



***NOVICE***  
***Autocross Guide***

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## SECTION 1 – INTRODUCTION

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First, if you're reading this document, thank you for your interest in our sport and our club. We are always looking for new members and to expand our hobby to others. We hope that this document can help explain our events and help to prepare you or someone else to participate.

### **Who are you?**

Highlands Sports Car Club (HSCC) is a nonprofit organization that is run by a local, friendly group of automotive enthusiasts based in Asheville, North Carolina. Our members come from all walks of life and drive all types of vehicles. HSCC is open for anyone to join and participate in. The competitive events we host are known as autocrosses.

### **What is an autocross?**

An autocross is a timed competition where drivers navigate (one at a time) a course marked with orange traffic cones. The course is usually set up in a parking lot or other large, flat, paved area. Timing for the drivers is handled by a computer system that tracks start and finish times.

### **Why? What's the point?**

Simple: it's **FUN**.

For automotive enthusiasts, driving a car in a sporty manner can be the pinnacle of entertainment. Autocrosses allow drivers to explore the limits of their vehicle in a safe, controlled environment with limited risk. When compared to something like a track day, autocrosses are cheaper, safer, require much less commitment, and have far fewer equipment requirements.

### **Is HSCC affiliated with the Sports Car Club of America (SCCA)?**

No. HSCC is an independent club. We do, however, use the SCCA rulebook for most event rules and car classing.



## SECTION 2 – VEHICLE AND DRIVER QUALIFICATIONS

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This section should help define many of the initial questions asked by spectators seeing an event for the first time:

What does it take to be a driver?

Can I do this in my Honda Accord?

Can I bring my friends?

Can I ride along or have them ride with me?

My relative/friend/boss has a Jeep Cherokee that's lifted on 35-inch tires, can he drive it here?

### **CAR DRIVERS**

Any person with a valid driver's license is eligible to drive a vehicle at a HSCC autocross.

Provisional Licenses (limited or full) and Learner's Permits are not acceptable.

### **KART DRIVERS**

Unlicensed drivers 12 years and older may participate in the kart classes.

### **MINORS**

Any participant under the age of 18, licensed or unlicensed, must have a minor waiver on file with HSCC. The waiver must be signed by a parent or guardian in the presence of an HSCC officer.

### **PASSENGERS**

Passengers are allowed to ride in vehicles, but they must meet the same requirements as drivers. Passengers are only allowed in the front seat of any vehicle.

### **VEHICLES**

Almost any 4-wheel vehicle can be run at an HSCC event. It is easier to describe what vehicles cannot participate, than to define what can. Here is brief summary of what cannot be driven at an HSCC autocross:

- Vehicles with less or more than 4 wheels (sorry, no motorcycles).
- Any vehicle banned from competition by the SCCA.
- Vehicles in a severe state of disrepair (we'll discuss this later in the Tech Inspection).
- High center-of-gravity vehicles without modifications to lower the center-of-gravity.
- All 4x4 and most 4x2 trucks (for exceptions, please shoot us an email)
- Almost every vehicle made by Jeep.
- Minivans and most crossovers.



## SECTION 3 – EVENT SCHEDULE

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HSCC hosts autocrosses during the day and night. The night autocrosses are on Wednesdays and the day autocrosses are usually on weekends. Below are the standard schedules for the events. We do our best to keep to the schedule, but it can be adjusted as needed.

### NIGHT SERIES

Registration / Check-in: 5:00 – 6:15 PM

Tech Inspection: 5:00 – 6:30 PM Novice

Walkthrough: 6:15 PM

Driver's Meeting: 6:30 PM

First Vehicle Off: 6:45 PM

### DAY SERIES

Registration / Check-in: 8:00 – 9:00 AM

Tech Inspection: 8:00 – 9:00 AM Novice

Walkthrough: 9:15 AM

Driver's Meeting: 9:30 AM

First Vehicle Off: 10:00 AM

Whenever possible, we recommend you get to the event as early as you can. Ideally, you are on-site no later than 30 minutes before registration closes.

Once we close the Registration and Tech Inspection, they're closed, no exceptions. The time in between closing Registration and Tech Inspection and the start of the event is used to make sure the computers are setup, worker groups are evenly split, and the timing system is functioning. We cannot be adding additional drivers during that time.

**If you paid ahead of time and did not get to the event by the time Registration and Tech Inspection closed, we can offer you a full refund or apply the payment to a future event.**



## SECTION 4 – EVENT TERMS/EVENT LAYOUTS

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Figuring out where to go or what is being announced during the event can be a bit difficult when you aren't familiar with some of the terms being thrown around at the event. This section is a breakdown of many of the most common terms.

### **OFFICERS**

Officers are the ones who run the club and the autocross events. Officers are members of the club who have dedicated time and effort to make sure the events happen and have specific roles before, during, and after the events. All Officers are volunteers and expend the extra effort to ensure that this sport continues and that everyone has an enjoyable time. Officers are not paid positions and are voted on once a year at the club meetings. All Officers running the autocross will be wearing official HSCC "Officer" shirts.

### **WAIVERS**

Our insurance policy requires everyone on site to sign a liability waiver. In the event of an accident, our insurance will cover bodily injury and property damage to the event site, but not your personal property.

### **TRAILER**

The trailer is the Headquarters for the event. If you need a club Officer, you can more than likely find one in or around the Trailer. When the event is running the Trailer should not be disturbed unless there is an emergency of some kind. If you have questions about a certain aspect of the event, please find an Officer outside of the Trailer.

### **REGISTRATION/CHECK-IN**

The Registration and Check-in desk is where you can do the following:

1. Register for the event if you have not done so online.
2. Pay your entry fee if you have not done so online.
3. Check-in to let us know that you are present.
4. Figure out what class your car is supposed to be in.

### **PADDOCK**

The Paddock can be thought of as a "pit" area for your car. This is where you will park your car and unpack your belongings for the event. This area can be used to swap rims and tires, fix problems, attach cameras to your car, put on your numbers, etc. The Paddock is where your car will remain when you are not driving the course.





## **TECH INSPECTION**

Tech Inspection is a temporary station setup at the beginning of every event. It is in a central and easy to find area. HSCC uses a green cone and yellow toolbox to indicate the Tech Inspection area. Any HSCC members running Tech Inspection will have uniforms indicating so.

## **GRID**

Grid is where the cars that are currently competing are parked. Cars should not be in the Grid if they are not going to be competing in the current Run Group (they should be in the Paddock).

## **RUN GROUP**

Run Groups are cars that will be competing at the same time. HSCC uses 2 Run Groups for most events. When the first Run Group finishes the drivers will park their cars in the Paddock and the second Run Group drivers will bring their cars into the Grid.

## **WORKER GROUP**

Everyone who competes at the event must also have a work assignment to get credit for the event. Worker Groups are the opposite of the Run Groups. If you are not in the Run Group currently competing, then you will be working some sort of job around the event. Most of the workers are needed for picking up hit cones, calling in hit cones via radio, and suspending the event (by waving a red flag) if a dangerous situation develops (for example, a car spins out, stalls, and cannot restart). There are also other, more specialized jobs that can be done when you become a more experienced member.

