

2012

Junior Kart Program Guidelines

Portions of this manual are taken directly from the SCCA Solo Rulebook; refer to the current year rulebook for rules clarification.

Foreword

The Junior Driver program is unlike others in Solo or SCCA. The age and inherent inexperience of the competitors requires special attention on behalf of the participants, parents and all regions which host Junior Driver classes at their events.

Unlike other classes, the SCCA strictly limits the ability of regions to modify or augment rules pertaining to the Junior Driver program. Event operation, safety and kart eligibility requirements of the Junior Driver rules must be followed closely.

This manual aims to help educate Junior Driver competitors, parents and region officials with regard to kart best practices and procedures. From how to properly tech a kart, to how to safely run grid and course, Junior drivers require special attention. This manual is designed to point out required and recommended procedures along with general kart information. In addition, it is intended to help educate those unfamiliar with karts.

These guidelines are meant to supplement the current year SCCA Solo Rulebook.

Updates will be posted when necessary online via SCCA.com, in the “Garage” section. *Fastrack* is released monthly, and is the official publication of the SCCA for rules changes, updates, and information. The Solo Rules book, along with official updates, is the authority if there is a conflict with this booklet.

Specifications for the Junior classes are outlined in the rule book. For the competition year 2012, they can be found in section 19.2, on page 158.

Since Formula Junior is not subject to the same rules season as other classes, frequent reading of monthly Fastracks is critical. The rules may be changed or supplemented at any time via publication/notification to competitors. This allows for fast adjustments to address safety concerns.

Guide Comment: Everyone in the SCCA wants to insure the safety and enjoyment of the Formula Junior program. The Solo Events Board and Kart Advisory Committee members look forward to continued member suggestions based on what works best in your region. The safety of all competitors, families, and spectators is the first and highest concern at any SCCA Solo competition.

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From the 2012 SCCA Solo Rules book, these sections specifically or generally apply to Formula Junior events. Included are safety requirements, classing and engine formulas, and driver eligibility information.

1.1 MANDATORY PROVISIONS
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Always refer to the current year SCCA Solo Rules book, and the Fastrack updates for the latest information, as there may be additions or modifications to the sections listed above.

The following sections quote some of the rules from the 2012 book, along with comments giving additional information and clarification. Subsequent editions of the rules may include variations in wording, and the latest version should always be used.

From the 2012 National Solo Rules:

1.1 Mandatory Provisions

Internal section quote: "... At events where kart classes (KM, JA, JB, JC) are offered, Sections 2.7 and 2.8 are mandatory. Vehicle classifications are not mandatory. Regions should use classing structures which are best for the development of their programs. However, Regions may not allow faster karts per age group than those already described in Section 19."

Guide Comment: Nowhere in this section does it say that alternate power plants are allowed. Quite the opposite is true.

"Vehicle classifications are not mandatory". That means regions can develop their own classifications for kids, including "L" classes if they so desire. Note that there are no "Ladies" classes in the FJ rules for National use, but a region can opt for them. It also allows regions to separate the engine types if they so choose, such as into JA-2 (2-cycle) and JA-4 (4-cycle). As an example, one region opted for a time to continue the old FJ1 through FJ4 designations, as it fit their participants, based on competitors and engines used. Regions are free, for instance, to run separate classes for Briggs flathead motors, if they so choose.

"However, Regions may not allow faster karts per age group than those already described in section 19." The emphasis here is that if Regions develop their own classing structure, the ages of the participants is what determines what power options they can use. Regions are not free to put up a FJ class for all 4-hole can/big carburetor Yamaha powered karts with no restrictions on driver age, for example. There is no intent or specified permission to allow alternate engines (other than those listed in section 19 of the rules) here.

1.3.2 Other Operating Requirements, subsection O.:

Children under twelve (12) years of age and pets shall be prohibited in the staging, grid, start/finish, and course areas. Drivers from eight (8) to eleven (11) years of age [five (5) to eleven (11) at regions running Junior Driver class C “JC”] who are participating in an approved Junior Driver program under the requirements of Section 19.2 are exempt from this prohibition during their run group. Otherwise they too are prohibited from these areas. Furthermore, staging, grid, start, finish, and course workers should be at least sixteen (16) years of age. Drivers from eight (8) to sixteen (15) years of age should be assigned to other worker duties as outlined in Section 19.

