

1/10th I.C. Circuit

Construction Rules

1 GENERAL CONSTRUCTION RULES

- 1.1 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.
- 1.2 The front bumper must be fitted to the car to the same shape of the body shell and material as supplied in any standard kit car. The bumper must not protrude outside the body nor shall it be cut down beyond the shape of the body. It should be constructed as to minimise injury that may result from being hit by a car.
- 1.3 Any part of a car may be substituted during a race meeting except the chassis. The chassis may be changed with the approval of the Race Director. The essence of this is that a car cannot be replaced or substituted once entered into a days racing.
- 1.4 Gearboxes up to two-speed only shall be used in all classes.
- 1.5 Fully independent suspension will be allowed in all classes.
- 1.6 The engines must be fitted with an suitable silencing system.
- 1.7 Fuel tank, fuel tube, and any external fuel filters are not to exceed a total capacity of 75cc, and no loose inserts in the tank are allowed. It is up to the driver to check that they do not infringe this rule prior to racing. If the car's total capacity is found to be above this figure the driver will be disqualified from the day's meeting.
- 1.8 All wheels/tyres are not to protrude outside of the body shell.
- 1.9 All types of tyre additives are prohibited from use in all classes with the exception of 200mm rubber only, which can use tyre cleaners. Anybody wilfully found using additives will be disqualified from the days racing.
- 1.10 An air intake silencer (e.g. approved INS box) must be fitted to the carburettor air-intake of all engines, with no internal modifications except for a 3mm hole at the base of the unit to allow water to drain. If a meeting is declared wet the INS-BOX may be removed as long as an air filter with equivalent noise suppression is fitted.
- 1.11 All entrants in 1/10th IC National events must use a personal transponder.
- 1.12 Anything not covered by any of the 1/10th IC Cct Construction Rules will not be allowed unless approved by a majority of the committee members in attendance.

2 SPORTS GT CLASS TECHNICAL RULES

2.1 BRAKING REQUIREMENT

Cars with proportional braking through the rear wheels only.

2.2 ENGINES

The engines for 4wd class cars may be of any configuration and construction with front rotary valve two-stroke air-cooled induction type, with standard 1\4 UNF or conical (turbo) glow plugs permitted. Maximum engine capacity of 0.15 cu in (2.5cc) allowed.

2.3 MUFFLERS

The exhaust pipe outlet can be any dimension so long as the silencing system noise levels conform to clause 5.6.

2.4 INTAKE SILENCING

In addition an air intake silencer (e.g. INS box) must be fitted to the carburettor air-intake of all engines, with no internal modifications except for a 3mm hole at the base of the unit to allow water to drain. If a meeting is declared wet the INS-BOX may be removed.

2.5 WEIGHT LIMITS

Cars must weigh a minimum of 1800grams.

2.6 CHASSIS/BODY DIMENSIONS

All dimensions in mm.	Min	Max
Wheelbase	260	280
Overall length (incl. wing)		490
Overall width (with body)		250

2.6 FUEL

Fuel may only contain Methanol, Oil/Lubricant and Nitro-Methane with maximum 16% nitro methane content. Verifying this fuel will be done using a floater called Nitromax 16, which is commercially available.

Any driver using fuel found to be illegal will be disqualified from the race in question. If a driver is found to use illegal fuel on a second time at the same meeting he or she will be disqualified from the meeting.

2.7 Bodyshells

Bodyshells are to be 1/10th scale type GT shells and must be commercially available. No performance aids or additional spoilers are to be fitted to the bodies apart from one rear wing or as supplied as part of the body.

Note: 'Wedge' or Group Style shells are not considered GT Shells.

2.8 WINGS

Rear wing	Cord	Width	End plate
235mm	55mm	233mm	55mm x 25mm

2.9 Windows

All windows must remain transparent. Only the front side windows and the rear window may be removed in part or whole. The side rear windows must remain whole.

2.10 TYRES AND RIMS

All dimensions in mm.	Max dia	Max width
Front wheels	51mm	30mm
Rear wheels	51mm	51mm
Front tyres	75mm	30mm
Rear tyres	80mm	51mm

NB. A tolerance of a further 1.0mm is allowed for tyre and wheel width

3.0 200MM TECHNICAL RULES

This section applies to the 200mm Touring, Scale Rubber and IC Truck classes.