## **THE COURSE**

The Course is the reason we attend these events. It's the path through the parking lot that you will be driving. It is designated by orange cones and sometimes supplemented with chalk and flour. The starting line will be marked with green flags, and the finish line will be marked with checkered ones. The Course should be ready for walking by the time Registration opens.

## **WORKER STATIONS**

Worker Stations are scattered through the Course. Each Worker Station is marked with a post that has a number. The Stations are setup in such a way that they are to the "inside" of course line so that they are safe if a car spins out during a run. The Stations have a stack of extra cones and a fire extinguisher.

## **NOVICE WALKTHROUGH**

The Novice Walkthrough happens shortly before the event starts. It is led by an experienced Officer or senior HSCC member. The Walkthrough is done to make sure that the course layout is understood by any new competitors and to offer insight and driving tips. It is **HIGHLY** recommended that anyone with less than 3 events of experience be on the Walkthrough.



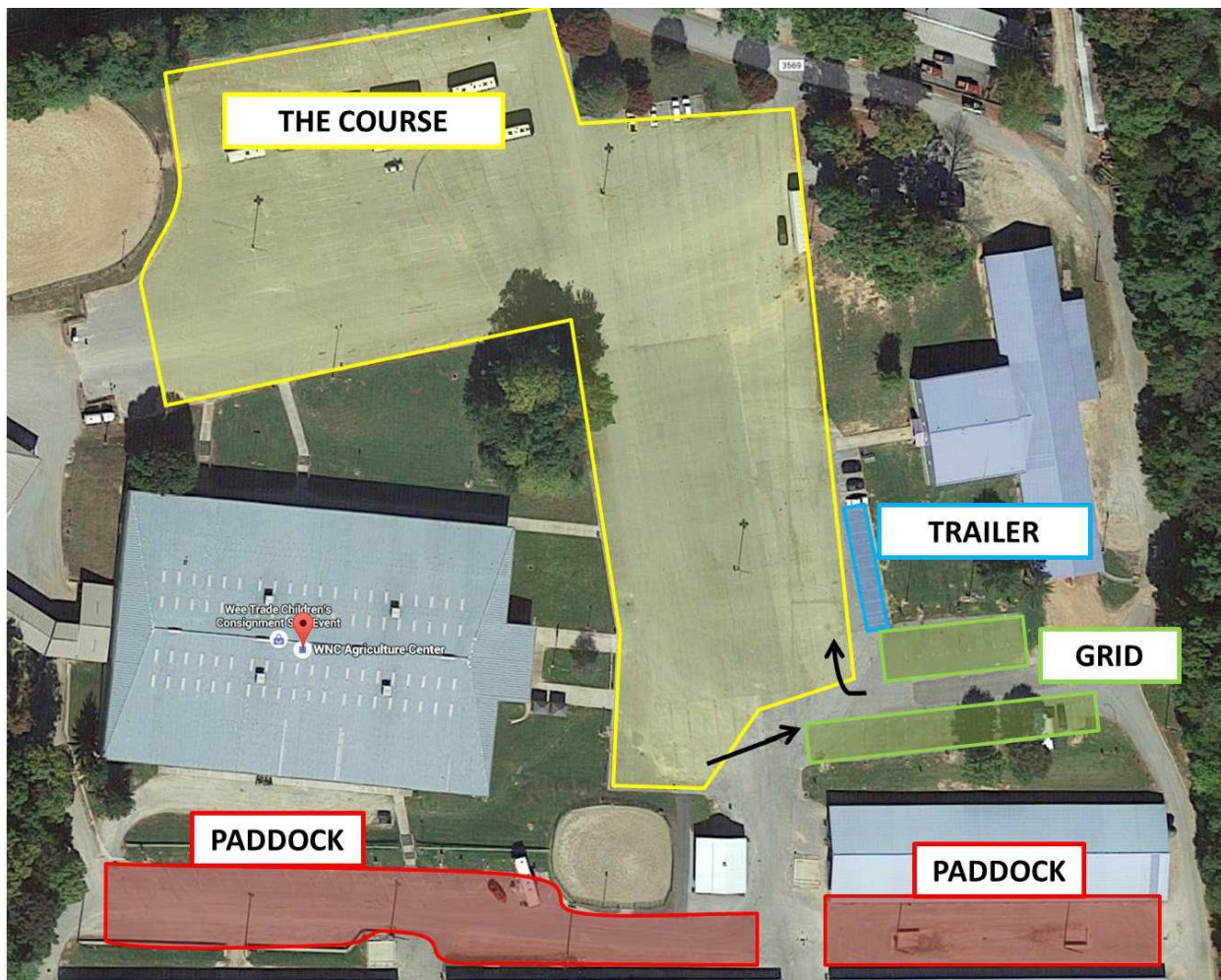
## DRIVER'S MEETING

The Driver's Meeting is held right before the start of the event. Its purpose is to cover any updates from the Club Meetings and to define the rules of the event. One of the HSCC Officers will read a sort of "script" that covers all the rules and any other specific information for that day. The Driver's Meeting is held every event, no exceptions.

## EVENT LAYOUT EXAMPLES

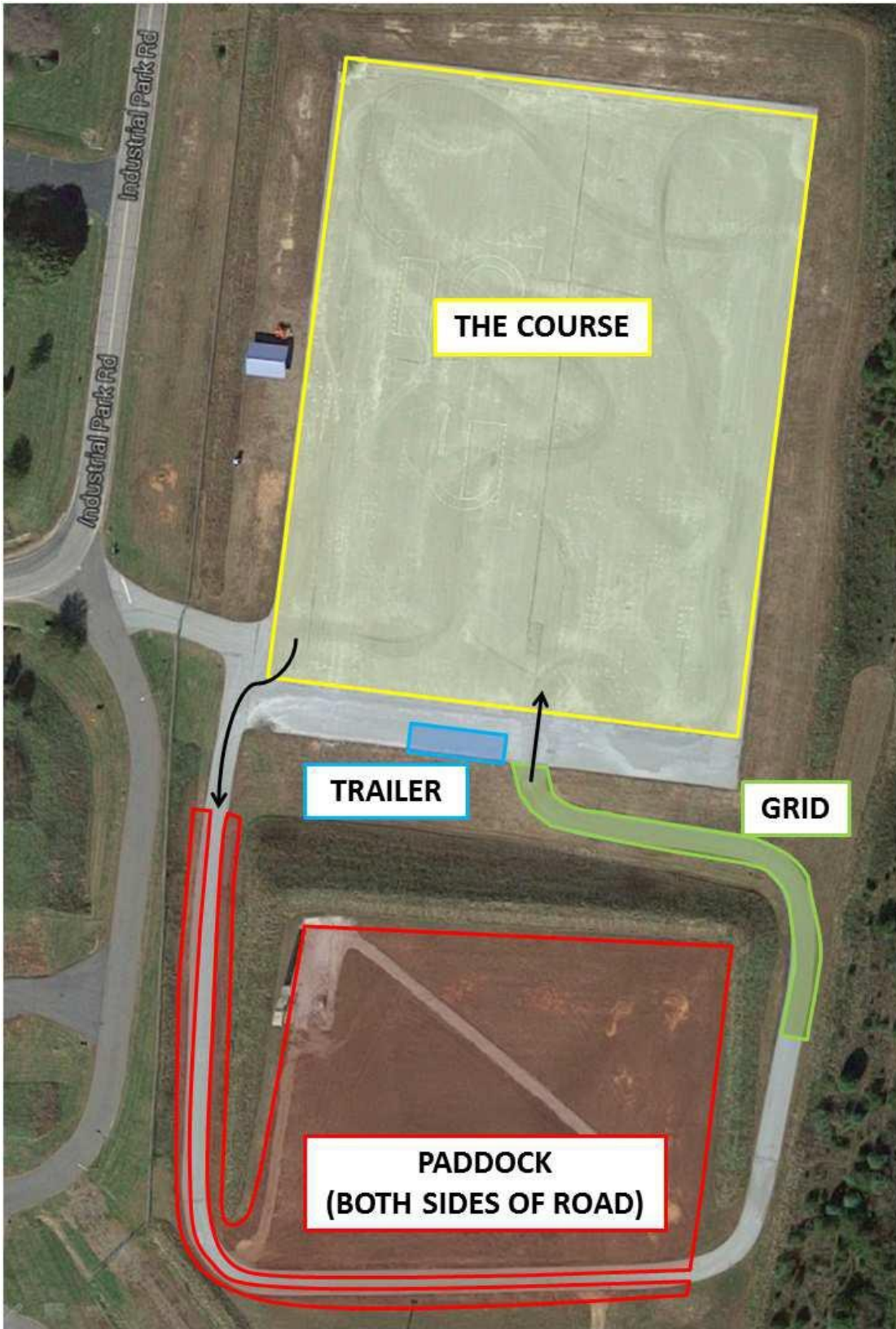
To help you navigate the event we have put together maps of both of our event locations. These layouts are common for HSCC events. There may be minor layout changes from event to event, but in general, they will look like the following.

