

Autocross Tips from Corvette Forum Members

(Editor's Note: few, if any, of these people are certified instructors. Use common sense in applying any of these tips to your own driving experience).

Here's a few books on autocross:

Secrets of Solo Racing - Henry Watts

Speed Secrets - Ross Bentley

Driving in Competition - Alan Johnson

Drive to Win - Carol Smith

A Twist of the Wrist - Lawson&Rainey

You should be able to order any of these books at your local Barnes & Noble or other bookstore.

Most all autocross events will have a Novice Class or some sort of program. Don't worry about trying to figure out what class your car will fall into especially if you have mods or are intending to make mods. The key to becoming a good autocrosser is seat time!. Ask questions and the experienced driver and ask questions? You will be surprised at the amount of help a newbie will get.

Don't worry about performance mods to your Vette. Your car (heck, any car) will have more performance than you can get out of it at first. You WON'T be competitive in the beginning, just worry about your gums splitting from the over-sized grin on your face! 🤪

Make sure you've got the engine oil topped off.

Tire pressures: I like to start newbies out with high pressures, mainly to save the sidewalls of the tires. Start by adding 6 psi to each tire, COLD. Cold, like before you leave home in the morning cold. After each run (each run because you'll be picking up speed on each run) check to see that you're not running onto the sidewalls. Wear on the corner of the tread is OK, but not past that.

Interior: Get everything out of the interior that can move. Floor mats, radar detectors 📡, CDs, etc. You'll be braking and turning harder than you ever have before, and you won't believe the stuff that'll come out from under the seats (I've found pens, coins, notepads, etc.)

Personal: Already mentioned above, but bears repeating: WATER, WATER, WATER! And eat light. Especially if you get some runs with an instructor.

Finally, one tip for you C5 newbies: You can lock the lapbelt down tight by pulling it out all the way then letting it retract. Shoulder belt doesn't do this, however.

Fred Puhn's book "How to make your car handle" is also very good. Its a bit complex at times, but he wrote it so even the most math/physics challenged person can understand.

Also my experience when I started autoxing was to try to meet someone at the event that has done it before, it just makes registration, course walks and the such that much easier.

Also dont freak out...I got red-flagged my first run of my first event, I thought I had done something wrong, turns out someone ahead of me just took out the timing lights.

Here's some basics for autoX and roadracing:

1. Slow in / fast out. If you start turning and the car keeps going straight (push/understeer) you are likely entering the turn too fast. In my experience this slows down lap times more than anything.

2. Look ahead. The proper line is key for fast times. Looking ahead allows you to keep the car on the proper line. This may mean looking at the next turn before you are out of the current turn. Often requires looking out the side windows rather than just through the windshield.

3. Use the whole track. This goes with the proper line. In general, you want to make the turn as gradual as possible to allow for greater speed. However, stick to the clean line. If your region has small cars, gravel & marbles will accumulate off the most used line and you will lose traction if you stray into it.

4. Try to brake hard and accelerate hard, minimizing coasting. AutoX is more "violent" with slamming on the brakes, hard turns and flooring it out of turns. Roadracing is about smoothness and not upsetting the car.

5. Whenever possible, ride with an experienced driver before your runs. Even better, co-drive your car with a good driver. This allows for great feedback on what your car can do for a particular course, and where you can pick up more time. (*Not possible if you are competing*).

6. Try to get your hard braking done in a straight line and take a line that allows you to get the car straighter and on the gas earlier in the turn, particularly before a straight.

7. Unwind the wheel as you accelerate out of the turn. Getting on the throttle as you come out of the turn will generally cause the back end to step out (oversteer). Turning into this or unwinding the wheel allows you to control the oversteer and generate more speed. Again, use the whole track.

Here's a tip I find useful for autocrossing. Fold your rear view mirror up out of the way. This does two things. It clears your field of vision and makes it impossible for you to look back to check and see if you just hit that pylon. You need to keep your eyes beyond the next gate and this just removes another distraction.

Another tip is to use chalk to check and see how far your tires are rolling over. A dab from the corner of the sidewall to the outside edge of your tread will do. After your run you will be able to tell how far you have "rolled" the tire by how much of the white has worn off. Play with your tire pressures throughout the day to get it right and check them often. More pressure will decrease "rollover," too much decreases your contact patch.

Last tip I can give is "work the course." Volunteer for corner duty out on the course and watch others. You can find potentially tricky spots on the course by watching others make mistakes. By watching you can find the fast line before you even get out there. Have fun and remember to take it easy your first time, just concentrate on being smooth

As we started a new season, maybe a penny or two about autoXing Corvettes.

