

# UKRRA

## U K Retro Racing Association

### Tottenham Retro Sports Cars

#### Technical Regulations

##### Intent.

The intention of these rules is to provide a class of 1/24<sup>th</sup> 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 John Secchi.

Please remember this is a 'Retro' 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 its tyres on a flat tech block.
  - 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: 0.047" (1.2mm). 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.**
- 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 Anglewriter 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 Anglewriter 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 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 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.**

**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](http://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) 1/24<sup>th</sup> scale replica** of a real, two seat, Sports Racing or GT car built and raced before the end of **1972** can be used.

**B. Bodies** must be realistic and reasonably to scale. **Flattened** or aerodynamically improved bodies are **not permitted**.

**Important Note:** We do not wish to get into approved body lists but if competitors push the boundaries too far this is what we will have to do.

## 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**.

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 **windcreens** 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 1/2" (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 1/2" (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 1/2" (12.7mm) high** by **1/2" (12.7mm) wide** may be **mounted** on the **front wheel arches** (fenders).