3.1 All measurements referred to in this section are minimum or maximum values. All measurements for the motor dimensions are to be considered with 2 digits behind the decimal point, all other measurements 1 digit behind the decimal point. Measurements must be within their maximum or minimum values under all circumstances.

3.2 ENGINES

200mm Touring and Scale Rubber Class cars must have an engine with a total capacity of not more than 2.11cc.

IC Truck class vehicles must have an engine with a total capacity of not more than 2.5cc
Engines shall be air-cooled, with front rotary valve two-stroke induction.

In the 200mm Touring and Scale Rubber Classes only, engines may have a maximum of four (4) ports including the exhaust port.

No form of forced induction, or any form of variable port timing, is allowed.

One additional gap or slit in the bottom (or skirt) of the piston is allowed.

Only glow plug ignition is allowed. Standard or conical (turbo) glow plugs may be used.

Additional slits or holes in the liner are allowed as long as they do not extend beyond the top of the piston when it is at the lowest point of the stroke.

In the 200mm Touring and Scale Rubber Classes only, the carburettor shall have a maximum throat diameter of 5.50mm.

Engine internal modifications are allowed as long as they are within the parameters of rule 3.2.

For the purposes of this rule, a hole is defined as being an aperture completely surrounded by material.

3.3 MUFFLER

A muffler of approved double chamber design including silencer chamber must be fitted.

The muffler will have a single outlet pipe.

The minimum tail pipe length is 10mm.

In the 200mm Touring and Scale Rubber Classes only, the maximum internal dimension of the tail pipe is 5.2mm (measured at the widest point).

NOTE this dimension includes a tolerance to account for manufacturers variation in commercial available tubing.

3.4 WEIGHT

For the 200mm Scale Touring Class the minimum weight without fuel and including a transponder is 1700 grams.

For the Scale Rubber Class the minimum weight without fuel and including a transponder is 1750 grams.

If the weight is found to be under the minimum weight the driver will be disqualified from the heat or final.

3.5 Car Dimensions

All Classes:

	Minimum (mm)	Maximum (mm)
Wheel base	230.00	270.00
Width without body	170.00	200.00
Length inc Body & Wing	360.00	460.00

In Addition: 200mm Touring Class Only

Height to the top of the roof measured with a 10mm spacer under the chassis plate on level.	115.00	175.00
Wing Cord inc gurney strip (if fitted)		55.00
Side dams: Width		50.00
Side dams: Height		35.00
Wing overhang (at rear)		10.00

In Addition: Scale Rubber Class Only

Overall length (incl. wing)	360mm min-460mm max
Overall width (with body)	175mm min-210mm max

3.6 Fuel

Fuel may only contain Methanol, Oil/lubricant, and nitro methane with a maximum 16% nitro-methane content. Verifying this fuel will be done using a floater called Nitromax 16, which is commercially available.

Any driver using fuel found to be illegal will be disqualified from the race in question. If a driver is found to be using illegal fuel on a second time at the same meeting he or she will be disqualified from the meeting.

3.7 BODIES

For the 200mm Touring and Scale Rubber Classes any commercially available bodyshell intended for 200mm 'Touring' cars is allowed, provided the engine is contained within the bodyshell, and it satisfies the dimensions in rule 3.5. The rear of the body may not be cut higher than 50.00mm measured with a 10.0mm spacer under the chassis plate on a level.

For the IC Truck Class any commercially available truck bodyshell (as in an articulated truck) intended for 200mm cars is allowed, providing it satisfies other stated dimensions in these rules. Truck bodies are not to be cut above the lowest original bodyline at the front, sides and rear.

The body must be made from a flexible material and be painted properly. All windows on Touring Car bodies must remain clear or be semi-transparent. The windows on Truck bodies must be clearly contrasted from the surrounding paintwork.

Details of all front and rear lights, grills, air intakes and windows must be clearly contrasted from the surrounding paintwork.

No parts of the car except the muffler outlet may protrude outside of the body shell when viewed from above.