1. It's usually a humbling experience your first few times out.
2. Nothing more embarrassing than being lost on a course. Walk it at least three times. Ride with someone, have someone ride with you.
3. You will have 3, 4 or more runs. Run 1 is FIND THE COURSE. Run 2 is a little bit better, and so on. Your best run should be last minus one, so you can hang it out on the last one.
4. Smooth is fast. Tire noises are usually bad.
5. Water, skin block, hat, sunglasses, folding chair, digital tire gauge, white shoe polish, working gloves (cones get dirty), good attitude.
6. Look ahead for cones and cone workers.
7. If you see anything that's not right: a worker on the course, a cone that's down from a previous run, a car that's spun out and maybe stalled, STOP- that's the only way to point out something to the timing booth that they may not be aware of. Then proceed at a slower pace (ie not racing or practicing) through the lights. You'll have a better case to argue for a re-run.
8. If you get red-flagged STOP, proceed when allowed and trip the lights at a slower pace (no practice runs allowed).
9. If you get lost, STOP before zooming around- don't wander around and find another car on the course the hard way --the corner workers will direct you back on course. AND TRIP THE LIGHTS unless directed otherwise.
10. Even though smooth is fast, everyone really appreciates a Corvette spinout, they are so much more louder than other cars. 😊
11. If you lose it, stay off the gas, lighten the brake pressure, and wait for the car to come back-- calm down, look around, find the course; trip the lights, and go and greet your appreciative audience.

Here's a tip for the slaloms, "Try and run over the cones with your rear wheels". This tip was given to me by the safety director and one of the fastest drivers of our Corvette Club. He said, "Go ahead and try it, you won't be able to hit the cones with just your rear wheels". Tried it, it works. This tip dramatically decreased my times through the slalom.

Some of the most important points I discovered during my first year of autocross:

- 1) Sun screen, gatoraide, and shade. It's all very exciting, and you're typically out in the sun on blazing hot asphalt with little shade all day long. Stay in shade as much as possible and reapply the sunscreen throughout the day. I got baked during my first couple of autocrosses. Don't think that just because it's cloudy and overcast you don't need to do this. I discovered I would still get baked even when it didn't look sunny. It's because of the prolonged exposure and the asphalt.
- 2) Tire pressures make a night and day difference in the car's handling. Normal tire pressures will make the car feel like slush. Your standard pressures assume that the tires are going to warm up and thereby reach a reasonable pressure. But this doesn't work at an

autocross. Your tires will be pretty cold by the time you start your first run. This is why autocrossers recommend much higher pressures. You need to get the tire up to at least the pressure it would have had when it was fully warmed up even though it's cold.

3) Bleed the tires between runs. Your tires will start out close to stone cold, but by your last run, they'll probably have gained quite a lot of temperature. The big problem is that your tires won't gain heat evenly. Your fronts will probably gain heat much faster than the rear. And one of the fronts will probably have much more heat than the other. This will dramatically change the balance of the car, and its balance will be quite different in left and right turns. When I started resetting my tires back to their starting pressures between each run, the car was suddenly vastly more predictable and the handling characteristics and balance stabilized.

4) Look ahead. When I first learned to drive and got my driver's license, I had to learn to look at the horizon rather than directly in front of the car. I discovered when I started autocrossing that I had to learn this again. The fear of hitting cones will draw you back into that short sighted view. Don't look at the apex cone. Spot it as you approach the turn, then direct your eyes to the cones beyond it on the other side of the turn where you intend to drift the car at turn exit. Direct your eyes where you want the car to go, and you will naturally go there. Don't look or aim at the apex. Aim for the corner exit and use the apex as an inside limit for the turn. Looking at and aiming for the apex will tend to pull you into an early apex turn, and you'll run out of road on corner exit.

5) For my first few autocrosses, I wasn't getting anywhere near as close to the cones as I thought I was. You're not getting close enough unless you hit them occasionally (and hitting them when you lost control or spun out doesn't count). Some have suggested practicing on the street by turning your side view mirrors down. I prefer to use road beetles. Finding them by 'feel' is much more autocross like.

6) The cones won't hurt your car. They're designed not to. Don't be the least bit afraid of hitting them. You'll feel better after you take out a couple and see that your car shows no signs of it. Unlike road racing or driving on the street, autocrossing has no need for safety margins. Take it out to 100% commitment all the time every time. Don't be embarrassed of spinning out either.

7) Kneel down when you walk the course. The corvette is a very low slung car. The track looks very different at the car's altitude than your standing altitude. So stop, kneel down low, and look at the cones from the perspective you'll actually be encountering them at. You'll discover that cues you intended to use to find the turn are useless at that viewing angle. Find the ones that are. Remember that your hood will be blocking the lower part of your view as well.

8) Figure out where you're going to change gears while you're walking the course. Don't just figure out where the course is, but map out everything you'll be doing in the cockpit. Especially when you're a beginner, changing gears is a major event. On a typical autocross track, your goal isn't so much to change gears at peak rpms as it is to change gears without throwing the car into a spin. The car is committed to a turn or otherwise off balance most of the time on a typical course. Switch gears when you are at a point where the car is at least momentarily stable. This point is determined by track position, not engine rpms. As you become more experienced and smooth, you will be able to shift successfully at less convenient times. Don't get too hung up on trying to be in the highest power gear. Corvette's have more power than they can actually plant most of the time on a typical

autocross course anyway. A lot of drivers enjoy success just leaving it in 2nd gear the whole time after the initial start. I found that I got better times when I shifted into 1st gear, but I had to use a lot of feathering on the throttle, and it was much harder to stay on top of the car and keep it smooth.

