

UKRRA 2016

U K Retro Racing Association

Tottenham Sports Cars

Technical Regulations

Intent.

The intention of these rules is to provide a class of 1/24th scale scratch built slot cars which replicates the kind of cars that raced on Britain's Raceways in their heyday of the late 1960s and early 1970s.

These rules are based on those of the Association of Raceway Centres (ARC) as published in the April 1970 edition of 'Model Cars' magazine and interpreted for current use by UKRRA.

Please remember this is a 'Vintage' class and, although modern parts are permitted in the interests of reliability and availability, the use of genuine period parts is encouraged whenever possible.

A. General Specifications.

- 1. *Maximum Overall Car Width:* 3 ¼" (82.55mm) with the body fitted ready to race.**
- 2. *Maximum Chassis Width:* No maximum is specified but no part of the chassis, including wheels and tyres, can be visible outside the body when viewed from above.**
- 3. *Wheelbase:* No maximum or minimum is specified (but see rule A15 & D1A).**
The majority of chassis from this period and the majority of bodies used would have been close to 4.00" (101.60mm).
- 4. *Rear Wheels and Tyres:***
 - A. Maximum Rear Tyre Width: 0.810" (20.57mm).**
 - B. Minimum Rear Tyre Diameter: ¾" (19.05mm).**
 - C. Rear Wheels can be made from any material and be of any diameter.**
 - D. Rear Tyre Material: Free choice but must not be made from, contain or be coated with silicone.**
 - E. Speed rubber is prohibited.**
- 5. *Front Wheels and Tyres***
 - A. Minimum Front Tyre Width: 3/16" (4.76mm).**
 - B. Minimum Front Tyre Diameter: 5/8" (15.88mm) - Note: ¾" is preferred.**
 - C. One piece front wheels/tyres are permitted.**
 - D. Front Wheels can be made from any material and be of any diameter.**
 - E. Front Tyres must be made from rubber or plastic and coloured black.**
 - F. Tyres made from, containing, or coated with, silicone, urethane or other similar compounds must not be used.**
 - G. Tyres may be coated with cyanoacrylate adhesive ("Super Glue") or nail polish.**
- 6. *Minimum Chassis Clearance:***

Measured with the Car sitting on it's tyres, on a flat tech block with the correct recess for the Host Track in which the guide, complete with braids, is positioned with the braids flat.

 - A. Rear: 0.0625" (1.59mm). Measured under the rear axle.**

- B. The drive gear may be below the rear minimum but must, at all times, remain clear of the track surface.**
- C. Front: 0.020" (.508mm). Measured under the most forward part of the chassis.**
- D. No intermediate part shall be lower than the front limit.**
- E. All four tyres must touch and roll on a level track surface at all times.**
- F. Touch and Roll Check. Scrutineers are instructed to ensure that all cars are checked, in the slot on the track being used for the event, to ensure that the Front Wheels touch the track surface and roll when the car is pushed forward.**
- 7. Axles (Front & Rear):**
- A. No minimum diameter is specified.**
Most axles in this period would have been 1/8" (3.18mm) or 3/32" (2.36mm).
Front axles were sometimes made from 16swg (1.6mm) piano wire.
- B. Solid steel axles only.**
- C. Hollow axles are not permitted.**
- D1. Inline chassis do not have to have straight or one piece front axles but they must be fixed rigidly to the chassis. Sprung 'L' arms are not permitted.**
- D2. Sidewinder and Anglewinder Chassis must have a single, straight, full length, front axle, which is free to rotate, on which both front wheels must be mounted.**
- E. Front Wheels may rotate independently.**
- F. Front axles may have side play but at no time can the wheels or tyres extend out past the body.**
- G. Axles must not protrude beyond the outside face of any wheel or tyre.**
- 8. Bushings and Bearings: Free choice.**
- 9. Drive Type: Free choice.**
- 10. Drive Gears: Free choice, but period items such as Taylormade, Cox, Cobra etc are preferred.**
- 11. Minimum Weight: Ready to race.**
- A. Inline Chassis: 100 grams.**
- B. Sidewinder and Anglewinder Chassis: 120 grams.**
- 12. Body Height:**
Measured with the car sitting on its tyres on a flat tech block.
- A. Maximum: Must not exceed 1 1/2" (38.1mm) including any add on air control devices.**
- B. Minimum: The top of the front wheel arches must not be less than 25/32" (20mm) measured across the front of the car above the centre line of the front wheels.**
- 13. Guide Lead: No maximum is specified but the body must completely cover the guide flag when viewed from above unless the front of the body is less than 1/4" (31.75mm) in front of the front axle centreline. In which case no part of the guide flag may be more than 1/4" (31.75mm) in front of the front axle centreline.**
- 14. All chassis parts, including the guide flag (except as above), wheels, tyres and all other running gear, must be covered by the unmodified body, without any add on aero devices, when viewed from above.**
- 15. All wheels must be located centrally in relation to the wheel arches in the body.**

