

I.C. On Road Section Rules

These rules must be read in conjunction with the General Rules

1. 1/8th IC ON-ROAD TECHNICAL SPECIFICATIONS

- 1.1 The engine may have a total capacity of not more than 3.5 cubic centimetres/0.214 cubic inches. No tolerance allowed. Homologated mufflers and homologated inlet noise silencer boxes (INS box) must be used. Each individual car must not produce more than 85 decibels, measured at ten (10) metres distance and one (1) metre high at full throttle. AARCMCC definition of a noise level is always final.
- 1.2 The fuel tank, including filter and fuel pipes up to the carburettor may hold a maximum of 125 millilitres/4.23 fluid ounces. No loose inserts allowed. Any tank found to be illegal (over 125 millilitres/4.23 fluid ounces) after a heat or final shall be removed from the car and inspected for a second time after an initial 'cool down' period of fifteen (15) minutes. This 'cool down' period is only necessary in the case of temperatures above 20 degrees C / 68 degrees F.
- 1.3 Overall dimensions:
Wheel base 270 - 330 mm
Maximum overall width 267 mm
Maximum overall height 190 mm (except aerial)
- 1.4 Tyres:
Maximum width front 37 mm
Maximum width rear 64 mm
Tyres must be black, except for writing on sidewalls.
- 1.5 Rims: The rim's diameter must not exceed 54 mm An edge to reinforce the rim of 2 mm thickness and 3 mm height on the inside (car side) is allowed. Flange diameter maximum 60 mm. Any fixing bolts or other equipment installed in the wheel rim must not extend beyond the exterior of the wheel rim. The wheel rim must not extend more than 1.5 mm from the exterior of the tyre.
- 1.6 All cars will be equipped with brakes and a clutch in such a manner that the car may be held stationary with the engine running.
- 1.7 Only IFMAR homologated pipes are allowed. The pipes used on the car have to bear their homologation number during the entire championship and their measurements (both internally and externally) have to conform with those on the homologation sheet issued by IFMAR. The IFMAR Approved Muffler List, with detailed drawings, must be available in Technical Control. Additional copies of the IFMAR Approved Muffler List must be available to each participant, if requested.
The outlet or tailpipe of the muffler must project horizontally or downward. No upward or vertical exhaust outlets are allowed. The first cone on all homologated mufflers may be reduced by a maximum of 8 mm (length). The outlet pipe may have a minus tolerance of 2 mm (length).
- 1.8 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 5 mm/0.20 in. in front of the body.
- 1.9 If a rear bumper is fitted, it must finish no more than 10 mm behind the rear wheels.
- 1.10 If a roll-over bar is built in, it must be placed behind the driver or just behind the imaginary driver's position.
- 1.11 The aerial must be made from a flexible material in such a manner that it will bend completely under the weight of an inverted car. Metallic aerials must have the free end protected.
- 1.12 Bodies must be a one-eighth 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. There will be an allowance of 10% tolerance in all dimensions.
- 1.13 Only bodies that are recognised and approved by IFMAR will be allowed.