Guide Comment: Whenever FJ drivers are in a competition staging area (grid) they must be accompanied by adults. Supervision is obligated. Additionally, the sport of autocross is built on a foundation of self-support. All competitors, including the FJ drivers, are a part of the worker pool which keeps the events operating. For regions which have been approved to run FJC drivers aged 5 – 7 years, it should be noted that those drivers are also allowed in the staging and grid areas during their run group only.

2.2 COURSE SAFETY AND LAYOUT RULES *subsection O:*

At any Solo event where Junior classes (JA, JB, JC) use the same course layout as all other classes, an additional safety precaution is required. During any heat in which Juniors are in competition: No car may be in motion in any area proximate to the Junior Kart Grid, or near the path traveled by kart traffic between the grid and the start and finish areas of the course, when any Junior kart is proceeding under its own power. From the start of Junior Kart competition, when the first driver in the class leaves the grid for the start line, until the last driver has returned his or her kart to the Junior Kart grid, this rule shall apply. This safety requirement applies to all areas normally considered “hot”, such as the adult grid and the staging area. It may also include a grid which is to be used for a subsequent heat, if it is along the lanes to the start and finish areas of the course. Under normal circumstances, any areas considered paddock are not to be included in this rule.

Guide Comment: For the safety of inexperienced drivers in small, low vehicles, all other vehicles in hot course areas such as the grid are to be stationary while the FJ classes are run. When all FJ karts are back in their designated grid, open class vehicles may resume normal operations. It is NOT suggested that all traffic everywhere in the site, such as in the paddock, be affected by this rule. At larger events where there are two grids, it may or may not be possible to allow cars in an alternate run group

grid to fill in or vacate slots, depending on the location and proximity to the course, FJ grid, and pathways to and from the course.

2.8 JUNIOR DRIVER PROGRAM

The Formula Junior (FJ) program is provided that allows regions to permit minors less than 18 years of age to compete in Solo events in non-shifter based racing karts. The purpose of this program is to serve as a tool for membership recruitment and retention by providing competition opportunities for the entire family. The rules for organizing and conducting a Junior Driver program are in Section 19, Appendix G, and Appendix H. As this program is still in the developmental phase, rule updates or clarifications may appear periodically in Fastrack News of the official SCCA publication and/or the SCCA website (www.scca.com).

Guide Comment: Appendix G. applies to all karts, including those operated by adults. Appendix H. applies specifically to Junior karts. Included is information and rules which identify requirements for the running of a Junior Driver program. The “Pilot Program” referred to in section III.B has been officially named as the third class for juniors, or JC, in section 19.2.A.3 of the rules. Emphasized is that this driver development class is restricted in availability and allowed on a regional basis only.

3.3.3 SAFETY INSPECTIONS

Guide Comment: Karts are mentioned in some of the items regarding what is referred to commonly as “Tech Inspection”. However, to assist a Youth Steward and any tech inspector who is charged with looking over a kart to determine its fitness for competition, the following key elements should specifically be closely observed. Particular attention should be paid to brake, throttle, and steering components. Hardware used should be minimally Grade 5, with Grade 8 preferred for inch increment sizes, and minimally Grade 8.8, with Grade 10.9 preferred for metric sizes. Because of the vibration and stress karts are subject to, nylock style nuts are recommended, with solid metal pinch-nuts at heat-prone locations like the rear brake disc.

Each of these items should be inspected. Hardware at these locations should at least have nylock nut fasteners. The most positive retention methods involve bolts and/or nuts which have been drilled or grooved for

the use of cotter or spring pins, safety wire, or spring clips. Most wheel-to-wheel racing organizations require pins, wiring, or clips at these spots.

Steering components:

1. Front spindle nuts. (2 per kart)
2. Kingpin bolts/nuts. (2 per kart)
3. Steering arm/tie rod bolts. (2 per kart)
4. Steering shaft/tie rod bolts. (2 per kart)
5. Steering wheel to shaft hub bolts. (3 or more per kart)
6. Steering hub to shaft bolt (1 per kart)

Wheel bearings, king pin bearings, and tie rod ends should be inspected for a loose or worn condition. The steering shaft should be securely attached to the kart. The steering wheel should be a 360° style, not a so-called “butterfly” shape or incomplete circle.