### WNC Ag Center (1301 Fanning Bridge Road, Fletcher, NC)





Franklin site (225 Industrial Park Loop, Franklin, NC)



## SECTION 5 – TECH INSPECTION

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Prepping your car for the Tech Inspection should be done well in advance of the events. The Tech Inspectors are looking for a specific set of requirements on every vehicle that is to be driven at the event. Ensuring that these requirements are met will allow a quick and flawless pass through Tech Inspection.

The Tech Inspectors are looking for the following items on every single car:

- ┆ Proper class letters and numbers
- ┆ No loose or potentially loose objects in passenger compartment
- ┆ No fluid leaks
- ┆ No driver's floor mats
- ┆ Secured battery
- ┆ Firm brake pedal
- ┆ Positive throttle return (not needed for drive-by-wire cars)
- ┆ Tires with no cords showing
- ┆ No wheel bearing/tie rod play
- ┆ Any other serious, visible problem with the car (Tech Inspector's Discretion)

### **PROPERLY SIZED NUMBERS AND CLASS**

Having properly sized numbers and class designations for your car is required for the event. Not having these on your car will cause a failure of the Tech Inspection. And even if you do make it through tech without proper numbers, your runs may not be scored if your numbers are illegible. Please see the Required Equipment section of this document for examples of properly sized numbers. Numbers and letters made from contrasting tape are allowed. Any taped car designation must be legible from 20' away.

### **NO LOOSE OBJECTS OR POTENTIALLY LOOSE OBJECTS IN PASSENGER COMPARTMENT**

The first thing the Inspectors are going to look for is any unsecured items in the car. This means ANY item that is not securely bolted or fastened to the body of the car in some way. Before you go through Tech, make sure to remove any loose items. This includes gym bags, tools, food wrappers, sub boxes, tools, phones, wallets, etc. You can technically have loose items in the trunk if they are separated from the passenger compartment; but for your own sake, it would be good to remove these as well.



### **NO FLUID LEAKS**

If your car leaks a drop of oil once an hour, it is not a big deal. However, if your car is leaving hand-sized puddles of oil (or any other fluid) in a matter of minutes, you will not be allowed to drive it on the Course. Fluid spills can harm the pavement of the facility we are renting and can cause potentially dangerous driving conditions on the course.

### **NO DRIVER'S FLOOR MATS**

This one is simple. If you have floor mats in the driver's floorboard, they must be removed from the car. Also, if there is no physical barrier between the driver and passenger floorboards (floor hump, center console, etc.) then the passenger side must be removed as well.

### **SECURED BATTERY**

If your battery is loose, you will not pass tech. The battery for the car must be securely fastened. OEM methods are 100% accepted. Attempting to secure your battery with bungee cords is not acceptable.

### **FIRM BRAKE PEDAL**

The brake pedal of the vehicle must be firm with no noticeable drop or "give" with the car parked and the engine off.

### **POSITIVE THROTTLE RETURN**

The throttle of the car must have a strong, positive return. If you have a drive-by-wire car, then you do not need to worry about this.

### **TIRES WITH NO CORDS SHOWING**

Tires cannot show any cords.

### **NO WHEEL BEARING/TIE ROD PLAY**

If the tie rods or wheel bearings exhibit clunking or shifting in any form when pushing on the wheels, the car will not pass tech.

### **ANY OTHER SERIOUS, VISIBLE PROBLEM WITH THE CAR**

This is the "catch all" for any other serious problem. If the inspectors find a problem on the car that is not listed above, but does pose a safety issue, then they have the discretion to fail the car. Examples might be: Serious rust on frame rails or other structural components, exposed/poorly connected wiring, improperly mounted seats/roll bars, etc. If you have a question about a potential problem, please do not hesitate to contact us.



## SECTION 6 – VEHICLE CLASSING

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Every vehicle at an autocross must be assigned a class and a number to compete. The idea behind car classes is to group cars together according to their performance potential.

Classes are divided by not only the Make and Model of a car, but also the level of modification done to it. It would be just as unfair to compare the time of a 2009 Nissan GTR against a 1994 Mazda Miata as it would be to compare a stock Mini Cooper against an identical car with \$10,000 of modification.

As of December 2018, the SCCA has approximately **48** different classes that a vehicle can fit in.

*Note: While HSCC is not an SCCA affiliated club, we do use most of their rules for car classing and safety requirements.*

### **What class am I in?**

Beginning in 2019, HSCC will classify all drivers who wish to compete in Novice as “N” without regard to base class. A Novice is someone who has participated in three (3) or fewer autocrosses and has not won an event in the open class. That said, no one is required to run in Novice. Competitors will be scored on RAW time only. As a competitor becomes comfortable with the sport, we will be happy to assist in classing their car.

First, let’s list the class categories.

1. Street
2. Street Touring
3. Street Prepared
4. Street Mod
5. Prepared
6. Modified
7. Karts
8. Classic American Muscle
9. Stock Race Tire

Categories 1 through 6 correspond to a different level of modification for a car. This will be explained later, but for now, just know that Street is the lowest level of modification and Modified is the highest. Karts, Classic American Muscle, and Stock Race Tire exist to catch certain vehicles that do not fit in the first 6 groups.

Each of these class categories has individual classes (except for Stock Race Tire).



The sub-classes generally follow an alphabetical scheme from the fastest to the slowest.

