

**Novice Basics & Driving information**  
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First of all, as many longtime drivers will attest to, "We were never as fast as we thought we were; when we first came out and autocrossed ANY car". Seat time and "knowing WHAT you CAN do with what you HAVE" will go a long way in your performance driving education.

Good driving "basics" are worth their weight in gold. Concentrating on YOU as the driver and NOT the vehicle or its modifications, is most important early on.

Many novices in the first year or two of competition make the common mistake of over-prepping their car, now that's not to say some mods wouldn't help, BUT again we want to concentrate on the driver, not the car. You can easily out class your driving abilities with TOO many vehicle modifications; learn how to drive what you have first !

Many of these concepts are covered in the Novice Handbook which is also available at no charge on this CSCC website. Please don't be offended if some of these concepts seem trivial to you, it never hurts to re-visit important ideas especially as a new driver to this sport.

Outline structure

Safety equipment  
Other important equipment  
Driver preparedness  
Vehicle preparedness  
Driver technique  
Do's and Don't's  
Closing thoughts  
TID BITS

Safety Equipment:

**HELMET**

A proper fitting helmet to a Snell Foundation 2000 rating is recommended, while other rated helmets (SA or M) are acceptable too, check with Tech or Registration for further details. An annual helmet approval sticker is available for the drivers who frequently come out and race. An open face vs. a closed face helmet is basically driver preference. Either way visibility is critical. An open face helmet allows for more viewing area. Some people prefer to wear sun glasses with their helmet, this is fine too.

**SUNGLASSES**

A good pair of medium expensive sunglasses that "polarize" are a big benefit on any day especially sunny days. Yellow lenses assist with cloudy, dark and evening type events; yellows are not necessary, but nice to have.

**GLOVES**

A good pair of driving gloves may assist with a tactical feel depending on what style steering wheel you have. Again use personal preference here.

**SEAT BELTS**

Standard modern seatbelts will work fine. Four and five point seatbelts will secure the driver better; check your cars classification for seatbelt modifications and possible class changes.

**SHOES**

Many drivers prefer to wear a small heeled, tight fitting, flexible soled shoe like a racing type. The flexible sole allows for better pedal feel, this is highly recommended.

**TIRES (yes tires are a safety item)**

Racing on a set of good tires is always important. Setting the tires to proper inflation is very critical too. Most street driven tires will allow an 8-12 PSI increase without damaging the tire. The pressure increase will depend on the tire design, rubber compound and driving style to name a few important ones. Work with your Team or a seasoned veteran on how to properly analyze your tire pressure after a run.

NOTE: As a tire gets warmed up on a race course, the air pressure will increase slightly some times more than you'd think, it is a good idea to monitor and adjust pressures after each run.

#### Other important equipment:

##### AIR TANK

A portable fully charged air tank will save you time and potential embarrassment in the pits and in grid. Sometimes vehicle prep-time can be a critical factor in making it to the pre-grid lanes before it closes.

##### AIR GAUGE

A good medium expensive, easy to read, accurate tire pressure gauge is a valuable tool in any A/X tool box. I prefer a liquid filled style. Be sure to choose a gauge that has a "workable range" for your tires. Example; if you plan on running your tires at 50 PSI and your gauge reads up to at least 100 PSI, the distance between each pound markers will be small and hard to read. If you purchase a gauge that has a maximum pressure of say 60 PSI, the pound markers will be further apart and easier for you to make out slight pressure changes between lines as you bleed off or increase pressures.

TIP Try not to let any air escape while pushing the gauge onto the valve stem, this will affect your readings.

##### CLIP BOARD & PEN

Often over looked, these "tools" will assist with keeping everything in order and provide a place to write and keep your important papers from flying away. I keep a box of pens on my A/X tool box. I like to keep some notes in a notebook at the end of each race day. This is a great tool to review your day and will assist with possibly planning a different strategy for the next race.

##### LOGBOOK

Some people like to keep a record of the day's activity. I keep both a notebook and clipboard with all kinds of good information in. Having the ability to review any given race day's history can prove to be a valuable tool to assist honing your vehicle set up and driving skills and help in making an informed decision regarding your efforts.

##### WATER

Bring lots of water with you to drink and snacks to eat. While you may not notice it due to the excitement of driving, your body will easily become de-hydrated causing fatigue and other symptoms which can affect your performance.

#### Driver preparedness

Having your body and mind ready to race is just as important as having your car ready to race. These simple ideas will help in big ways.