- 1.14 The body must be made from a flexible material and painted properly.
- 1.15 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. The head may not be amputated to make way for the fuel filler cap or any other element. The driver need not be fitted under a closed body.
- 1.16 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.
- 1.17 The windscreen must not be cut out. In closed bodies, a hole of maximum 6.5 square centimetres/1 square inch for cooling is allowed to be cut out in the front of the windscreen. The windscreen may be painted in a realistic transparent colour.
- 1.18 Side windows and rear window may be opened.
- 1.19 No wheels, tyres or rims of the car may extend outside the body shell, as viewed from above.
- 1.20 Cut-outs in the body that were not in the original full scale version will be allowed for the following:
- 1 - The cylinder head and air filter must follow their contour and have a maximum of 10 mm clearance on all sides
 - 2 - The aerial hole will be no larger than 10 mm in diameter
 - 3 - The radio switch hole will be no larger than 13 mm in diameter
 - 4 - Cut-out for the fuel filler cap will follow the contour with a maximum of 10 mm in gap between the body and the filler cap as viewed from above.
 - 5 - The hole for the exhaust pipe must follow the contour of the above piece with a maximum of 10 mm in gap between the body and the exhaust outlet
 - 6 - The slot for the roll-over bar should be no more than 10 mm in width. The bar should not protrude more than 38 mm above the body and not exceed a total height of 190 mm from the ground
- 1.21 A spoiler/wing which conforms to AARCMCC regulations may be fitted.
- 1.22 Spoiler/wing sizes for sports cars/prototypes:
Maximum width 267 mm
Maximum length 77 mm
Maximum height 191 mm
Maximum angle 45 degrees.
- 1.23 Fuel:
Fuel may only contain Methanol, oil/lubricant and nitro-methane (with a maximum of 25% measured in volume). To implement this rule, Organisers will provide the appropriate Serpent/EFRA fuel check system at Technical Inspection. Random fuel tests will be made during the entire championship. Samples and counter samples will be collected for analysis and any competitor found to be using any substance other than those mentioned above will be disqualified and any race result obtained will be null and void. Further punishment to be determined by AARCMCC, such as a ban from future racing.
- 1.24 The minimum weight limit of the cars is 2525(weight includes timing transponder allowance). The weight limit will be checked with the cars being ready to race including timing transponder but with empty tank. The weight will be checked by a set of digital electronic scales and can be done at any time during the meeting, i.e. before the start of a heat, sub-final or final or after the end of either. An approved test weight must be provided for checking calibration of the digital electronic scales.
- 1.25 The car shall be measured for the width by placing it on a baseboard equipped with two side rails of 25.4 mm in height, spaced 267 mm apart. Constructed in such a way that the car can roll freely between them. Base board and rails must be constructed of high quality material, suitably stiffened to prevent distortion. The car must roll freely between the rails with any steerable wheel set in the straight ahead position, irrespective of the compression or extension of the suspension. The car shall be measured for length and height in a similarly constructed box of internal dimensions 637 x 267 mm which includes provision for checking the maximum height. Measurement of the wheel base may be made by simple measurement of axle centre distance but the Race Director should be prepared to make more exact checks in case of doubt or protests. It is suggested that the wheels are removed and the wheel spindles firmly placed on V-blocks whilst accurate measurements are made. It is the responsibility of the driver to ensure that his/her car complies with the regulations at all times it is on the track and 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.

- 1.26 The maximum carburettor size will be 9.00 mm
- 1.27 Technical restrictions: (Not allowed)
 - 4 wheel brakes (no independently controlled braking on the front wheels is allowed)
 - liquid cooled engines
 - hydraulic systems
 - more than 2 servos
 - no more than 3-speed transmissions.
- 1.28 Driver Aids - The use of traction control devices, active suspension devices and any steering control aided by gyroscopes/'G'-force sensors is strictly forbidden. Sensors are only allowed for the purpose of passive data recording and not for adjusting the performance of the car whilst in motion. It is the object of this rule to ensure that the AARCMCC sanctioned events be a test of driver skill.

2 1/10TH 235mm I.C 2.5cc - TECHNICAL SPECIFICATIONS

- 2. Generally the specifications allow cars with two wheel drive and four wheel drive, mechanically operated brakes must be fitted acting on the rear wheels only, two speed transmission, 2.5cc (0.152 cu.in) engine, and a minimum weight of 1925 grams (weight includes timing transponder allowance). An IFMAR approved fuel tester NITROMAX 16, will be available to race organisers to verify the conformity of fuel to the rules.
- 2.1 **Engine Rules**, The engines shall be air cooled, with front rotary shaft valve, two stroke induction type and may have a maximum of four (4) gas ports including the exhaust port, no additional holes in the liner and no holes in the piston allowed. The top outer diameter of the piston must be in a flat single plane and at ninety (90) degrees to the side of the piston. The highest part of the piston will be the outer diameter. The crankshaft hole shall have a maximum diameter of 7.00 mm on its end. No form of forced induction is allowed or any form of variable port timing. Only glow plug ignition using standard 1/4-32 UNEF glow plugs is permitted.
- 2.1.1 During scrutineering, engines which drivers intend to use at the event must be submitted to Technical Inspection to be checked and sealed. If, for any reason, a driver wishes to use another engine during the event which has not been previously scrutineered, it must be submitted to the Technical Inspection Officer to be checked and sealed before it can be officially used in the event.
- 5.1.2 Only engines which have been inspected, found to comply to the rules and sealed by the Technical Inspection Officer will be allowed to be used. The decision of AARCMCC on whether an engine complies to AARCMCC rules is always final.
- 2.2 Engine Dimensions
 - Capacity 2.5 cc/.152 ci.
 - Stroke minimum 14.0 mm
 - Exhaust Port height 4.5 mm
 - Maximum diameter of the crankshaft hole on its end 7.0 mm
 - Carburettor maximum - throat diameter 6.0 mm
- 2.2.1 Definitions:
 - The exhaust port height is considered to be the distance from the crown of the piston to the uppermost point of the exhaust port measured with the piston at the bottom dead centre of its stroke.
 - The crankshaft hole shall be a straight parallel hole with a maximum diameter of 7.0 mm in on its end. The hole can be finished with a continuous unbroken chamfer with a maximum width of 0.5 mm if this is required for manufacturing purposes at the crank web end.
 - The carburettor bore diameter restriction is to be measured at the smallest section of the carburettor bore above the point where the fuel enters the carburettor throat.
- 2.3 The fuel tank including filter and fuel pipes up to the carburettor may hold a maximum of 75 cc. No loose fuel tank inserts allowed.

