

AARCMCC IC 1/8th Onroad Racing Technical Rules

May 2009

Notes:

1. Initial extract from **IFMAR 1/8th I.C. TRACK RACING AND TECHNICAL RULES** Amended October 2007. Full IFMAR rules available from http://www.ifmar.org/pdf/ifmar_wc_8th_track_2008.pdf.
2. Updated 5th December 2008 removing sections related to engine tagging and control fuel. Added original AARCMCC fuel rules. Renumbered Rules. Removed mailing of muffler lists to participants. Changed wording of IFMAR to AARCMCC where applicable.
3. Removed IFMAR rules with regards to prototype body proportions as all homologated bodies will conform to the specification. Removed IFMAR rule on rear body overhang to allow for drivers to position the chassis within the limits of a homologated body.

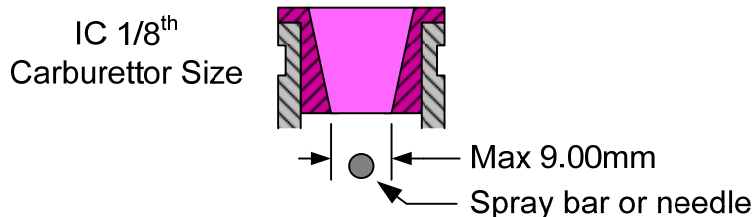
AARCMCC IC 1/8th Onroad TECHNICAL SPECIFICATIONS

1. General

- 1.1. The class run will be the AARCMCC IC 1/8th Onroad.
- 1.2. The official measurements in these Technical Specifications are the metric measurements.
- 1.3. All measurements referred to in these rules are maximum or minimum values.
- 1.4. It is the object of these rules to ensure that the AARCMCC I.C. 1/8th Onroad Championship be a test of driver skill.
- 1.5. It is the responsibility of the driver to ensure that their car complies with the regulations at all times it is on the track. The organiser may check any car at any time during the championship for compliance with the regulations. On checking immediately after a race, if a car is found to be under the minimum weight or has incorrect dimensions, positive proof of race damage may prevent disqualification.

2. Engine

- 3.1 The engine shall have a total capacity of not more than 3.5cc (0.214 Cu.In.). No tolerance allowed.
- 3.2 The maximum carburettor size will be 9.00mm. This is measured directly above the spray bar or needle of the carburettor.



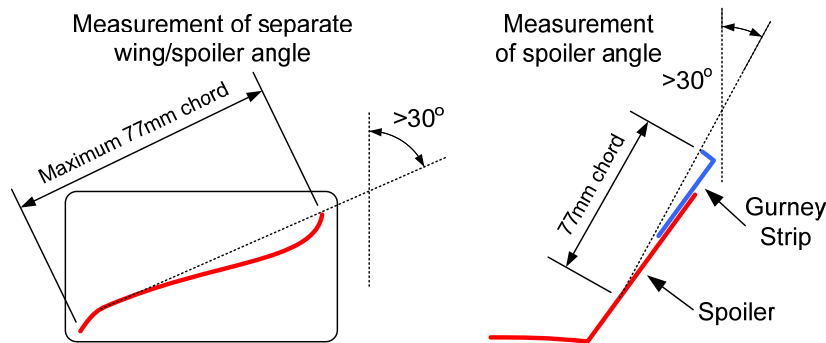
3. Exhaust

- 3.1 Homologated mufflers, of a 3-chamber type, and homologated inlet noise silencer boxes (INS box) must be used.
- 3.2 The muffler must be IFMAR listed as homologated by ROAR, EFRA, FEMCA or FAMAR, and must bear its homologation number during the entire competition.
- 3.3 With a fitted INS box, the muffler may not produce more than eighty five (85) decibels measured at ten (10) metres distance and one (1) metre high. AARCMCC's definition of a noise level is always final.
- 3.4 The measurements of the muffler and INS box (both internally and externally) must conform with those on the homologation sheet issued by IFMAR.
- 3.5 Mufflers and INS boxes can be checked and may be cut open at the completion of a qualifying heat and/or final and checked for compliance with homologation drawings and/or samples.
- 3.6 The muffler must be of a 3-chamber type. No holes are allowed in the first chamber. All gasses must pass all 3 chambers.
- 3.7 The first cone on all homologated mufflers may be reduced by a maximum of 8mm (length). The outlet pipe may have a minus tolerance of 2mm (length).
- 3.8 The IFMAR Muffler and Inlet Noise Silencer Box Lists, with detailed drawings, should be available in Technical Control.
- 3.9 The outlet or tailpipe of the muffler must project horizontally or downward. No upward or vertical exhaust outlets are allowed.
- 3.10 The shape of the exhaust pipe has to be of a straight circular rotated type. Any other shape like oval, bent or any other form that is not reproducible by a lathe is not allowed.