##### DRIVING POSTURE

Sit in an upright position, not a reclined long distance freeway type driving position; arms need to be free from any obstacles close to you. Arms and elbows should be almost 90 degrees perpendicular to the steering wheel as possible and of course comfortable for you. Having the ability to quickly pull down and hold a steering wheel setting without letting the wheel go and then steering the wheel back to straight travel, is very important, this is called "winding and unwinding". A common mistake is to release your grip off the wheel allowing the wheel to "snap" back to center, this IS NOT a good practice in performance driving, you want to stay in control 100% of the time.

TIP: Place a piece of colored tape on the steering wheel to indicate "straight forward" located at 12 o'clock as the car is perfectly straight. This gives a visual reference for many different reasons which can be discussed later.

## HANDS

Most people will agree, the basic “10 and 2” o’clock position is considered optimum for vehicle control. Gloves are not necessary but some drivers like to wear them, personal comfort is again key here.

## CONCENTRATION

Turn off the radio, all of your attention must be focused on the task that is at hand, this will help you to relax. Even the most seasoned veteran gets the butterflies as they approach the starting line, go ahead and ask anyone.

## COOL DOWN

Often at the end of a run, especially new drivers, will have the adrenalin still pumping and forget to slowdown after the finish lights and or the checkered flag. Once finished regain composure and stop for the person at your drivers door who will hand you a time slip. Drive slowly back to grid or the pits and take the next few minutes to calm down. If going back to, pre-grid, get your car back into the same line as where you started, maybe take a drink of water too as you check your tire temps and pressures. It is a good idea to have some friends watch your runs and give you feedback from their vantage points, a video camera is a great tool.

## HYDRATE

Otherwise, known as drinking liquids. Drink a good amount of water before each race and even between runs. This will keep the body from “running low” which can decrease mental clarity and reaction times. You may keep the water bottle in the grid line or in a friend’s hand, the last thing you want is a bottle rolling around under your feet affecting your pedal usage and stealing your concentration.

## Vehicle preparedness

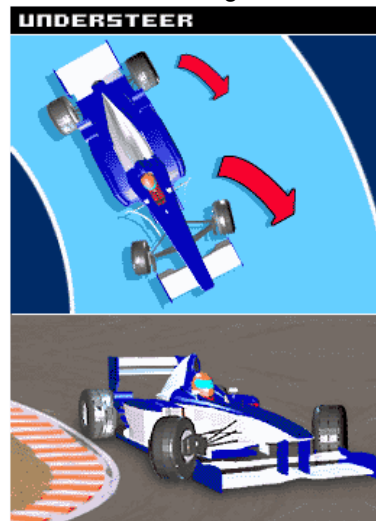
### TIRES

The tires in part, are one of the vehicles “communication” devices with the race/road surface. Tires play an important roll in any driving event. In A/X due to the extreme nature of vehicle movement such as lateral acceleration, it is recommended to increase tire pressure to lessen “side wall flex” thus giving a more positive road feel to the driver. Side wall flex or “roll” is evident by the sluggish feel of the tires during a turn; typically this is accompanied with a lot of “tire squeal”. Most notably will be the front end’s “push” or understeering of the vehicle.

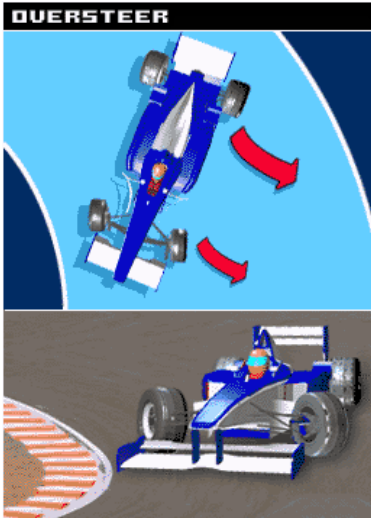
**Understeer** often called “plowing” or “pushing” is when the vehicle continues straight forward in a turn or does not go where you point it because the vehicle’s weight and momentum forces the car straight during a turn i.e. the front tires HAVE NO GRIP.

So with this in mind, some experimentation on your part will be necessary because each tire has its own “character” or personality at certain pressures. Rule of thumb or starting point for a street tire is to increase pressures on all tires by 8-12 pounds.

Keep this idea in mind; **VERY IMPORTANT**; A locked up, non-turning or skidding FRONT tire(s), **DOES NOT STEER**, just like in understeering. If you over drive a corner apply the brakes as necessary, try to avoid a skid, remember skid equals no steering. Use the brakes only as necessary to slow the vehicle for a turn.