- 2.4 Mufflers: A muffler of approved double chamber design must be fitted having the following dimensions:
Tail pipe maximum internal diameter * 5.2 mm
Tail pipe minimum length 15.0 mm
The tail pipe must be oriented on or below the horizontal.
* This dimension includes a tolerance to account for manufacturing variations in commercially available tubing.

2.5 Overall Dimensions:

	Minimum	Maximum
Wheel base	260 mm	280 mm
Track width		250 mm
Overall length		490 mm

- 2.5.1 The car shall be measured for the width by placing it on a baseboard equipped with two side rails of 25.4 mm in height, spaced 250 mm apart. Constructed in such a way that the car can roll freely between them. The base board and rails must be constructed of high quality material, suitably stiffened to prevent distortion. The car must roll freely between the rails with any steerable wheel set in the straight ahead position, irrespective of the compression or extension of the suspension.
- 2.5.2 The car shall be measured for length and height in a similarly constructed box of internal dimensions 490x250 mm. Measurement of the wheel base may be made by simple measurement of axle centre distance but the Race Director should be prepared to make more exact checks in case of doubt or protests. It is suggested that the wheels are removed and the wheel spindles firmly placed on V-blocks whilst accurate measurements are made.
- 2.5.3 It is the responsibility of the driver to ensure that his car complies with the regulations at all times it is on the track and 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.
- 2.6 Weight: Minimum weight 1925 grams.
The weight limit will be checked with the cars being ready to race including timing transponder but with empty tank. The weight will be checked by a set of digital electronic scales and can be done at any time during the meeting, i.e. before the start of a heat, sub-final or final or after the end of either. An approved test weight must be provided for checking calibration of the digital electronic scales.
- 2.7 Fuel will only contain Methanol (Methyl Alcohol), lubricating oil and a maximum of 16% Nitro-methane measured in volume. The specific gravity of the mixture may not be heavier than 0.87. An IFMAR approved fuel tester, e.g. NITROMAX 16, will be available to verify fuel's conformity to the rules at Technical Inspection.
- 2.7.1 Random fuel tests will be made during the entire Championship. Samples and counter samples will be collected for analysis and any competitor found to be using any substance other than those mentioned above will be disqualified and any race result obtained will be null and void. Further punishment to be determined by AARCMCC, such as a ban from future racing.
- 2.7.2 Only one (1) fuel bottle will be allowed in the pit lane for refuelling each car.
- 2.8 Tyres must be black, except for side wall detailing.

Tyre diameter:	Front -75 mm maximum	Rear - 80 mm maximum
Tyre width	Front - 30 mm maximum	Rear - 51 mm maximum
Rim Diameter	Front - 51 mm maximum	Rear - 51 mm maximum
No tyre additives or cleaners allowed.		

- 2.10 Bodies and Wings:
For Sanctioned Events Clubs have the choice of either Group C Bodies or Body shells from the following full-size classes will be allowed (Clubs to advise at time of distribution of entry forms):
FIA 2-litre Championship
German Touring Car Championship

Australian Touring Car Championship
North American 2-litre Super Touring Car Championship