4. Body

- 4.1 Bodies must be a 1/8th scale authentic reproduction of sports cars or prototype cars in full scale racing participating in FISA's, IMSA's or CANAM's official sport classes.
- 4.2 The body must be IFMAR listed as homologated by ROAR, EFRA, FEMCA or FAMAR, and must bear its manufacturer and/or homologation number during the entire competition. This number should be moulded near the cockpit.
- 4.3 The body must be made from a flexible material and painted. The gurney strip must remain transparent.
- 4.4 In open cockpit bodies, a realistic driver's figure (minimum helmet and shoulders) made to 1/8th scale and painted in a minimum of three (3) colours must be fixed at the normal place in the body. No part of the driver's helmet may be amputated to make way for the fuel filler cap or any other element.
- 4.5 In a closed body, the windscreen must not be fully removed. A hole of maximum 6.5 square centimetres for cooling is allowed to be cut out in the front of the windscreen. All windows must either remain clear or be painted in a realistic transparent colour. Side windows and the rear window may be opened. A driver need not be fitted under a closed body.
- 4.6 All bodies must have the front and rear sides cut out for the wheels if the original was so designed. The radius of the cut-out must not exceed the tyre by more than 13 mm.

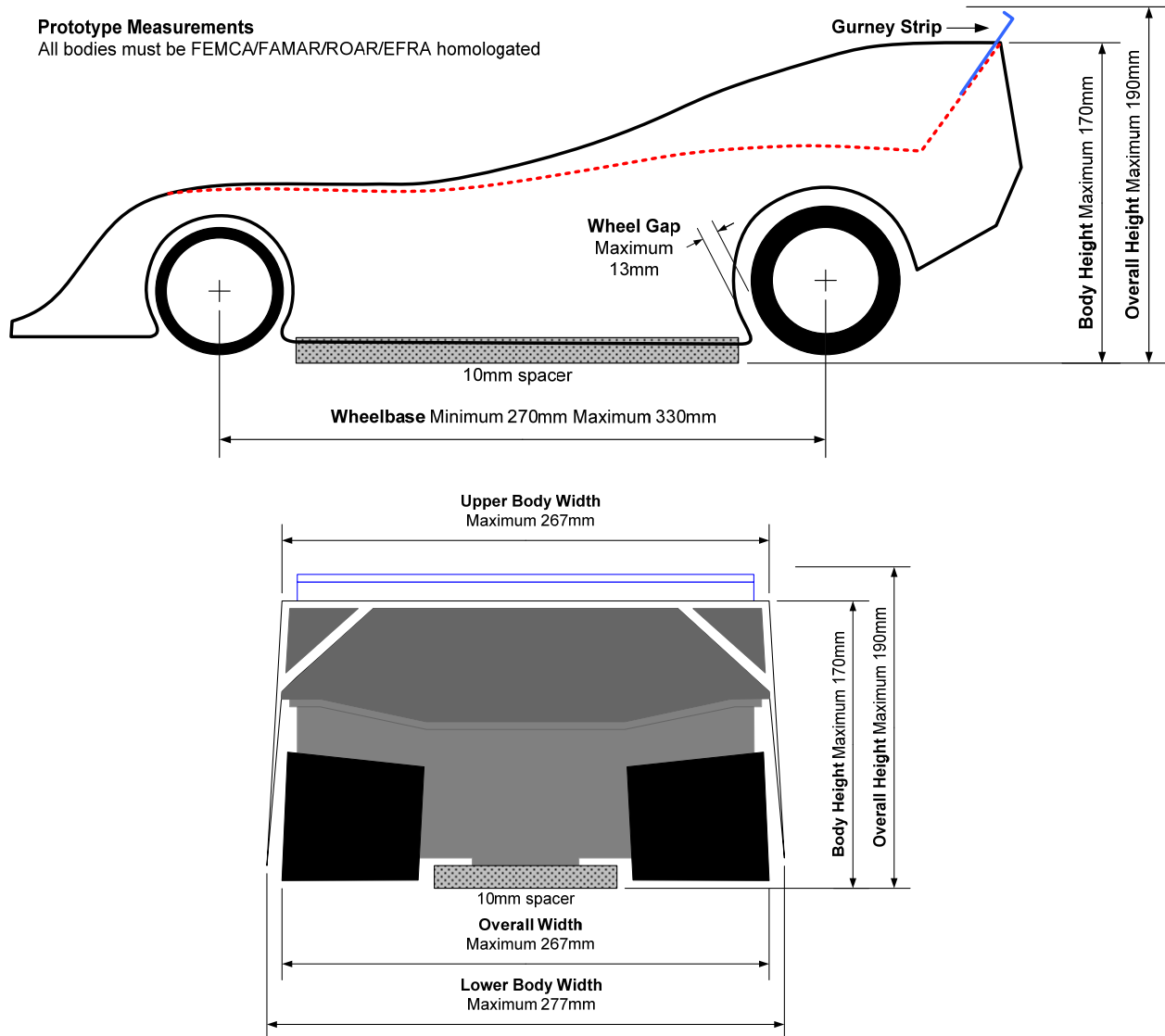
- 4.7 Cut-outs in the body that were not in the original full scale version will be allowed for the following:
- 4.7.1 The cylinder head and INS box must follow their contour and have a maximum of 20mm clearance on all sides.
 - 4.7.2 The aerial hole will be no larger than 20mm in diameter.
 - 4.7.3 The radio switch hole will be no larger than 25mm in diameter.
 - 4.7.4 Cut-out for the fuel filler cap will follow the contour of the fuel filler cap with a maximum of 20mm in gap between the body and the fuel filler cap, as viewed from above.