	Street	Street Touring	Street Prepared	Street Mod	Prepared	Modified	Karts	Classic American Muscle	Stock Race Tire
Faster ----->	SS	STU	SSP	SSM	XP	AM	KM	CAM-S	SSR
	AS	STR	ASP	SM	BP	BM	JA	CAM-C	
	BS	STP	BSP	SMF	CP	CM	JB	CAM-T	
	CS	STX	CSP		DP	DM	JC		
	DS	STS	DSP		EP	EM			
	ES	STF	ESP		FP	FM			
	FS		FSP		HCR	FSAE			
	GS								
	HS								
	HCS								

### Okay, that's all good, which one am I in?

We're getting there. Unfortunately, before we can continue, we must explain the SCCA National Solo Rulebook. To do this, we're going to use a few vehicles as examples as we go through the rulebook.

There are 3 steps:

1. Find and open the rulebook
2. Figure out all the classes your vehicle can fit in
3. Choose your class

Let's get started:

Step 1: Find and open the rulebook (preferably on a desktop computer)

The SCCA National Solo Rules can be found at this web address:

<https://www.scca.com/pages/solo-cars-and-rules>

They can also be found at our club website:

<https://HSCC.club/>





The most recent set of rules will be listed at the top of the “download” section. Any addendums or changes through the year will be noted in their own documents below the main one. If an addendum or change exists in its own document, then it also exists within the main one. The picture below details the layout on the page:

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## Solo Cars and Rules

**2016 SOLO RULES**

The 2015 SCCA® National Solo® Rules are available on-line by the SCCA® Solo® Department to our members, entrants, volunteers, and anyone interested in learning more about the technical regulations governing SCCA® Solo® Competition. If you would like to purchase a hardcopy of the Solo® Rules, please contact SCCA® Merchandise via e-mail or call 1-800-770-2055.

The 2015 SCCA® Solo® Rules are available on-line in Adobe® Acrobat® format. We have chosen to serve this document in its original format using Adobe®'s Portable Document Format (PDF). This allows important documents and forms to be just a mouse click away. With the free Adobe® Reader software, users on any computing platform can navigate, scale, zoom-in, and print PDF files directly within their web browsers.

The official 2015 SCCA® ProSolo® Series Rules are also available on-line in a PDF.

**NOTE:** Technical Bulletins are periodically issued in Fastrack® News that supersede the information in the Solo® Rules.

**DOWNLOAD THE SOLO® RULES HERE**

DRAFT - 2016 SCCA® National Solo® Rules - DRAFT 12-22-2015 (2.1M)

2015 SCCA® National Solo® Rules - 10-26-2015 (4M)

- Section 13 Street Category - 6-23-2015
- Section 14 Street Touring® Category - 10-26-2015
- Section 15 Street Prepared Category - 5-19-2015
- Section 16 Street Modified Category - 6-23-2015
- Section 17 Prepared Category - 3-31-2015
- Section 18 Modified Category - 10-26-2015
- Section 19 Kart Category - 6-23-2015
- Appendix A - Automobile Classes - 10-26-2015

**MOST RECENT RULE BOOK PUBLISHING**

**PREVIOUS YEAR'S RULE BOOK**

**PREVIOUS YEAR'S ADDENDUMS AND CHANGES**

If you open the document, you will find that it's approximately **350** pages long. To properly classify a car, we're only going to need a *fraction* of that.

Step 2: Figure out all the classes your vehicle can fit in

Now that we have the rulebook, we'll need to know the year, make, model, and trim level of the vehicle in question.

The section of the rulebook we're going to be focusing on first is Appendix A – Automobile Classes. Appendix A contains a section for every single class and the vehicles that fit into each one.

Scrolling down a few pages (past the intro section) will reveal lists of vehicles with a heading that defines the class. At a minimum, each vehicle has the make and model listed. There are extra designators for the trim level, year, and engine options as needed.

Here's how to interpret these pages, we'll use the class AS (A Street) as an example:

STREET - APPENDIX A  
**A STREET CLASS (AS)**

**THE CLASS THAT THE FOLLOWING VEHICLES ARE ALLOWED TO COMPETE IN**

**MAKE AND MODEL OF VEHICLE. NO SPECIFIED YEARS IMPLIES THAT ANY YEAR OF THIS VEHICLE FITS IN THIS CLASS.**

**SOME VEHICLES CHANGE TRIM LEVEL NAMES THROUGH THE YEARS, THIS IS ACCOUNTED FOR.**

**VEHICLES WITH MANY TRIM LEVELS AND OPTIONS CAN END UP WITH VERY SPECIFIC CLASSING RULES. READ THEM CAREFULLY.**

**SPECIAL PACKAGES CAN CHANGE THE CLASSING. A NORMAL BOSS 302 WOULD GO IN F STREET, WHILE A NORMAL S2000 WOULD GO IN B STREET.**

**SOME VEHICLES NEED EXTRA DESIGNATORS FOR THE TYPE OF ENGINE IT CAME WITH. AN OPTIONAL ENGINE OR POWER ADDER (TURBO/SUPERCHARGER) CAN CHANGE THE CLASS. SOMETIMES THIS IS DONE JUST FOR CLARITY.**

ACURA  
NSX Alex Zanardi Signature Edition

AUDI  
TTS (2016)

BMW  
M3 & M4 (F80/F82) (2015-16)

CADILLAC  
XLR

CHEVROLET  
Camaro Z28 (2014-15)  
Camaro ZL1 (2012-15)  
Corvette (C6, non-ZR1) (2005-13)  
Corvette Z06 (C5) (2001-04)

DODGE  
Viper (non-ACR) (2008-10)  
Viper GTS (1996-2005)  
Viper R/T (1992-2003)  
Viper SRT-10 (2003-07)

FORD  
Mustang Boss 302 Laguna Seca (2012-13)  
Mustang Shelby GT350 (2016)  
Mustang Shelby GT500 (2007-14)

HONDA  
S2000 CR

JAGUAR  
F-Type (except Project 7) (2014-16)

LOTUS  
Esprit Turbo (1996-2004)  
Evora (non-supercharged) (2010-15)

MAZDA  
RX-7 (1993-95)

MORGAN  
Plus 8  
Roadster (V6)

NISSAN  
350Z NISMO (2004-2008)  
370Z NISMO (2009-16)

PONTIAC  
Solstice GXP (Turbo) (2007-09)

PORSCHE  
911 (1996, non-turbo) (1998-2005)  
Boxster S (2005-08)

SAATCHI  
Boxster (non-GTS, non-S, non-Spyder) (2009-16)  
Cayman (non-GT4, non-GTS, non-R, non-S) (2009-16)  
Cayman S (2006-08)

SATURN  
Sky Redline (Turbo) (2007-10)

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We do not expect you to read the entire list of every class to try to find the classes your car could potentially be in. Instead, we'll search through the document using functions that are already present in every single computer.

By pressing "Ctrl" and "F" at the same time ("Command" and "F" on a Mac), your computer will open a search box in your browser or PDF viewer. Using this, you can search for the model of your car and simply go through the results to find all the classes.

For this example, we'll use 2 different, but common vehicles:

- 1) 2006 Chevrolet Cobalt SS (2.0L supercharged)
- 2) 1999 Chevrolet Corvette

So, we press "Ctrl" and "F" and type "Cobalt" into the search box, we see that there are 14 results for the car. Clicking the arrows or pressing "Enter" will cycle through the results.