- 2.10.1 Only bodies that are approved and listed by IFMAR will be allowed. The body must be made from a flexible material, painted properly, and must be one piece and used in the standard form, (body shell + wing), with no modifications or additions allowed (i.e. separate front spoiler, for example).
- 2.10.2 All bodies must have the front and rear sides cut out for the wheels if the original was so designed.
- 2.10.3 No wheels, tyres or rims of the car may extend outside the body shell, as viewed from above. One (1) cooling hole may be cut in the front windscreen with a maximum dimension of 50% of the front windscreen.
- 2.10.4 Only the front side windows and the rear window may be removed, partly or totally; other windows must remain clear.
- 2.10.5 All parts of the vehicle must be covered, except:
Aerial (max. 10 mm)
Outlet pipe of muffler (reasonable clearance)
Only if these parts are extending the body.
In addition to this the following holes are allowed:
for muffler outlet
for refuelling (max. 30 mm)
for glow plug (20 mm)
fuel mixture valve (max. 10 mm)
- 2.10.6 Rear of the body may not be cut away higher than 45 mm measured with a 10 mm spacer under the chassis plate, and rear side-light details must remain. Side profile must remain unaltered. Rear Bumper line must remain.
- 2.10.7 Roll-bars (Roll-over Bars) must be kept under the body.
- 2.10.8 Wings are allowed only if fitted in the original car, and must be in the original position and may not project above the height of the roof line. Side dams may be fitted but must be a reasonable representation of those fitted to the original car and may not be wider than 55 mm and higher than 25 mm and fit in a rectangle of these measurements and may not project above the height of the roof line.
Wing width 230 mm Maximum
Wing chord 55 mm Maximum
(A 20 mm extension to the wing in the form of a tab/gurney flap is allowed, but must be clear and unpainted and still may not project above the height of the roof line).
A level meter should be used to verify that wings and the allowed 20mm extension do not project above the height of the roof line with a 10mm spacer under the chassis plate on level.
- 2.10.9 Cars must be equipped with a flexible "plastic" bumper to minimize injuries. The bumper may not protrude outside the body.
- 2.10.10 All cars will be equipped with brakes and a clutch in such a manner that the car may be held stationary with the engine running.
- 2.10.11 The aerial must be made from a flexible material in such a manner that it will bend completely under the weight of an inverted car.
- 2.11 TECHNICAL RESTRICTIONS (Not allowed)
4 wheel brakes.
Liquid cooled engines.
Hydraulic systems.
More than two (2) servos.
No more than 2-speed transmissions.
- 2.12 TELEMETRY & DRIVERS' AIDS
It is not allowed to use any electronic devices with the exception of two (2) radio channels of the receiver which will

be used to operate steering, throttle and brakes. A passive data recording or information system to record functions of the car can only be used up to the end of controlled practice.

- 2.12.1 The use of traction control devices, active suspension devices and any steering control aided by gyroscopes/'G'-force sensors is strictly forbidden. Sensors are only allowed for the purpose of passive data recording and not for adjusting the performance of the car whilst in motion. It is the object of this rule to ensure that the AARCMCC Sanctioned Events be a test of driver skill.

3 1/10TH I.C. 200mm NITRO TOURING-TECHNICAL SPECIFICATIONS

- 3.1 The class run will be the "200mm NITRO TOURING CAR" which will be 4WD. Only one brake, working on the central power transmission, is allowed. No second or individual brake system(s) for front and/or rear axles or single wheels is allowed.
- 3.2 Maximum 2-speed gearbox allowed.
- 3.3 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.
- 3.4 The use of .12 (2.11 cc) engines only will be permitted. They shall be air-cooled, with front rotary valve, two-stroke induction. **The engines may have a maximum of four (4) ports in the cylinder liner, including the exhaust port, seen with the piston at lowest position. Additional slits or holes in the liner for cooling purposes are allowed as long as they are not visible and do not reach the top of the piston at lowest position. (B.D.C.)**
No form of forced induction is allowed or any form of variable port timing. Only glow plug ignition is allowed. One additional gap in the bottom (skirt) of the piston is allowed. No holes in the piston **Where ever we say hole in this rule we mean a hole that is surrounded completely by material.**
The maximum carburettor size is 5.50mm.

From 2009 on, INS BOX and 3-chamber muffler will be mandatory

- 3.5 Engine capacity is to be maximum .12 (2.11cc) only.
- 3.6 Standard pull-start is optional.
- 3.7 Engine internal modifications are allowed as long as they are within the parameters of Rules 3.4 and 3.5.
- 3.8 A **Homologated** muffler of approved double chamber design, including silencer chamber must be fitted **The mufflers have to bear their homologation numbers during the entire competition.**having the following dimensions:
Tail pipe maximum internal diameter* 5.20mm.
Tail pipe minimum length 10.00mm.
The tail pipe must be oriented on or below the horizontal.
*This dimension includes a tolerance to account for manufacturing variations in commercially available tubing.
- 3.9 Minimum weight without fuel: 1725.00 grams (including transponder).
- 3.10 Fuel tank capacity to be 75.00cc including all fuel tubing, filters, etc. No loose inserts allowed inside the tank
- 3.11 Touring car bodies shall be accurate 1/10th scale representations of full-size touring cars, which have been homologated & approved by the F.I.A. for use in the following:
FIA 2-litre Championship - German Touring Car Championship - Australian Touring Car Championship - North American 2-litre Super Touring Car Championship.
Refer to the IFMAR Approved Body List.
- 3.12 The front bumper must follow the body contour and must be constructed so as to minimise injury that may result from being hit by a car. The bumper must be made from foam rubber or a flexible plastic material.
- 3.13 The body must be made from a flexible material and be painted properly. All windows must remain clear and not be painted over or be semi-transparent.

