

SCC Autocross Definition & Rules

Rev. C -- 9/16/21

Note: This SCC autocross procedure has been updated as part of making our procedures more complete and easier to follow. While SCC has always had procedures, they have been expanded by drawing on Sports Car Club of America (SCCA) procedures. SCCA is a huge nationwide organization that has formalized its procedures, and we can benefit from using parts of them – modified as needed to work at our events.

1. SCC AUTOCROSS

1.1 DEFINITION OF AUTOCROSS (AX)

Autocross is a normal-speed driving-skill contest. It is run on a paved short course (~ 1 km long) defined by traffic cones, usually in a large parking lot. Autocross emphasizes the driver's ability and the car's handling and agility. Special licenses are not required, and hazards to spectators, participants, and property do not exceed those encountered in normal highway driving.

1.2 SCC SAFETY STEWARDS

The SCC Safety Steward (SS) program is designed to provide reasonable precautions to help keep SCC Autocross events safe. The SS program is covered in another document – SCC Autocross Safety Steward Program.

1.3 SCC EVENT INSURANCE

WSCC-sanctioned events must be insured for Liability. The SCC Event Chairman applies for this insurance at least 30 days ahead by submitting the WSCC Event Sanctioning Request to the WSCC Events Director. The WSCC Events Director is responsible for obtaining and transmitting the approved Sanction Request to SCC. The SCC Event Chairman must then transmit the insurance certificate to the AX venue management and post it at the event.

1.4 COURSE MAP

The event chairman must submit an approved map of the proposed autocross course to the WSCC Events Director at least 30 days ahead of the event. The map should include the location of the grid, timing, course workers, as well as the routes cars will use to get on and off the course.

1.5 EVENT OPERATING RULES

- A. Competitors and passengers are required to wear a seat belt when driving in competition.
- B. All cars must comply with the car inspection criteria, as defined in Section 4.0.

- C. Competitors and passengers are required to wear an approved safety helmet when driving in competition.
 - 1. The helmet must meet current or 2 prior Snell SA ratings (e.g. in 2021-2024, helmet must be certified to Snell SA2010, 2015, or 2020).
 - 2. Motorcycle helmets (M rating) are not allowed.
 - 3. The helmet must be in good physical shape (straps not frayed, no obvious outer shell damage).
 - 4. Drivers of cars with no windshields must have visor in place.
- D. All competitors must be registered in the event (typically on MotorsportReg). Same-day registration is allowed if there is room, but events often sell out beforehand.
- E. Age requirements
 - 1. Competitors must be a minimum of 16 years old. A driver's license is required.
 - 2. Passengers are allowed in a competitor's car, provided they are at least 12 years old. Passengers must wear an approved helmet and be belted in (see 1.5.B).
 - 3. Only people 12 years and older may be present in the active areas of the venue – Grid, In and Out lanes, Course, start and finish areas.
 - 4. Children less than 12 years old must be accompanied by an adult and may only be in the spectator areas and the parking areas.
- F. Waiver requirements
 - 1. All adults (18 + years old) including competitors, workers, crew, and spectators must sign the waiver for the event.
 - i. Waivers are typically signed on-line, as part of the registration process.
 - ii. Waivers may be signed on site, if necessary, as people enter the venue.
 - 2. All attendees under 18 must have a Minor Waiver filled out and signed by a parent or guardian. This applies to minors who are driving, riding as a passenger, or spectating. These waivers may be filled out and signed on site, but minors attending without a parent must have had them filled out and signed ahead of time.
 - 3. Waivers or electronic copies of waivers must be kept for at least two years – which is California's statute of limitations for bringing a lawsuit. However, there are many exceptions that can extend this period. For instance, an injured minor has until he turns 20 to file a suit. Military personnel have no deadline. There can be extensions to file suits due to special circumstances like the COVID epidemic. Accordingly, it is strongly recommended that that SCC save waivers indefinitely. If waivers signed on MotorsportsReg expire, then SCC should get electronic copies of all waivers and save them in a secure manner independently.

- G. Every event must have an Event Chairman and a Safety Steward in place at least a month before the event for event planning and preparation and to supervise the running of the event. At the event, if these people are also competitors, there must be duplicates to cover the event while the main appointees are running.
- H. Use of Alcohol / Narcotics. No driver, course worker, official, volunteer, or spectator may consume alcohol and/or narcotics until the event is complete. Violators may be disqualified and barred from future participation.
- I. Unsportsmanlike Conduct. Any driver who drives unsafely at the event location or displays unsportsmanlike conduct may be disqualified by the Event Chairman.
- J. Smoking (including e-cigarette use) is not permitted on grid or in staging areas.
- K. The Starter, Grid Chief, and Safety Station workers must be standing at all times when any competition cars are on-course during the event. Workers in protected areas may be seated (at the timing table e.g.).
- L. Use of cell phones and/or cameras is not permitted at course worker positions or other locations within the course area, except for emergencies. (A photographer with a personal spotter is allowed on the course.)
- M. The use of unmanned aircraft systems (UAS, drones, etc.) is not permitted at any event, unless approved by the autocross venue and event officials. Any applications or insurance required by the venue for drone use shall be provided prior to the event.