9) **Don't be afraid to bounce off the rev limiter. It won't hurt the engine.** And if you're reaching the limiter shortly before the braking point, then bounce away rather than shifting. Up-shifting just as you're going into a turn where you have to brake is one of the worst things you can do to yourself.

10) Don't coast. Especially if you're in 1st gear. You'll find points where you tend to coast while you're pulling or about to pull a hard turn. Coasting has the same effect as pulling on the emergency brake... engine drag is slowing down just the rear tires. In first gear and/or at high rpm in a corvette, this effect is severe. In a hard turn, it will toss you immediately into a spin. This seems a little strange because it's not like that when you're driving on the street... you coast all the time on the street. But that's because you're at low rpm. Try this... put your car in 1st gear and take it up to red line on the street, and then keep it level there for a few seconds. Now take your foot completely off the gas suddenly. Rub the bump on your head where it contacted the steering wheel when the car bucked backwards. This is a good exercise to do because you'll do the same thing on the track... but you'll be so pumped full of adrenalin that you won't realize that you just did it. You're likely to just be sitting there after the spin wondering why the rear end just shot out like that without warning. The car responded exactly as if you had yanked on the e-brake. And you effectively did.

11) **Use full brakes.** This may sound obvious, but I didn't find it nearly as obvious as I thought I would. We are conditioned by a life time of street driving to avoid stamping on the brake all the way. Full throttle is easy... we're pretty used to doing that. But full brakes are something only done under emergency conditions. There's a mental shift there that has to be made. 'Emergency' braking is what you do on every turn on the track. That's harder to get used to than you might think. Watch for your ABS light to come on in your peripheral vision. If it's not, you're holding back on the brakes. Oh, and btw, I was amazed at how short the stopping distances for the corvette really were under full braking. I mean... I expected them to be short... but... I still totally underestimated how quickly the car could stop at first.

12) Don't follow the race lines from the other racers except for guys that are fast. My experience has been that most of the racers have bad lines. They aren't good examples to follow. Watch the cars that are winning. Inevitably, they're on different lines than most of the other cars. Those are the faster lines. Keep in mind, however, that the 'ideal' race line is changed by the car you have. The best line for your car on street tires is not the same as the best line on race tires.

After some more autoX experience and now some track day experience too, I have a few more things to add to my earlier post:

1) **Wear a good hat.** I found that baseball caps are pretty marginal since they don't protect the sides or back of your head. A hat with a brim that runs all the way around is a very good thing.

2) **Eat lightly and healthy.** You don't want to be contemplating the bathroom while you're sitting on the grid. Be very careful what you eat and how much you eat on the day of the

event and the day before. Load up on good food the day before. And then eat lightly in the hours before. Eat a bit of something like a granola bar or trail mix just before your runs.

(Notice that my first suggestions are always about taking care of yourself? Don't take sun and heat exposure lightly when you're spending all day on the hot asphalt. It creeps up on you, and you don't realize how messed up you are until later. You can't drive safe, fast, or have much fun if you're not feeling well. And often, you don't know how bad you were messed up until the day after the event. But just because adrenalin kept you from feeling the pain doesn't mean your driving wasn't suffering from the ill effects)

3) (*EDITOR's Note: This next suggestion is highly subjective... there are many schools of thought on this subject...*) Turn off the traction control. Yes, even when you're just starting. Traction control is a safety system designed for normal street driving under bad weather conditions. It's not for the track. When you're trying to go fast, the traction control will fight you and confuse you by obscuring what's really going on with the car. Initially, I was afraid to turn it off because I thought I would be much more likely to spin or run off the track. It seemed to me that when it engaged, it was saving me. But I found that I was actually much safer with it turned off. In fact, many of the times it engaged, it was creating the situation, not solving it. (On the other hand, I always have it turned on when I'm driving normally on the street, and it's saved my butt more than once especially in the rain. But that's the situation it was really designed for)

4) Adjust your seat position. I didn't pay attention to this at first. I'd heard some mention of it, but I didn't think it would matter much. It does. The seat position I find most comfortable for normal street driving and long cruises is not a good position for racing. I found myself leaning forward most of the time while I was on the track. Driving well suddenly became much easier when I moved the seat forward and a little more upright. In general, you want to be closer to the wheel than you normally are. You need to be close enough to all of the controls that your arms and legs are never at or near full extension.

With your back against the seat drape your arm over the top of the wheel. With your elbow straight your wrist should rest on the wheel, not your fingers. Obviously you don't drive this way...both hands on the wheel for that. Your clutch leg should still be slightly bent with the pedal fully pressed in. At first it may not feel right because you are probably in a more relaxed position on the street (one hand on the shifter and one on the wheel doing the Detroit LEAN). But it makes a big difference on a track. Big.