- 3.14 Bodies are not to be cut above the lower bumper line at the front or the back or above the bottom line of the doors. Details of all front and rear lights, grills, air intakes and windows must be clearly contrasted from the surrounding paintwork.
- 3.15 Only the following AIR HOLES and sizes are permitted in the body shells:
One (1) hole, for cooling may be cut in the front windscreen, (not intruding on either the roof or bonnet), with a maximum opening of 50% of the total windscreen area.
15.00mm (maximum diameter) hole in the roof for glow plug access.
Both front side windows and the rear window can be removed for ventilation, except for the side rear windows, which must remain intact.
Re-fuelling hole, maximum 50.00mm diameter, to have a 5 mm spacing from the windscreen hole.
A hole with maximum diameter of 35.00mm is allowed just above the engine cooling head for easy glow plug access, and can not be combined with any other hole, minimum distance 5mm.
Small holes can be made for the exhaust pipe, Transponder and radio antenna.
No other holes are permitted.
- 3.15 Roll-bars (roll-over bars) must be kept under the body.
- 3.16 No parts of the car, except the muffler outlet may protrude outside of the body shell when viewed from above.
- 3.18 Under body/chassis aerodynamic aids of any nature are not allowed.
- 3.19 General Dimensions:

Description	Minimum (mm)	Maximum (mm)
Wheelbase	230.00	270.00
Width (without body)	170.00	200.00
Width (with body)	175.00	205.00
Length (inc. Body & Wing)	360.00	460.00
Height (to top of roof) with 10mm spacer under the chassis plate	120.00	175.00
Wing width Inclusive	125.00	200.00
Wing Chord		50.00
Wing Endplate (equal size)	35.00 x 50.00	5.00 x 50.00
Wing Overhang (at rear)		10.00
Wheel Dia. (excluding Tyre Bead)	46.00	50.00
Wheel width (including bead)	24.00	30.00

- 3.20 One wing and one spoiler may be mounted to any car (if the original full-size car had more, it is allowed to do the same). Wing and spoiler must be made from a flexible material. Wing and spoiler must not be fixed to body with piano wire. Basically, they must be mounted to body directly. Wing and spoiler may not protrude outside the maximum height and width of the body (including the side dams). Rear wings must be mounted in the same place as was intended by the body manufacturer and to be painted.
The overhang must not exceed 10.00mm at the furthest point, to be measured from boot lid. The height of the wing may be adjusted but the wing, including endplates must not extend higher than the roofline. Wings (excluding endplates) are to be of single moulded construction (no flat-packs/bend your own). Gurney strip (if allowed) may not exceed the width of the wing and have an edge not more than 5.00mm high. Total cord of wing, plus the strip is 55.00mm.
- 3.21 Foam and/or Rubber tyres may be used. Any materials used in, or on, the tyres must not damage the racing surface. Treatment of the tyres with additives is prohibited.
- 3.22 Quick – change wheel systems are not allowed. Wheels must be fixed by a screw or nut The screw or nut installed in the wheel rims may not extend beyond the exterior of the wheel rim.**
- 3.23 Fuel will only contain methanol (methyl alcohol), lubricating oil and a maximum of 16% nitro-methane in volume. The specific gravity of the mixture may not be heavier than 0.87. An IFMAR approved fuel tester, e.g. Nitromax 16 will be available to verify fuel's conformity to the rules at Technical Inspection. Any fuel adjudged to be dangerous by the Organiser or Race Director may not be allowed.

- 3.24 The aerial support must be flexible. Carbon, GRP, steel, etc. are not allowed.
- 3.25 Only two (2) servos are allowed. Frequency must be legal as specified by Race Director. Drivers must have more than one (1) frequency available. Under no circumstances shall a transmitter be taken onto the track.
- 3.26 TECHNICAL RESTRICTIONS (Not allowed)
4 wheel brakes.
Liquid cooled engines.
Hydraulic systems.
More than two (2) servos.
No more than 2-speed transmissions.
The use of electronic gyroscopes.
- 3.27 All measurements referred to in these rules are maximum or minimum values