**Oversteering** often called “sliding”, now also known as DRIFTING, has given this idea a new look, is when the rear tires lose their GRIP or traction and the rear of the car tries to come around toward the front of the car. Just like in drivers ED class, the way to correct this situation is to turn-into-the-skid.



Get to know your tires, ask around in the pits about who is using which tire and why they like them, a wealth of knowledge is at your fingertips, just ask, we are a bunch of friendly people.

Oversteering CAN be a good thing, to a degree, because it has the tendency to “rotate” the car around a turn quicker. With time and practice you may be able to master this art form. Please DON'T try to impress yourself, the crowd or your friends by driving out of control.

### Drivers Technique

If you drive a manual vs. an automatic ONLY touch the shift knob when you need to shift, always keep BOTH hands on the steering wheel as much as possible, and remember the 10 & 2 o'clock positions. This will assist with vehicle control and a safe “in control” feeling.

Regarding rear wheel vs. front wheel vs. all wheel drive vehicles, they all perform differently from model to model. Have a look around in the pits and find a like make and model, strike up a conversation with the owner. Ask a lot of questions and maybe even ask for a ride in their car. You can learn a lot of useful information being a passenger in a like vehicle.

### Dos and Don'ts

#### **DO**

- DO, Ask a lot of questions, you will learn from everyone you speak with
- DO, Come out and practice your driving skills, schools are available year-round
- DO, Get to know the “limits” of your cars handling, in a safe and controlled environment
- DO, Practice your advanced driving knowledge in every day driving, NO-not street racing, things like controlled braking and hand shuffling the steering wheel on a daily basis
- DO, Print out the Novice Handbook and this beginning A/X driving document for quick review
- DO, Bring lots of water to drink and snacks to eat
- DO, Tell your family and friends how much LEGAL fun you just had and try and get them to come out and support you in your new sport

#### **DO NOT**

- DO NOT, Play the radio, SHUT IT OFF, listen to the tire's song instead, it tells you a lot
- DO NOT, Practice your A/X driving skills like an idiot in every day driving
- DO NOT, Bring any illegal drugs or alcohol to any CSCC event, ever
- DO NOT, Drive like an idiot in or around any CSCC event, OK don't drive like an idiot ever
- DO NOT, Try and warm up your tires in the grid line by quick acceleration and fast braking, this will only get you thrown out of the event, and possibly lose your ability to run our events
- DO NOT, Forget to sign up for OR skip a work assignment, this hurts everyone and may exclude you from driving with us again

## Closing thoughts

And now that the race day is over, have a look around and see if you or someone close to you has left some trash, pick it up and dispose of it, please. We rent these lots and we get many people eating food, reading newspapers, flyers etc. and they easily get blown away from their pit area. Part of the contingency for us renting these parking lots is to leave it just as clean, if not cleaner, than when we arrived, if we all pick up just one piece of trash the place will be much cleaner and entitle us to return and race another day.

Be smart and drive out of the local event area at posted or slower than posted speeds. Again these venues are getting harder to find and we are constantly being evaluated for enforcement of all abiding rules at every event.

Spending some more money for driving schools and practice days are a great way to quickly hone your driving skills. Check our local website [www.solo2.com](http://www.solo2.com) for more school and practice events.

Sometimes in the Southern California's wonderful weather, we have the ability after the race event to have "FUN RUNS". These fun runs are cheap, usually \$1.00 each. This is a wonderful time to learn more about your car and improve your driving skills. Secondly, this is a GREAT time to ask some of the faster drivers to ride along or even drive your car to gain further knowledge.

### TID BITS:

Smooth + fast = quick: Drive as **SMOOTH** as possible, Keep the vehicle moving as **FAST** as it can without loosing traction, apply the brakes easily and only when necessary AND as little as possible, these things this will help you become **QUICK** through the lights.

Autocross is a **Speed, Control, Time** and **Traction** type of event. So if your tires are skidding (you have no **Traction**) AND you are gaining **Time** (*this is bad you want to be loosing time*) and you are scrubbing **Speed** (*necessary for a quick time*) and most likely you are out of **Control** doing so. Try slowing down, hitting your braking zones and use better apexes, being smoother through the turns with as little noise from the tires.

**THE CHALLENGE:** Einstein or was it Newton once said "A body in motion tends to stay in motion" here's how to apply that to our sport; I bet you can get a quicker time by being conservative with your speed and not driving super fast or over your ability. Keep this in mind, try driving at a somewhat fast but comfortable pace at a controlled speed, be very attentive to the tire noise you are making, concentrate on not skidding, and concentrate on using the brakes as little as possible keep the car moving, see what happens.

Good Luck, Be Safe and Have Fun.....

Norman Roberts co-founder