 - 4.7.5 The cut-out for the exhaust must be no greater than 40mm in any direction. Where the exhaust opening cuts through the side lower edge of the body, a slotted opening is allowed.
 - 4.7.6 The slot for the roll-over bar should be no more than 20mm in width.
- 4.8 All measurements for the body and wing height will be taken with the chassis raised on a 10mm spacer.
- 4.9 Maximum width of body and wing/spoiler, as measured across the top outside edges, is 267mm.
- 4.10 Wing and spoiler, if separate, must have a chord of no more than 77 mm. Any added aerodynamic aids must have a chord of no more than 77 mm.
- 4.11 Wing and spoiler, whether built into the body or separate, must have an angle of minimum 30 degrees measured on the vertical line inclusive of any added aerodynamic aids.



- 4.12 Additional cut-outs in rear built-in spoilers are not allowed.
- 4.13 No additional items may be fastened to the body exterior other than the rear gurney strip.
- 4.14 Maximum height for the body and side, including a separate wing/spoiler is 170mm with the chassis raised on a 10mm spacer. This maximum height is excluding the gurney strip where it is directly attached to the body, but including the gurney strip in case of a separate wing/spoiler.
- From 2011 the body height and side/rear wings will have a maximum of 160mm (on a 10mm spacer).*
- 4.15 If body stiffeners are used they cannot cause the body to be wider than 277mm across the lower edges of the body.

Prototype Measurements

All bodies must be FEMCA/FAMAR/ROAR/EFRA homologated



5 Chassis

5.1 Overall dimensions:

Wheel base minimum 270mm, maximum 330mm.

Maximum overall width 267mm. The car must roll freely between the inspection measuring rails with any steerable wheel set in the straight ahead position, irrespective of the compression or extension of the suspension.

Maximum overall height 190mm.

5.2 Tyres: Tyres must be black, except for writing on sidewalls.

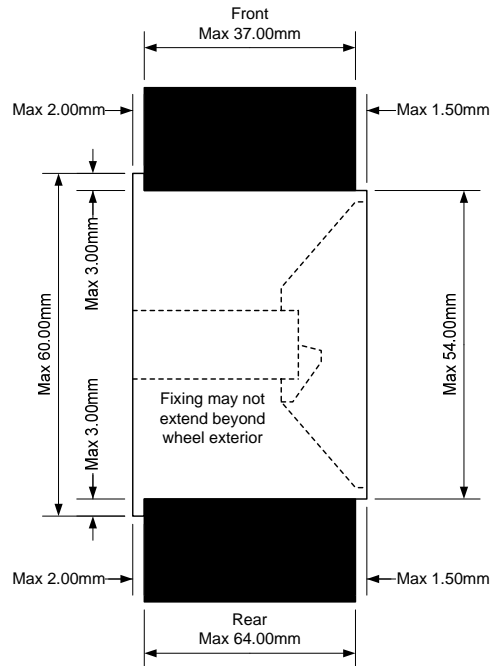
Maximum front tyre width 37mm.