Brake components:

1. Brake master cylinder to frame bolts.
2. Brake caliper attachment bolts.
3. Brake rod clevis pin at pedal.
4. Brake rod clevis pin at master cylinder.
5. Brake rotor attachment bolts.

Brake actuation should be tested by rotating the rear axle while applying pressure to the brake pedal, to assure proper function. *Note:* A safety cable between the brake pedal and master cylinder is mandatory for 2012. Its sole function is to provide some level of brake action in the event of failure of the brake rod or attachment hardware. A brake pedal return spring is advised.

Fuel lines and overflow lines must be zip tied, clipped, or safety wired at origin and destination, including in-line filters. Fuel lines must be secured and unable to drop below the frame rails. The fuel tank must be securely attached to the kart. Lines for oil breathers or overflow must be minimally zip tied. Overflow bottles or cans must be securely attached.

Throttle action should have a smooth pull from closed to wide open, and have a positive return. A spring must be used at the carburetor and at the pedal, to assure a complete closing of the throttle when released.

Weights/Ballast

A positive method of attachment for all ballast is required. If bolted on, the bolts must be at minimum 5/16", or M8, and either double-nutted or safety wired. If the weights are bolted to the seat, the head of the bolt must have a large washer to distribute the load and prevent pulling through the fiberglass. It is recommended that lead weights be coated. The standard for most racing is white paint, although other coatings are acceptable for autocross use. Lead sheets wrapped completely in fabric and formed to fit in the bottom of the seat may be used.

Tires

Tires must have no cord showing and be otherwise judged as safe for use, just as for cars in the sport. For Junior A and B classes: Maximum size for front tires is 4.60/10.0-5. Maximum size for rear tires is 6.00/11.0-5. Tire brand and compound is restricted to the MG Brand - HZ model or MG "Red".

For Junior C class: Maximum size for front tires is 4.60/10.0-5. Maximum size for rear tires is 5.00/11.0-5. Tire brand and compound is restricted to the MG Brand - HZ model or MG "Red". Also, "Cadet" designated tires from any manufacturer are allowed.

Miscellaneous

The seat and all bodywork must be positively attached to the kart. Seat inserts are allowed, providing that they do not put a smaller driver too far towards the front of the seat, so that no side support is available. The floor pan should be securely attached, however: Allowing some freedom of movement of the pan is a chassis tuning method. As long as all bolts have nuts and the pan cannot become unattached, the bolts can be slightly loose or not torqued tight.

Chain Guards are required on all karts. Guards should be strong enough and positioned in a fashion that would deflect a chain from striking a driver, or flipping off to endanger someone such as a course worker.

4.14 INSURANCE RELEASE AND WAIVER

A. ADMINISTRATIVE PROCEDURES (Refer to Introductory Section I.10 of these Rules)

In accordance with the SCCA insurance guidelines, all competing and non-competing participants *at or over* the age of majority in the state in which the event is being conducted must sign a Release and Waiver of Liability, Assumption of Risk, and Indemnity Agreement (form MS-1). Those under the age of majority must have a completed

Minor Release and Waiver of Liability and Indemnity Agreement (form MS-2A) on file with an SCCA Registrar/Region. All competitors, except participants in the Junior Driver program, must also have a valid driver's license.

For competitors, the Minor Waiver form must be signed by both parents/legal guardians if the minors are to be drivers/passengers. For non-competitors, the form may be signed by only one parent/legal guardian on a per-event basis. If signed by both parents/legal guardians *and properly filled out to apply to "ALL EVENTS" and "ALL DATES,"* the form is valid at all SCCA Solo events held in that SCCA Region. *A new waiver must be signed each calendar year. However, it is agreed and understood by the signatory/signatories that the prior year's waiver form's validity is not affected by the failure to do so.*

All parent/legal guardian signatures must be witnessed by an adult SCCA member. The SCCA Region may, at its discretion, require that any form completed off-site be *notarized*.