2. COURSE

Autocross courses should be open enough to allow good competition between larger and smaller cars, and they should not emphasize high speed, power-to-weight ratio, extreme maneuverability, driver memory, or visual acuity.

2.1 COMMON SENSE AND AUTOCROSS COURSES

- A. Although autocross events are normal-speed events, speed alone is not the operative factor in determining what is and is not a safe event. Hazard is the operative word. Hazards must not exceed those encountered in legal highway travel. Generally, maximum speeds in the mid-50s to mid-60s (mph) are contemplated for stock, newer model, base Corvettes, since these are speeds with which the average driver is familiar. But it is quite possible to set up a course on which speeds do not exceed 45 mph, but which is more hazardous than another course on which 65 mph is attainable. Accordingly, a rule based strictly on max speed will not always work. A critical eye for hazards present is required to assure a safe course.
- B. The same sort of reasoning must be applied to cornering speeds. If, for example, there are two identical 30-mph turns, one bordered by a 50-foot drop-off or a solid row of trees, and the other by 50 feet of flat, obstacle-free asphalt, the hazards involved are much different. The first case would not be permitted, whereas the second case would. Again, common sense must prevail.

- C. Basically, autocross speeds are limited to what is “reasonable and prudent for the conditions encountered,” subject to the constraint that top speeds be within an allowable range, as described in section 2.2. Laying out a course to comply with the safety requirements of these rules calls for the exercise of prudent good judgment and common sense.

2.2 COURSE SAFETY RULES These purpose of these rules is to keep the event safe for workers and observers.

- A. Courses must be tight enough so that cars run the entire course in their lower gears. Speeds on straight stretches should not normally exceed the mid-60s (mph) for stock, newer model, base Corvettes. The fastest portions of the course shall be those most remote from spectators and property. Turns should not normally allow speeds in excess of 45 mph in stock cars. Conformity to these speed guidelines does not preclude reasonable and prudent consideration of the conditions encountered.
- B. The course shall be laid out on a paved surface, and it shall contain no dangerous holes, excessive loose gravel, gratings, oily spots, or other hazardous features. Surface features (e.g., dips, crowns) which could upset a car shall be avoided.
- C. The edges of the defined course shall not normally pass closer than 25 ft. from solid objects.
- D. A long straight (over 150 ft.) should not terminate in an extremely sharp turn (e.g., a short-radius U-turn).
- E. The inner and outer limits of turns and corners should be marked by course markers (cones), displacement of which results in time penalties. Corner limits must never be marked by curbs, buildings, poles, trees, soft shoulders, or other hazards which could lead to car damage.
- F. Cars on the course simultaneously shall not ever pass in close proximity to each other.
- G. All portions of the course shall be visible to at least one course worker who can communicate through signals or electronic means with the starter and timing personnel.
- H. Extreme care shall be taken in the location of the start, finish, staging, and timing areas. Timing personnel and staging area must be placed well clear of the course in a safe area. The finish section and course exit should be clearly and carefully defined to safely restrict speeds. It is not recommended that competing cars be required to come to a complete stop immediately following the finish line. It is preferred that cars be required to slow to walking speed within a controlled area before returning to the grid or paddock areas. In all cases, a sufficient distance past the finish line must be available to safely slow or halt any competing car from the highest possible speed attainable at the finish without locking brakes or wild maneuvering. Particular care must be exercised in the finish area to keep it free from hazard to participants and non-participants.

- I. Entrance and exit lanes shall enter the course at separate points, though they may be close together. They must be kept clear for use by competing cars at all times.
- J. Portions of the course where significant braking is necessary shall not terminate at a point where participants, non-participants, or obstacles are directly in front at a distance less than 75 feet.
- K. Participants and non-participants must be kept at a safe distance from the course, particularly at the outside of turns (the spin-out zone) and at the start and finish lines. Unless protected by substantial barriers, non-participant areas must be roped off. The Safety Steward shall have the authority to set minimum viewing distances from the course, but such minimum viewing distances may not be less than 75 ft. from the course edge in unprotected areas (areas without adequate barrier protection such as concrete or tire walls).
- L. The Starter is a key person with safety responsibility. Course workers have safety responsibility as well. Their duties are covered in the Drivers' Meeting document.
- M. Appropriate fire extinguishers at the timing table and each workstation (5-lb A, B, C), flags, and material for cleaning up fluid spills must be provided by the host club.

2.3 TOP-LEVEL COURSE DESIGN RULES The purpose of these rules is to make the autocross course drivable and fair for a variety of competitors.