Maximum rear tyre width 64mm.

5.3 Rims: The rim's diameter must not exceed 54mm. An edge to reinforce the rim of 2mm thickness and 3mm height on the interior (car side) is allowed. Flange diameter maximum 60mm. The wheel

rim must not extend more than 1.5mm from the exterior of the tyre.

- 5.4 Any fixing bolts or other equipment installed in the wheel rim must not extend beyond the exterior of the wheel rim.



- 5.5 All cars must have a de-clutching device and have an operating brake capable of stopping the car and holding the car motionless with the engine running.
- 5.6 No tyre or rim of the car may extend outside the body shell, as viewed from above.
- 5.7 The front of the car must be equipped with a bumper in such a manner that it will minimise a wound in the case of it entering into contact with other participants or members of the public. The bumper must be made from a flexible material with all corners and sharp edges rounded off. The contour of the bumper will follow the contour of the body with which it is being used. At no point may the bumper protrude more than 5mm in front of the body.
- 5.8 If a rear bumper is fitted, it must finish no more than 10mm behind the rear wheels.
- 5.9 If a roll-over bar is fitted, it must be placed behind the driver or just behind the imaginary driver's position. The roll-over bar cannot protrude above the maximum overall height of 190mm.
- 5.10 The aerial support must be flexible. Carbon, GRP, steel, etc. are not allowed.
- 5.11 The minimum weight is 2525g. The weight will be checked with an empty fuel tank and a transponder installed.

6 Fuel

- 6.1 Fuel may be tested and samples and counter samples taken for testing at any time during the competition. Competitors whose fuel does not pass inspection will be disqualified. Competitors whose fuel samples are found to contain prohibited additives will be stripped of all results and further actions, including bans from future racing, will be imposed.

- 6.2 Fuel will only contain methanol (methyl alcohol), lubricating oil, coloring agent and a maximum of 25% nitro-methane in volume. Any other additives are strictly prohibited.
- 6.3 The specific gravity of the mixture may not be heavier than 0.91. An IFMAR approved fuel tester, e.g. Nitromax 25, will be used to verify the fuel's conformity to the rules.
- 6.4 Fuel capacity to be 125.0mL including fuel tank, fuel tubing up to the carburetor, filters, etc. No loose inserts *are* allowed inside the tank.
- 6.5 Any fuel capacity found to be illegal (over 125.0mL) after a heat or final shall be inspected for a second time after an initial 'cool down' period of fifteen (15) minutes. The fuel tank, fuel tubing up to the carburetor, filters, etc may be removed from the car. This 'cool down' period is only necessary in the case of temperatures above 20°C.

7 Technical Exclusions

- 7.1 It is not allowed to use any electronic devices with the exception of:
 - 7.1.1 Two radio channels of the receiver which will be used to operate steering, throttle and brakes.
 - 7.1.2 Not more than two (2) servos.
 - 7.1.3 A passive data recording or information system to record functions of the car can only be used up to the end of controlled practice.
 - 7.1.4 A transponder.
 - 7.1.5 An electronic failsafe.
 - 7.1.6 A voltage regulator and/or battery level indicator.
- 7.2 The use of traction control devices, active suspension devices and any steering control aided by gyroscopes/'G'-force sensors is strictly forbidden.
- 7.3 Sensors are only allowed for the purpose of passive data recording and cannot be used for adjusting the performance of the car whilst in motion. Sensors may only be used up to the end of controlled practice.
- 7.4 Not allowed;
 - 7.4.1 4 wheel brakes. Independent controlled braking on the front wheels is not allowed.
 - 7.4.2 Liquid cooled engines.
 - 7.4.3 Hydraulic systems.
 - 7.4.4 No more than 3-speed transmissions.

END