After cycling through the results, we find that the results are as follows: DS

- Cobalt SS (2.0L Turbo) (2008-10)
- GS - Cobalt Sport (2.4L) (2008) GS -
- Cobalt SS (2.0L SC) (2005-07) GS -
- Cobalt SS (2.4L) (2006-07) HS -
- Cobalt (2.2L, all) (2005-10)
- STX - Cobalt (2.4L N/A, 2.0L S/C, & 2.0T)
- STF - Cobalt (2.2L, N/A)
- DSP - Cobalt SS (N/A) (2005-07) Cobalt SS Supercharged (2005- 07)
- DSP - Cobalt SS Supercharged (2005- 07)
- DSP - Cobalt SS Turbo (2008-10)

Note: There are only 10 results shown from the initial 14. The other 4 results are from the awards from previous years' Nationals competitions and a few other sentences that relate to the Cobalt. You can ignore the awards section, but it is good to read these other rules and limitations.

So, from the results above, we find that the Cobalt can fit into many different classes depending on the trim and engine. However, we're only focused on the "SS" trim level. This leaves us with the following classes:

- DS - Cobalt SS (2.0L Turbo) (2008-10)
- GS - Cobalt SS (2.0L SC) (2005-07)
- GS - Cobalt SS (2.4L) (2006-07)
- STX - Cobalt (2.4L N/A, 2.0L S/C, & 2.0T)
- DSP - Cobalt SS (N/A) (2005-07) Cobalt SS Supercharged (2005- 07)
- DSP - Cobalt SS Supercharged (2005-07)
- DSP - Cobalt SS Turbo (2008-10)

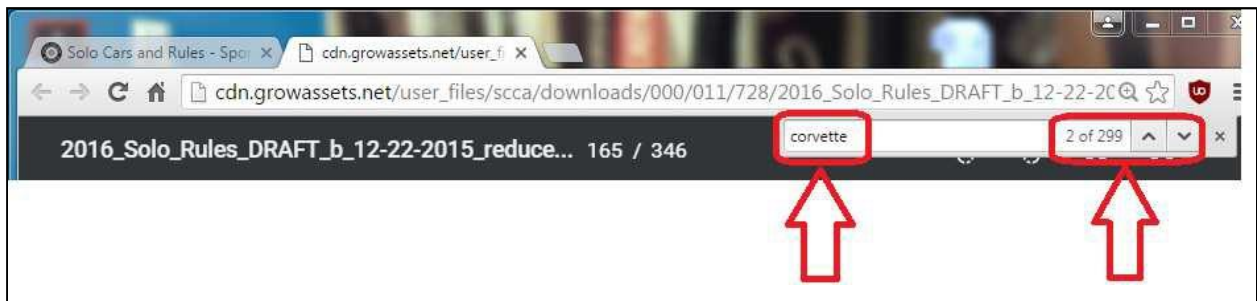
Now, the "SS" trim was used through various years of production and during that time, there were 3 engines available: a supercharged 2.0L, a turbocharged 2.0L, and a naturally aspirated 2.4L.

If we focus down by the year (2006), we find that there are 3 potential classes for this car: GS -

- Cobalt SS (2.0L SC) (2005-07)
- STX - Cobalt (2.4L N/A, 2.0L S/C, & 2.0T)
- DSP - Cobalt SS Supercharged (2005-07)

This is very typical for a standard street car. There is a Street class, a Street Touring class, and a Prepared class.

Let's do this again, but for the Corvette:



A few more results this time. Let's focus on the year, make, and model from the beginning and cut down the steps:



BS - Corvette (C5, non-Z06) (1997- 2004)  
STU - Corvette (C5, non-Z06) (1997- 2004)  
SSP - Corvette (C5 chassis) (1997- 2004)  
CAM-S - Corvette (1984-2016)

Notice how the Corvette can also be included in CAM-S in addition to the other 3 classes. There may be more than just the 3 classes available for the car. The Cobalt could also be classed into Street Modified; however, it is not explicitly stated in a list. Instead, Street Modified classifications are based upon weight and engine displacement due to the extreme amounts of modification that are allowed.

### Step 3: Choose your class

Which class should you choose? Well, the level of modification to the car will determine the class in which it can participate.

At this point, you must read the appropriate sections in the rulebook to see what is allowed in each class. *There is no easy way to explain this.* It is going to require a fair bit of reading by you.

Each class category is well explained on what is allowed. For the Street class, it starts at Section 13 in the rulebook. You can skip the first portion that just outlines car eligibility for a Nationals event and some basic definitions. The essential information is everything beneath "Authorized Modifications." An important rule to remember is this:

**"IF A MODIFICATION IS NOT SPECIFICALLY AUTHORIZED IN THIS OR PREVIOUS SECTIONS OF THESE RULES, IT IS NOT ALLOWED."**

Example: You want to put an oil cooler on your car. The Street section mentions nothing about adding oil coolers. Therefore, you cannot do it.

**It is good to read the rules for each class your car could fit into so you are familiar with the differences. If you have any question about classing, please do not hesitate to ask the HSCC Officers. Our contact information is on the website and we are available on Facebook.**





## SECTION 7 – NOVICE CHECKLIST: REQUIRED EQUIPMENT

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Below is a list of items that are absolutely required for every event.

- └ A parent or guardian (for minors only)
- └ A driver's license
- └ Money for registration
- └ Car Numbers and Class

### **PARENT OR GUARDIAN (FOR MINORS ONLY)**

If you are a minor, a Parent or Guardian must be present to allow you to run at the event. They are required to sign the Waiver and to Register/Check-in.

### **DRIVER'S LICENSE**

A Driver's License must be shown at the time a Waiver is signed and/or at Check-in.

### **MONEY FOR REGISTRATION**

If you did not register and pay online ahead of time, you will have to pay at the event. Paying at the event requires registering at the event **and this will incur a \$10 fee**. Cash and checks are allowed as payment. Do not worry about bringing exact values. We can make change if needed.

### **CAR NUMBERS AND CLASS**

HSCC allows "tape" numbers as many other clubs do. Tape numbers and letters must be made from a contrasting color of tape (no dark tape on dark cars) and must be legible from 20 feet away. *The HSCC website contains a document that has numbers and classes that easily print to 8.5 x 11 (letter size) sheets of paper.*

If you choose to make your own, an acceptable size is one number per 8.5 x 11 sheet of paper and the entire class on a separate 8.5 x 11 sheet. Classes and numbers must go on **BOTH** sides of a vehicle. Karts can have them either front/back or both sides. Please see the following images for acceptable types of car classes/numbers.

If you choose to use vinyl instead of printed paper, please sure the vinyl color contrasts starkly with the color of the car. Having light blue numbers on a dark blue car is not considered to be a stark contrast. Red is not a very good color to use unless the numbers and class are large or bold. Having almost any color is acceptable when using a white background.



ACCEPTABLE TYPES OF CAR NUMBERS AND CLASS:



## SECTION 8 – NOVICE CHECKLIST: RECOMMENDED EQUIPMENT

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The equipment listed below is not required, but highly recommended. You will see many of the more experienced members of the club arrive with these items. Many of these are listed because they are far more convenient than attempting to use HSCC-provided equipment or because HSCC does not provide some of the things listed. A brief explanation of each follows the checklist.