Copies of the original Minor Waiver form may be used at individual events *or for calendar year/annual waivers*. A Minor Photo ID card may be issued by the Region *for that calendar year*. Minors may not attend non-spectator events without a properly completed waiver.

From the 2012 Book, Page 276:

KART CLARIFICATIONS

BRIGGS AND STRATTON ENGINE

The Briggs & Stratton World Formula engine as homologated by CIK is eligible for competition in JA and JB.

WORLD FORMULA CHAIN / SPROCKET / GEAR

It is permissible to use an alternate chain/sprocket/gear (type 35) on the World Formula engine as used in the FJ classes.

Guide Comment: Note that for use in JB, the World Formula engine must use a throttle slide restrictor, as specified in section 19.2.A.2.b.4.B of the 2012 Rules. A restrictor may be obtained by contacting the Technical Services Department at the SCCA National Office, or by emailing tech@scca.com

From **APPENDIX E – SOLO SAFETY STEWARD GUIDEBOOK** section of the Solo Rules:

VIII.D.7

The Solo Safety Steward has the authority to disapprove a site for karts only when there are upright solid objects (light poles, fence posts, etc.) on the site within 50 feet of the actual course, or low-lying objects adjacent to the course area. This does not include curbs. While safety systems for karts provide acceptable driver protection for most incidents, upright solid objects and low-lying objects present potential hazard for which kart safety systems are not well suited. This rule gives the Solo Safety Steward the option of excluding karts without having to declare the site unsafe for everyone. It is the judgment of the Solo Safety Steward whether the course design, surface, solid objects, and type of karts running present an unsafe mix. In most cases, the situation can be resolved by a course design change.

Guide Comment: Youth Stewards and parents of FJ competitors should be very interested in working with the SCCA's Solo Safety Stewards at every event, to insure that all efforts are put into providing safe fun for the young drivers.

APPENDIX G – KARTS AT SOLO EVENTS

Guide Comment: Note that a separate grid is suggested for even the adult karts, and required for the Formula Junior classes. As mentioned elsewhere, the FJ classes are to be run only when no other vehicles are active on the shared autocross course. During the FJ runs, other vehicles may not even move in course or close to course (grid) areas. As described in G.1.B., a post-event report describing the kart portion of the solo grid should be submitted.

APPENDIX H – JUNIOR DRIVER PROGRAM

Guide Comment: The number of Youth Stewards recommended is dependent on the total number of FJ drivers at an event, and their age/experience mix. The minimum number is one, otherwise no FJ may participate in the autocross event. Additional or assistant Youth Stewards should be available to aid specific needs, such as the integration of a new

or inexperienced driver, or a large number of entries in one of both classes.

Guide Comment: The duties outlined for the Youth Steward and assistant(s) are intended to give the person responsible for the FJ drivers at an event a road map, or a list of specific items to cover prior to competition. As with all positions at an SCCA Solo, the Youth Steward is an unpaid volunteer one. However, it brings along an increased emphasis on safety, and responsibility to perform the duties with the greatest possible diligence. Since the drivers are minors, even the most experienced among them will occasionally need the guidance of an adult, and those newer to the sport will need considerable help. In a nutshell, the Youth Steward's task is to ensure that all of the FJ competitors have a safe and enjoyable experience at an SCCA Solo, and that in doing so, the other competitors are not left with any feeling that the junior program hindered their own good time.

Guide Comment: The "Pilot Program" referred to in the 2012 rule book has been officially named JC. It will remain a regional-only class, with restricted availability. The ability of a region to run the 5 to 7 year-old drivers is based on the experience level of a region with the FJ classes, and the experience level of the available Youth Stewards. Permission to run JC age drivers must be obtained from the SCCA National Office.

Guide Comment: Regarding section III. JUNIOR DRIVER ELIGIBILITY, the minimum age for sanctioning requirements is 8 years old, unless a region has obtained in writing a permission to allow the 5 to 7 year old JC drivers. All FJ competitors must have the proper permission and waiver forms completed in order to run. All FJ competitors must report to the Youth Steward for a Driver meeting and Course walk.