B. Chassis.

- 1. Chassis Type;**
- A. Any chassis either hand built or commercially available in 1972 or earlier.**
Provided there is reasonable evidence to support the date claim.
- B. Any more recently hand built, or partly hand built, chassis in the style of a 1972 or earlier chassis.**
Provided there is reasonable evidence to support the design used.

- 2. Slot Guide:**
- A.** Only **one slot guide** is permitted **per car**.
 - B.** The **guide** must be a **commercially available** type but can be from **any period**.
- 3. Exclusions applying to all chassis.**
- A.** ‘Flexiboard’ designs (i.e. Chassis with a longitudinal centre line hinge) and any other later than 1972 design features **are not permitted**.
 - B.** **Spring Steel Sheet** may **not** be used, **except** as a **guide tongue**, unless it can be shown that the **chassis** was **actually made** in **1972** or **earlier**.
 - C.** **Track Skids** are **not permitted**.
 - D.** Only **Clear Sellotape** may be applied to the **bottom** of the **chassis** to prevent **tarnishing of brass**. This must **not modify** the **movement** of any **chassis component**.
 - E.** **Centre line Torsion Bars** will only be legal if they are **solidly and visibly soldered** at both ends either to **pockets in the main chassis components** or if soldered into **tubes** at either or both ends have a “free wire” distance of **4mm minimum** between the tubes, additionally the tubes to be **slotted crosswise and soldered**, to **openly display** to scrutineers that it is a **Torsion Bar** and not a **pivot**.

Note: For **examples of period chassis designs** look in the pages of period magazines. There are many race reports from events at Tottenham and Nordic in particular and there were several chassis builders who described their chassis construction methods. Another place to look is scratchbuilt.com where there are many examples of well known, Mainly American, period chassis designs.

C. Motor.

- 1. Period Motors:**
Any **complete motor**, or **motor assembled from parts**, intended for slot racing and manufactured and sold in **1972** or **earlier** may be used.
- 2. ‘C’ Cans Motors:**
- A.** Any **Mura** or **Champion ‘C’ can** of the type without lightening cut outs around the end bell mounting may be used. **Two hole** type cans are the **preferred option**. The can must be **0.030” (0.76mm) minimum thickness** material and of **standard length** with **no lightening**.
 - B.** **Magnets** must be a **one piece** type with a **minimum length** of **0.500” (12.7mm)**.
 - C.** **Armatures** for these motors must have a **minimum diameter** of **0.500” (12.7mm)**, a **maximum diameter** of **0.530” (13.5mm)** and a **minimum stack length** of **0.440” (11.18mm)**. **Windings** and **comm’ timing** is **free**.
- 3. 16D/Super 16D Motors:**
- A.** Any **Parma**, **Slot Works** or **similar full can** may be used. The can must be **0.025” (0.63mm) minimum thickness** material and of **standard length** with **no lightening**.
 - B.** **Magnets** must be a **one piece** type with a **minimum length** of **0.670” (17.0mm)**.
 - C.** **Armatures** for these motors must have a **minimum diameter** of **0.525” (13.34mm)**, a **maximum diameter** of **0.565” (14.35mm)** and a **minimum stack length** of **0.500” (12.7mm)**. **Windings** and **comm’ timing** is **free**.
- 4. End bells:**
- A.** In the interests of reliability **modern end bells** of **plastic based material** may be used in **any motor**. **Period style** items are **preferred**.
 - B.** **Metal end bells** may only be used if they can be **shown to have been made** in **1972** or **earlier**.