- ┌ Your own helmet (DOT rating required)
- ┌ Water
- ┌ Sunscreen
- ┌ Sunglasses
- ┌ Snack foods
- ┌ Folding chair
- ┌ Pop-up cover
- ┌ Tire pressure gauge
- ┌ 12-volt air compressor
- ┌ Chalk
- ┌ Blue painters' tape (or masking tape)
- ┌ Tarp/blanket
- ┌ Poncho/umbrella
- ┌ Small toolbox (see description below)
- ┌ Torque Wrench
- ┌ Towels (paper or cloth)
- ┌ Handheld IR temperature gauge
- ┌ Nitrile gloves
- ┌ Spare tire
- ┌ Extra quart of oil
- ┌ Multimeter

### **YOUR OWN HELMET (DOT RATING REQUIRED)**

HSCC has a few loaner helmets that can be used if you do not have one or forget one. These helmets vary in size and condition (they were donations after all). Having your own helmet is much more convenient. Helmets require a DOT rating at a minimum and they must cover your ears. Almost any motorcycle helmet is okay to use, however, "brain buckets" are prohibited. Open or closed face helmets are okay (purely driver preference).



## **WATER, SUNSCREEN, SUNGLASSES**

Water, sunscreen, and sunglasses are **exceedingly** important when you are going to be standing in a parking lot for the better part of *6 hours*. Even on cloudy days, UV rays will cause sunburn in a short time. Dehydration and heat stroke are miserable experiences and dangerous to your health. HSCC provides some water during events but cannot provide for every member. Please consider bringing these for yourself and others.

## **SNACK FOODS**

Snack foods are useful for the in-between times of the day. HSCC does have a lunch break on Day Series events, but there's a lot going on before and after that time. Trail mix, granola bars, and any other on-the-go food are good to have. You will be burning tons of calories between walking, working the course, driving, chatting, and just generally being up, around, and having an enjoyable time. Don't let hunger pangs ruin your day.

## **FOLDING CHAIR/POP-UP COVER**

Many events do not have any overhead protection or a place to sit (these are parking lots after all). Having a cool place to sit (other than your vehicle) is nice for watching the competition and chatting during the lunch breaks. Keeping your belongings out of the sun is also a nice benefit.

## **TIRE PRESSURE GAUGE**

Tire pressure gauges are good to check and monitor how your tire pressures are reacting to the heat of the pavement (or lack of). Tires can experience upwards of 12 psi of pressure change during an event. This level of change can radically affect how your car is handling and the tire wear you will experience.

## **12 VOLT AIR COMPRESSOR**

It is much more convenient for you to have your own air pump at the event. HSCC provides an air compressor at every event, but it may be in use when you need it. Having your own can save you a lot of time and effort. It is also handy to have to put air back in your tires when they cool off at the end of the day.

## **CHALK**

Sidewalk chalk can be used to mark the sidewall of your tire to check how far it is rolling over. Too much or too little rollover may cause handling issues. Using chalk on the sidewall is cheap, fast, and very easy. Ask an officer or a more experienced member of the club for instruction or interpretation of your markings.



### **BLUE PAINTERS TAPE (MASKING TAPE)**

Blue masking tape is a cheap, paint-safe method of attaching numbers to your car. It is fast and easy to apply and remove. It also works very well for protecting paint from potential cone damage/smudges. HSCC allows contrasting color tape for numbers and letters.

### **TARP/BLANKET**

A tarp or blanket is useful for covering all the equipment you bring if it rains. It can also provide a clean place to set your equipment (instead of the dirt/grass). It is a good way to “mark” an area as yours in the Paddock as well.

### **PONCHO/UMBRELLA**

Poncho/umbrella should be self-explanatory. This isn't NASCAR. We hold the event rain or shine. You will be expected to do your worker assignment regardless of rain. Lightning is an exception, and the officers of the club may call the event off if deemed necessary.

### **SMALL TOOLBOX WITH GENERAL HAND TOOLS**

A small toolbox filled with general hand tools allows you to fix any small issue that might arise during your day. Any issue requiring tools beyond what is listed is probably going to require a tow home. Handy items include:

- Wrenches
- Sockets
- Breaker bar (to loosen lug nuts)
- Screwdrivers
- Pliers
- Wire cutter/crimper
- Rubber mallet
- Small hammer or mini-sledge
- Zip ties
- Assorted electrical connectors (butt or spade)

### **TORQUE WRENCH**

Proper lug nut torque is no joke. While the speeds and risks of an autocross are low in comparison to something like a track day, the proper lug nut torque on your wheels is just as important. It is common practice, and highly recommended, to loosen lug nuts and torque them at the event. You will see many experienced members double-checking their lug nuts at the beginning of the event. Don't be the guy/gal who loses a wheel during the event (yes, it has happened).





## **TOWEL(S)**

Towels are useful for a lot of things. Sweat. Fluid leaks. Wiping the car down to apply tape for numbers, etc., etc. If you bring paper towels, please dispose of them properly at the event or bring them home with you.

## **HANDHELD IR TEMP GAUGE**

Infrared temperature gauges have gotten very affordable in recent years and allow you to check and see how your tires are reacting during the event. A hotspot on your tire can indicate a particular problem with alignment or driving style.

## **NITRILE GLOVES**

A staple for any automotive work. Nitrile gloves come in handy when fixing problems on vehicles (yours or someone else's). Nobody wants to have greasy/dirty hands while attempting to work on their car. Walmart sells large packs of them in the pharmacy section (way cheaper than buying small packs from auto parts stores).

## **SPARE TIRE**

A spare tire is nice to have. Every once in a while, someone picks up a nail or "cords" a tire during an event. You cannot participate at the event with one on your car, but at least you can get home. Just make sure it's pressurized. You did bring that 12V air compressor, right?

## **EXTRA QUART OF OIL**

Having an extra quart of oil on-hand can save a LOT of time during the day if your oil light comes on. You may find that your car burns a bit more oil than usual due to the extended high- RPM activities.

## **MULTIMETERS**

Multimeters go hand-in-hand with the rest of the toolkit to fix any minor problem that your vehicle might throw at you during the day.



## SECTION 9 – YOUR FIRST DAY

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Now that we have covered just about every definition of specific autocross terms, what to bring, what the Tech Inspection is looking for, and how to read the course, let's step through the actions you need to do on your first day. This is pretty much step-by-step.