No parts of the car except the antenna, body posts and transponder may protrude outside of the body shell when viewed from the side, except for the Truck class, where the engine cooling head, air filter/silencer, roll over bar and fuel tank may also protrude outside of the body shell.

3.8 CUT OUTS

For the 200mm Touring and Scale Rubber classes, only the following holes are permitted in the body shell.

- One cooling hole in the front windscreen, max 50.0mm diameter.

- A hole is allowed directly above the engine cooling head for glow plug access with a max diameter of 35.0mm.
- A refuelling hole may be cut in the roof, max diameter 50.0mm, the centre of this hole must be the centre of the fuel filler cap viewed from above. Note cooling hole in front windscreen and re-fuelling hole may not be combined. Minimum distance between holes of 5.0mm.
- Both front side windows and the rear window can be removed for ventilation. The rear side windows must remain intact.
- Small holes can be made for the body posts, transponder, carburettor adjustment and radio antenna, max 10.0mm.
- The hole for the exhaust pipe must be of reasonable size.
- No other holes are permitted.

For the IC Truck class only the following holes are permitted in the body shell:

- A refuelling hole or hole for uppermost part of the fuel tank (only if necessary) may be cut in the bodyshell, to be of reasonable size.
- Small holes can be made for the body posts, transponder, carburettor adjustment and radio antenna, max 10.0mm.
- The hole for the exhaust pipe must be of reasonable size.
- A hole for the engine cooling head may also be made, this must be of reasonable size.
- A hole of reasonable size may be made for the air intake filter / silencer if this needs to protrude through the bodyshell when fitted directly to the carburettor.
- No other holes are permitted

3.9 WINGS AND SPOILERS

FOR TOURING CAR CLASSES ONLY:

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).

Wings and spoiler must be made from a flexible material.

Wing and spoiler may not be fixed to the body with piano wire. It must be mounted to the body directly.

Wing and spoiler must not protrude outside the maximum height and width of the body (including side dams). The height of the wing may be adjusted but the wing including side dams must not extend higher than the roofline.

Rear wings must be mounted in the same place as was intended by the body manufacturer. The overhang must not exceed 10mm at the furthest point to be measured from the most rear point of the body.

Side dams may be fitted but must be a reasonable representation of those fitted to the original car. They must fit in a rectangle with the measurements defined above and must not project above the height of the roofline.

Wing Dimensions:

Wing Cord inc gurney strip (if fitted)	55.00
Side dams: Width	50.00
Side dams: Height	35.00
Wing overhang (at rear)	10.00

Wings (excluding side dams) are to be of single moulded construction (no flat packs/bend your own).

Any Gurney strip (if fitted) must not exceed the width of the wing. The Gurney strip must not have an edge more than 5mm high.

3.10 BUMPER

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

3.11 AERIAL

The aerial must be flexible. Carbon, metal etc. aerials are not allowed.

3.12 TYRES

200mm Touring and IC Truck Classes:

Tyres must be black except for writing on the sidewalls.

Foam and/or rubber tyres can be used.

Treatment of the tyres with additives is prohibited.

Wheels must be fixed by a screw or nut.

Quick – change wheel systems are not allowed. No automatic systems to change the wheels allowed (just manpower).

Wheel and tyre width including tyre bead (across side walls): 30 mm Front and Rear

Wheel dia excluding tyre bead: Minimum 46mm, Max 50 mm.

Scale Rubber Class

The Scale Rubber Class will use a Controlled tyre. Details of this tyre will be posted on the 1/10th IC Section pages of the BRCA Website. <http://www.brca.org/index10ic.htm>

3.13 TRANSMISSION

200 Touring and Truck Classes:

4wd and 2wd cars can be used without any technical restriction except those listed elsewhere in Section 4. The use of separate front wheel brakes except through the transmission is not allowed. Locking of one way bearing is allowed.

Scale Rubber Class

Scale Rubber Class cars must be 4 wheel drive having a central brake acting on all four wheels.

3.14 ROLL BARS

Roll bars (roll-over bars) on Touring Car classes must be kept under the body.

IC Truck vehicles must have a Roll bar (roll-over bar) fitted.

3.15 DRIVER AIDS

It is not allowed to use any electronic device for traction and/or braking control.