- A. All corners shall be negotiable without reversing.
- B. The course shall be at least 15 ft. wide – 20 ft is preferable.
- C. The markers (cones) defining a slalom shall be at least 45 ft. apart.
- D. An SCC autocross shall be a test of driving skill, not just memory.
- E. The course shall be well-marked with pylons or other “markers.” The base of each marker shall be outlined with chalk to permit accurate replacement if displaced. The borders of the course shall be lined with chalk to aid in comprehension, whenever practical.
- F. Cars should leave a gate/turn headed generally in the direction of the next gate/turn.
- G. Safety design rules are covered in 2.2.

2.4 ADVANCED DESIGN GUIDANCE There is much more guidance for making a course work – that is, making it interesting and challenging -- beyond those listed in sections 2.1—2.3. These have been captured in a thorough, comprehensive package called Solo Course Design Challenges 2016 by Roger Johnson. This document is part of the SCCA's documentation, and the safety aspects should be considered mandatory training for course designers. The 2016 version, which SCC has adopted, is on the SCC website.

Note that any newer SCCA versions are not automatically invoked for SCC use – the version called out in this document is the operative version for SCC events.

3. ELIGIBLE VEHICLES

- 3.1 An SCC autocross is open to any vehicle that can pass safety (tech) inspection, is properly muffled, and is roughly the same size as typical autos found on the road. (Go karts or very large vehicles are not allowed.) The Event Chairman has authority to disallow any vehicle that will, in his judgment, not be able to readily negotiate the autocross course. Cars need not be licensed or licensable for road use, so long as they otherwise comply with SCC Rules.
- 3.2 Vehicles with a high center of gravity and a narrow track, including SUVs, minivans, and pickups on lift kits, are considered unstable and are not eligible to participate.

4 VEHICLE SAFETY

- 4.1 Driver Restraints. At a minimum, seat lap belts are required in all cars. Competition harnesses are allowed, and encouraged, for faster cars.
- 4.2 Roll bars. Roll bars are allowed, even recommended. Any bars or hoops must extend above the driver's helmet, so that the car will pass the "broomstick test." That is, if a car over-turns, it must have sufficient protection from the roof or roll bar to the top of the windshield frame, or whatever is the next forward structural support point, so that the weight of the car does not land on the head of the driver.
- 4.3 Safety Inspections. All vehicles must pass safety (tech) inspection prior to competing. The safety worthiness of a car is the responsibility of the driver, who must ensure the car is safe to autocross by meeting all requirements given below. The driver must sign off on his car's preparation, either electronically on MotorsportsReg during registration or on a hard copy at the event. In addition, SCC tech inspectors may perform a limited inspection of the car on site, prior to competition. Note that this on-site inspection does not relieve the driver of responsibility for the car's readiness. Inspection requirements include:
 - A. All loose items, inside and outside the car, must be removed. Hand-held items, such as cameras and cell phones, are considered loose items.
 - B. Pedal operation must not be impeded. The driver's floor mat must be removed unless securely mounted. Original Equipment (OE) fasteners designed to prevent the mat from sliding satisfy this requirement, if they are in good working order.
 - C. Passenger's seat back and all cushions, bolsters, headrests, etc. must be secured. Aftermarket replacement seats (i.e., driver and passenger) must be securely and safely mounted.

- D. Any cameras must be securely mounted to withstand loads from driving maneuvers. The camera may be installed either inside or on the outside of the car. In either case, its mounting method and position must not interfere with driving or pose an additional hazard to driver, passenger, or course workers.
- E. Snap-on hubcaps, detachable fender skirts, and trim rings must be removed.
- F. Wheels must be safely affixed. They shall not be reversed so that the lughole taper does not mate with the chamfer of the lugs. All studs and lug nuts must be present and functional.
- G. Tires must be in good condition with no cord or belts showing or cracks in the tread or sidewall. Each tire with tread must have measurable tread depth at no less than two points on the tire which are 180° apart around the circumference, and which are within the center one-half of the tread surface that normally contacts the ground. Tires may not have cord visible at the start of competition.
- H. Seat belts (and harnesses if used) must be properly installed, in good condition, secure, and tight.
- I. Throttle return action shall be consistent and positive.
- J. No excessive fuel, oil, water, or brake fluid leaks are allowable.
- K. Steering “spinner” knobs are not permitted.
- L. No broken or missing spokes or more than one loose spoke per wheel shall be permitted in wire wheels. No cracks shall be permitted in disc or cast wheels.
- M. Brakes must have an adequate pedal, sufficient fluid in the master cylinder, and no apparent hydraulic leaks under pressure. Vehicles must have a brake mechanism acting upon each wheel.
- N. Wheel bearings, shocks, steering, and suspension shall be in good operating condition.
- O. All batteries shall be attached securely to the frame or chassis structure, independent of any container or cover that may be present.
- P. Helmets for all occupants of the vehicle are to be in good condition and compliant with age and rating requirements given in 1.5.C. Motorcycle helmets are not allowed.
- Q. Cars must run the course with their front windows down, unless the Event Chairman allows windows to be closed due to rain or other factors.