

# 1:32 SCALE DIGITAL Touring Car (TC)

## TECHNICAL REGULATIONS

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### Preamble

These regulations are applicable to 1/32 scale models of next-generation touring cars, principally the 2015+ BTCC range by Hornby Scalextric. Models belonging to other series such as TCR and WTCC may also become eligible should they be produced in future. A list of defining characteristics and current production models is given below, by which the admission of new models will be based on;

- 60mm width
- in-line s-can motor giving approximately 20,000rpm @ 12.0v
- none-adjustable plastic chassis with rigid motor bracket and fixed axel mounts
- consistent or comparable design architecture

Currently available models:

- BMW Series1
- Honda Civic Type-R
- MG-6
- Volkswagen Passat
- BMW 330i
- Honda Civic Type-R (2021)

The formula allows for light tuning in order to compensate for manufacturing defects, out-of-tolerance parts and to perform handling balance adjustments.

## 1. Body

- 1.1. The exterior of the body shell must appear original and unmodified from the manufacturer's design when placed on the circuit and viewed from any angle
- 1.2. Body must be decorated with an authentic racing livery
- 1.3. For the following models only, the original driver's cockpit may be replaced with a polycarbonate (a.k.a. lexan) copy with clearly defined dash, driver's head, shoulders/bust and steering wheel.
  - 1.3.1. MG-6
  - 1.3.2. Volkswagen Passat
  - 1.3.3. BMW 330i
- 1.4. The original driver's cockpit may be modified by having excess material removed from the under side. Modifications must not be visible through the windows of the car, or be carried out in a way that makes the chassis and/or components fitted to the chassis visible through the windows of the car. The following clarifications are offered;
  - 1.4.1. Bearing support legs may be removed
  - 1.4.2. Ribs beneath seat mouldings may be ground away in order to achieve a 'flat pan'
  - 1.4.3. Block and mounts beneath parcel shelf may be removed
- 1.5. All drivers cockpits must be decorated. Unfinished cockpits are illegal
- 1.6. All drivers cockpits must retain the original roll cage
- 1.7. All lenses and glass must be present and appear original when placed on the circuit and viewed from any angle
- 1.8. Spoilers, wings and mirrors must be fitted.
  - 1.8.1. Rear spoilers must be fitted at all times
  - 1.8.2. Mirrors must be fitted at the start of the race
  - 1.8.3. Vulnerable parts may be rubber-mounted. Modifications must be sympathetic to the final appearance of the model
- 1.9. The minimum allowed mass for the body, excluding screws, is 25.0g
  - 1.9.1. Any ballast needed to make up the minimum body weight must be placed to the underside of the interior tray beneath the space in which a passenger figure would occupy.

## 2. Chassis

- 2.1. Chassis must be original equipment, as supplied with the model from the factory
- 2.2. DPR hatch must be present and fixed with flat-head screw
- 2.3. The following chassis modifications are allowed;
  - 2.3.1. Chassis modifications to aid the fitment of digital chip
  - 2.3.2. DPR hatch may be modified on the top side only for fit and clearances to digital chip and/or associated cabling, connectors and ancillary components.
  - 2.3.3. Chassis modifications for fit and clearances of components are allowed
  - 2.3.4. Area directly beneath crown gear may be cut / removed to give clearance for an aftermarket crown gear and/or improved ground clearance
  - 2.3.5. A hole no bigger than 2.0mm diameter may be drilled for crown gear grub screw access
  - 2.3.6. Removing material from the chassis for lightening purposes is illegal
  - 2.3.7. Other non-specified modifications to the chassis are illegal
- 2.4. The body must be mounted to the chassis using the original fixing locations and methods
- 2.5. Screws and washers are free

### 3. Motor & Transmission

- 3.1. Motor must be original S-Can supplied with the car (Hornby Scalextric) approx. 20,000rpm at 12.0v
- 3.2. Motor cans must be insulated from the circuit rails. Original moulded-in bars are considered sufficient protection
- 3.3. Any other motor modification is illegal
- 3.4. Pinion gear must be nine (9) teeth
- 3.5. Pinion gear must be made from nylon material
- 3.6. Crown gear must be twenty seven (27) teeth
- 3.7. Make and type of crown gear is free, but must be a type where the gear mesh is set by the motor shaft and without the use of additional stoppers.
- 3.8. AWD systems are illegal

### 4. Wheels & Tyres

- 4.1. Wheels are free, but must have a diameter of 16.5mm (equal to original equipment size)
- 4.2. Wheels must have a three dimensional spoke pattern. Plastic moulded inserts are acceptable
- 4.3. Front tyres are free, but must be rubber.
  - 4.3.1. Front tyres may be glued or varnished (topcoat), but must not be glued to wheels
  - 4.3.2. Minimum diameter for front tyres is 19.0mm
  - 4.3.3. Minimum width for front tyres is 9.0mm
- 4.4. Rear tyre compound is to be specified by of the race director
  - 4.4.1. The legality of glueing rear tyres is to be specified by the race director
- 4.5. The surface of any tyre may be cleaned with tape or lighter petrol only

### 5. General

- 5.1. Maximum track width is 60.0mm
- 5.2. Minimum overall mass is 75.0g
- 5.3. Traction magnets are illegal
- 5.4. Ballast is allowed, but subject to the following criteria;
  - 5.4.1. Ballast must not be visible from any view of the car, including when viewed from the bottom
  - 5.4.2. Ballast must be securely fixed in place at all times
  - 5.4.3. All ballast must be contained within the boundaries of the chassis
  - 5.4.4. Ballast may not be used in the manner that it acts as a structural component
  - 5.4.5. Any ballast in the body must meet the criteria specified in 1.8.1
- 5.5. Axels are free but must be solid steel
- 5.6. Axel bearings are free but must be plain centred bushings
  - 5.6.1. Ball bearings, spherical combination bearings and eccentric (off set) bearings are illegal
- 5.7. When viewed from above, tyre edges must be contained within the widest point of the wheel arch

- 5.8.** Guide blade must be original equipment consisting of blade and quick change disc
- 5.9.** Cables, braid and connectors are free.
  - 5.9.1.** Braid must be trimmed to a length shorter than the guide flag
- 5.10.** The factory fitted lighting installation is required to be fitted and working at the start of every session
  - 5.10.1.** Additional lighting (eg ID lights, flaming exhaust, brake lights) is illegal
- 5.11.** No mechanical parts of the car, except for the guide flag, wheels and tyres, should be visible from any angle when the car is placed on the circuit.
  - 5.11.1.** In the case of wireless digital systems, wireless antenna may be visible
  - 5.11.2.** It is not necessary to cover gear teeth protruding from the bottom of the chassis
- 5.12.** The race director maintains final authority on the legality of any car