### PRIOR TO THE EVENT

- ┆ Figure out what class your vehicle fits into
- ┆ Register for the event online and pay your entry fee
- ┆ Print off your numbers and class (or bring contrasting painters' tape).
- ┆ Gather all equipment you will bring for the event (see checklists above)
- ┆ Prep your vehicle to pass Tech

### DAY OF THE EVENT

- ┆ Arrive at least 1 hour prior to check-in closing, the earlier the better
- ┆ Sign Insurance Waiver at the gate, receive wristband
- ┆ Find a place to park your vehicle in the Paddock
- ┆ Put your wristband on
- ┆ Unload your vehicle
- ┆ Attach your class and numbers
- ┆ Check-in at the Registration
- ┆ If you did not register online, then register yourself and your car at the Registration Desk **(a \$10 fee will be charged for day-of Registration)**
- ┆ Take your vehicle through Tech Inspection
- ┆ Park your car back in the Paddock
- ┆ Walk the course
- ┆ Walk the course again
- ┆ Walk the course a third time (yes, we're serious)
- ┆ Attend the Novice Walkthrough
- ┆ Attend the Driver's Meeting
- ┆ **If you're in the 1<sup>st</sup> Run Group:**
  - Get your car and line up in Grid
  - Make your run through the course
  - Return your car to your spot in Grid
  - Repeat the previous 2 steps for all your runs
  - Park your vehicle back in the Paddock
  - Head back to trailer for Work Assignment



- ┌ **If you're in the 2<sup>nd</sup> Run Group:**
  - Receive worker assignment from Worker Steward
  - After the other drivers have finished their runs, return vest to trailer
  - Get your car and line up in Grid
  - Make your run through the course
  - Return your car to your spot in Grid
  - Repeat the previous 2 steps for all your runs
  - Park vehicle back in Paddock
- ┌ Eat your lunch (Day Events only)
- ┌ Repeat what you did in the morning for the afternoon (Day Events only)

#### **AFTER THE EVENT**

- ┌ If possible, hang around and help stack cones and deliver other equipment to the trailer
- ┌ Gather up all your belongings from the Paddock (we aren't responsible for items left behind)
- ┌ Leave the event location in a controlled and safe manner. **Burnouts and/or aggressive driving while leaving an event will lead to disqualification from future events.**
- ┌ Tell your friends/share photos on Facebook/follow us on Facebook
- ┌ Join the club as a member to receive a discount on all events



## SECTION 10 – UNDERSTANDING THE COURSE LAYOUT

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Understanding the course layout at an event is one of the more difficult things for a novice to do for their first few events. At first, the parking lot will look like a sea of cones, but there is a method to the madness. This section will hopefully explain the basics of how to “read” the course but will not cover how to drive the course quickly (that comes with time and experience, not from reading).

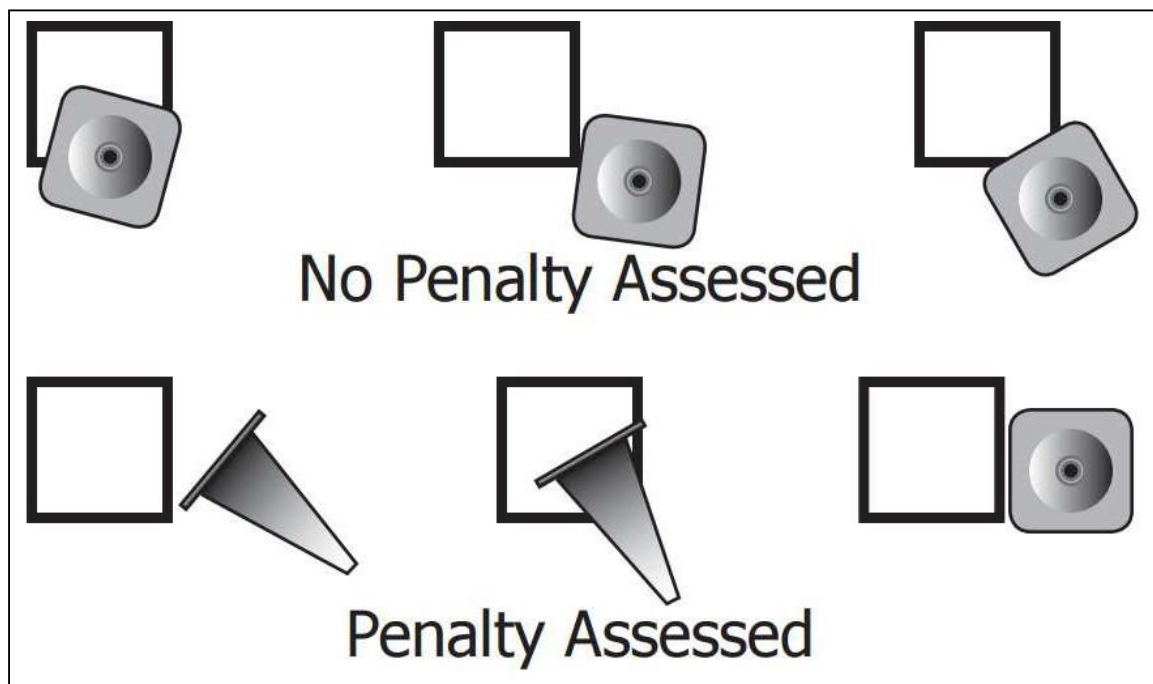
### BASIC CONE RULES

First, let’s cover some basic rules regarding cones and penalties:

1. Hitting a cone will result in a “+1” penalty being called on you (2 cones = +2, etc., etc.)
2. Every cone you hit will be an extra 2 seconds added to your time.
3. Hitting a cone in the braking zone (after the finish line) will be an automatic DNF (did not finish = disqualified time).

### WHAT COUNTS AS HITTING CONES

Not every cone that is hit will result in a penalty. There are some set rules regarding this. The SCCA has a handy image to explain this, and it is shown below. Simply put, if you hit a cone, and it ends up like one of the top 3, there is no penalty. However, if you hit a cone and it ends up like one of the bottom 3, you will be penalized.



## BASIC COURSE ELEMENTS

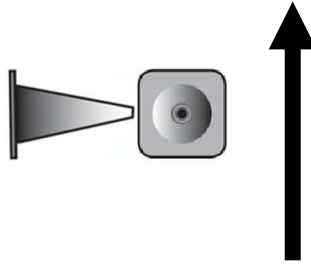
The following course elements are strung together in several ways to form the Course. The elements will sometimes look slightly different with an extra cone or two but should follow similar layouts to what is shown below. Regardless, if you are standing at an element on the Course, you should be able to look outwards and clearly see where the next element is. If there is any confusion on where the next element is, please do not hesitate to ask.

### Pointer Cones

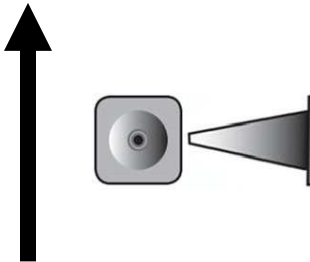
Pointer cones are cones that are placed on their side next to another cone. Pointer cones “point” to which side of a cone you are supposed to drive around. Pointer cones can also be laid down in straight lines to clarify a course layout. Hitting a pointer cone **does not** count against your time.