5. **Hardware:**

- A. Any type of bearings, brushes, brush hoods, brush springs, spring posts and screws may be used in any motor. Period style items are preferred.
- B. Elephant ears for cooling are permitted.

D. **Body.**

1. **Body Type.**

A. Any vac' formed (Lexan, PETG etc) 1/24th scale replica of a real, two seat, Sports Racing or GT car built and raced before the end of 1972 and not included on the 'Banned Bodies' list (see regulation D4) can be used.

B. Bodies must be realistic and reasonably to scale. Aerodynamically improved or generic bodies in the spirit of racing in the specified period may be used providing they meet the Guidelines laid out in the Banned List (see Rule D4A).

2. **Body Finishing.**

A. To remain within the spirit of this class of racing the lower edge of the body should be cut close to the marked cut line on commercially available body shells.

B. Front wheel arches need not be cut out, but if not, must then be left transparent so that the full front wheel and tyre is visible.

C. Rear wheel arches must be cut out so that the full rear wheel and tyre is visible unless the real car had closed rear wheel arches.

D. The body must be fully painted and detailed, including all engine and mechanical detail where shown on the body shell. Authentic real car liveries or paint schemes 'in the style of the period' are preferred. Simple 2 tone fades, numbers drawn on with a pen and un-detailed interiors are not acceptable.

E. Openings, such as air vents and intakes, must be cut out or painted to look realistic.

F. The body must display at least two sets of racing numbers.

G. The body must have transparent windows and windscreens in all locations as on the real car.

H. Open top cars must have the cockpit opening fully cut out along the upper edge of the windscreen and cockpit sides.

I. The body must have a realistic three dimensional interior which includes a correctly positioned and painted driver figure consisting of at least a helmet, shoulders, arms, hands and the upper part of a steering wheel.

J. The body must be securely mounted to the chassis. Tape alone is not permitted except as a temporary repair during a race.

K. The body must cover the tread of all tyres when viewed from above.

L. The chassis, motor and all other running gear must not be visible through the cockpit opening, cabin area or engine bay.

3. **Add on Spoilers and Air Control Devices.**

A. All add on air control devices must be in a clear plastic material.

B. **Rear Spoiler.**

a. One rear spoiler only.

b. Must not lengthen the car by more than 1/8" (3.18mm).

c. Must not be taller than 1/2" (12.7mm) above the local height of the body shell.

d. Must not increase the overall height of the car above 1 1/2" (38.1mm) from the track surface.

e. Must not extend beyond the widest part of the moulded body shell.

C. Rear Side Dams.

- a. Must **not extend further forward** than **1” (25.4mm)** from the **centre line** of the **rear axle**.
- b. Must **not exceed** the **height** of the **rear spoiler**.
- c. Must **taper uniformly** so that they are **level with the body** at their **forward end**.

D. Diaplane – Front Splitter.

- a. **One front diaplane** only.
- b. Must **not lengthen** the car by more than **½” (12.7mm)**.
- c. Must **not extend beyond** the **widest part** of the **moulded body shell**.

E. Front Trim Tabs.

Either

- a. **One trim tab** measuring **no more than ½” (12.7mm) high by 1” (25.4mm) wide** may be **mounted** on the **centre line** of the **body**, **in front** of the **windscreen**.

Or

- b. **Two trim tabs** measuring **no more than ½” (12.7mm) high by ½” (12.7mm) wide** may be **mounted** on the **front wheel arches** (fenders).

4. The Tottenham Sports ‘BANNED BODIES’ List:**A. Guidelines for acceptable bodies.**

The Body shape must be a reasonable 1/24th scale representation of the real car, within the logical limits of vacuum formed production, and not grossly lowered in profile. Bodies of cars raced and/or produced prior to 1973 and modified in terms of aerodynamics or flattening, including bodies which were made as ‘generics’, but excluding ‘thingies’ or ‘wing car’ bodies, should be allowed as being ‘in the spirit of the class’, provided that any such aerodynamic changes are no more extreme than that of the most extreme body approved by the IRRRA for the Can-Am class. See also rules D3Da and D3Db above with regard to bodies with a moulded on splitter.

B. BANNED BODIES

There are currently no Bodies on this list.

C. The procedure for getting a body added to or removed from this list can be found in the SPORTING REGULATIONS.