of the race.

Tips & Tricks

Keep your head, if another racer gets out in front of you just continue to race smoothly and effectively. Getting to excited and trying desperately to pass another driver will usually result in more mistakes and inefficient use of your N2O.

Don't give up, if you crash or get pushed into an obstacle, straighten out and keep driving. There's a good chance that your competitors will make a mistake as well, giving you the opportunity to catch up and pass them.

Know your tracks, It's always a good idea to practice a track a few times before you compete in it. Try to memorize your turns. Pay attention to your top speeds and try to maximize every corner and straight that you can. Look for short-cuts but also make sure that they're helping your time and not hindering it, some short-cuts are pointless to take and will only slow you down.

Remember that braking before a turn can help you navigate the turn quicker. Taking turns to quickly will result in drifting or even complete loss of control. Every time you touch a wall or drift your losing valuable seconds from your finish time.

If you're trying to rack up time or bounty in a pursuit try evading the cruisers for just enough time to get the "Cool Down" meter, then turn around and find the cops again, this resets the reinforcement timer and will help keep the number of cruisers on your tail to a minimum.

Credits

This guide was designed and developed by **Micheal "sub7th" Filer**.

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If you have questions, comments or suggestions regarding this guide you can contact me directly at:

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If you'd like to learn more about racing and it's basic concepts here are some helpful links.

http://www.nas.nasa.gov/About/Education/Racecar/aerodynamics.html

http://en.wikipedia.org/wiki/Auto_racing