### Examples of pointer cones seen from above

Pointer cone indicating to drive on right:

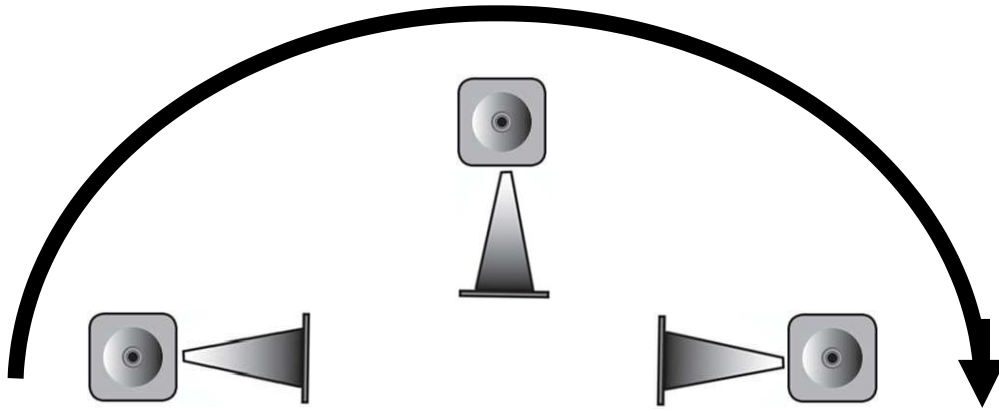


Pointer cone indicating to drive on left:

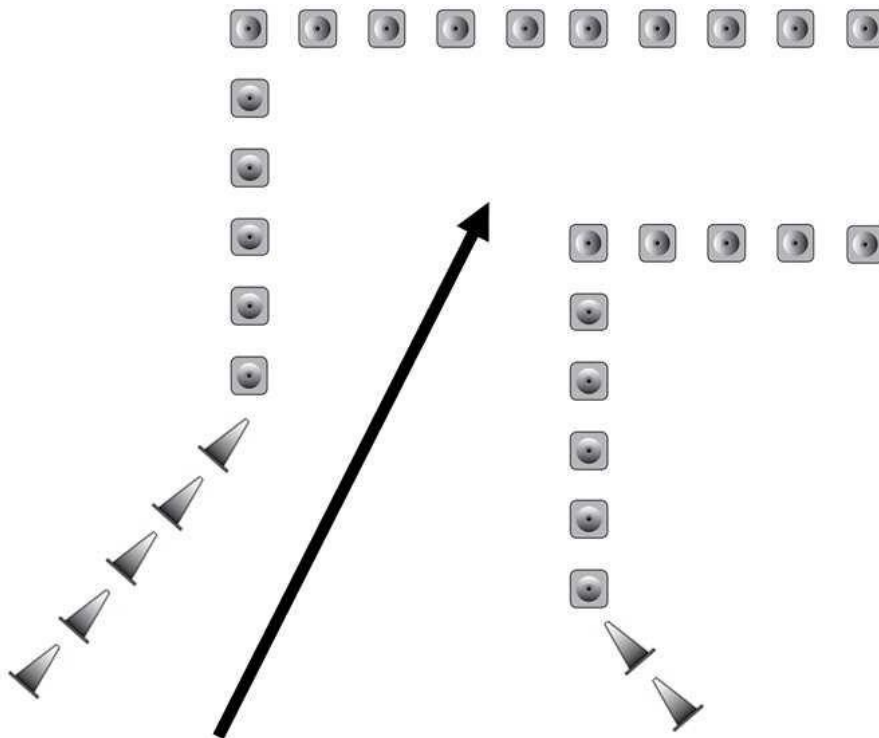




Pointer cones indicating to drive around outside:



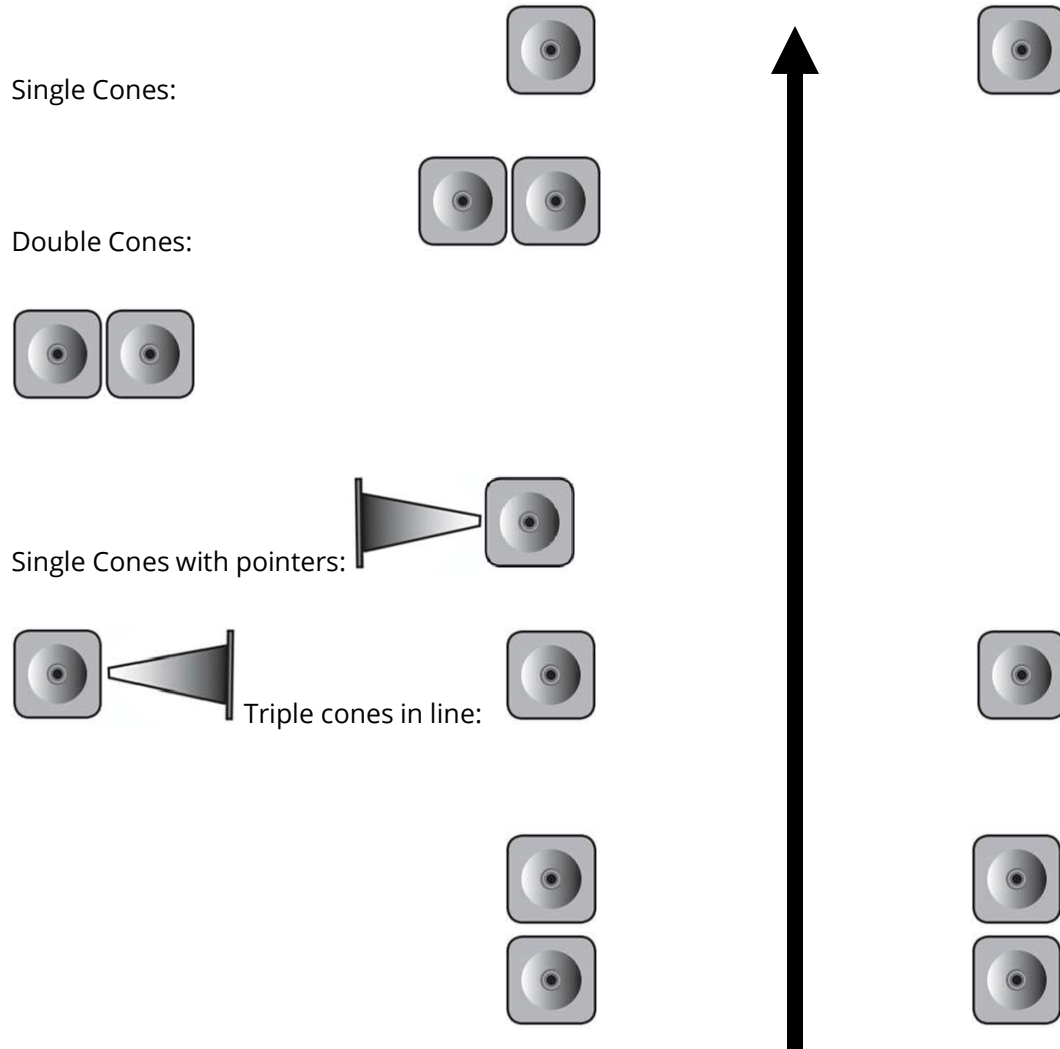
Pointer cones clarifying course layout



## Gates

Gates are sets of cones that mark out the limits of the course. Gates can be identified by sets of cones opposite each other. It is required to drive through the center of each gate to stay on the course. Missing a gate by driving around it will cause you to "DNF" immediately.

### Examples of gates seen from above



## Slaloms

Slaloms are cones setup in a straight line that are navigated by alternately weaving around each one. Slaloms are generally 3-5 cones in length and may or may not indicate which direction to start the slalom. If the first cone in a slalom has a pointer cone, then the direction is established, however, if there is no pointer then the slalom is optional on which side to start.

### **Examples of slaloms seen from above**

Directed



Optional starting right



Optional starting left

