

**STMCC Club Race Meetings
Technical Rules and Regulations**

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(Review 2)

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SPECIAL NOTE:

Prior to purchasing batteries and/or motors, members are advised to check roar approved lists of the items you are planning to purchase, as only approved batteries may be used in sanctioned events.

For current approved lists go to www.roarracing.org

1 **Classes & Class Specifications**

1.1 Novice

<u>Chassis</u>	Any IFMAR legal ISTC 1/10 th scale chassis Must have 4wd and a flexible joint in each drive shaft (universal joint or dogbone)
<u>Bodies</u>	Unrestricted bodysHELLs
<u>Tyres</u>	Rubber tyres only permitted
<u>Motors</u>	540 Johnson/Mabuchi standard replacement silver can metal endbell motors Motors may not be modified or tampered with in any way A Brushless Motor & ESC may be used, but this will be at the discretion of the Race Director
<u>Batteries</u>	Any 6 cell Nicad and NiMH 7.2v pack in stick, side by side or saddle configuration OR Any 2 cell Hard-cased 7.4 Lipo pack
<u>Additional</u>	Kits and hot-ups must be assembled as per manufacturers instructions

1.2 PRO Tourer

	(New Class)
<u>Chassis</u>	Any IFMAR legal ISTC 1/10 th scale chassis. Must have 4wd and a flexible joint in each drive shaft (universal joint or dogbone)
<u>Bodies</u>	Any 190mm 2 or 4 door sedan/saloon style body.
<u>Tyres</u>	Rubber tyres only permitted.
<u>Motors & ESC's</u>	540 Johnson/Mabuchi standard replacement silver can metal endbell motors. OR A 21.5T Brushless Motor (Tekin or Speed Passion Only) with any Brushless ESC with the following conditions: "The ESC must be set at ZERO Turbo Boost and ZERO Timing Advancement" Motors may not be modified or tampered with in any way
<u>Batteries</u>	Any 6 cell Nicad and NiMH 7.2v pack in stick, side by side or saddle configuration OR Any 2 cell Hard-cased 7.4 Lipo pack
<u>Gearing</u>	Unrestricted
<u>Additional</u>	Any hop up from any manufacturer

1.3 Mini

<u>Chassis</u>	Tamiya M03 or M05 series "Front Wheel Drive" chassis only
<u>Bodies</u>	BodysHELLs are open, with the following restrictions - No Modern (post 1980) 4 door Touring Sedans and/or 12th scale type Wedge/Can-am Sports bodies.
<u>Tyres</u>	Any commercially available rubber mini-sized tyre, in any combination and/or compound, with any insert, and standard offset mini-sized wheels.
<u>Motor & Transmission</u>	Tamiya Black Can Sport-Tuned motors (23,000 rpm max) - 53068, or 13T/3000KV Hobbywing OEM/rebranded COMPLETE SYSTEM with max 25 or 35 amp ESC and engraved /etched can. No modifications are permitted to motors. Removal of fans is permitted on esc's. 20, 18 or 16 tooth pinions only
<u>Chassis & Modifications</u>	Cars must be assembled as per Instruction Manual, and no chassis/powertrain modifications allowed. With the exception of the included/optional differential which may be modified to give a locked/spool action. Aftermarket differentials/spools are permitted. One-way diffs are specifically prohibited. A minimum weight limit of 1330gms (with transponder) will apply. ESC, bearings and Tamiya Hot-ups only permitted, with the following exceptions – Official Tamiya optional ALLOY Hot-up components may be replaced with an equivalent aftermarket part. e.g. Front/Rear Uprights, Heatsink motor mount, servo mounts, shocks, steering bellcranks and linkages. Protective bumpers are permitted providing they are of essentially foam construction with no hard mounting points contacting the body shell. Aftermarket rear body mount support/braces are also permitted.

1.3 Mini (Continued)

Batteries Any 6 cell Nicad and NiMH 7.2v stick pack configuration.
OR
Any 2 cell Hard-cased 7.4v Lipo pack that will fit the mini chassis (without modification to pack or chassis).

1.4 21.5 Turn

(Replaces Stock)

Chassis Any IFMAR legal ISTC 1/10th scale chassis

Bodies Any 190mm 4 door touring car body

Tyres Rubber tyres only permitted

Motors Any 21.5 turn Brushless motor with any rotor released for that motor

Batteries Any 6 cell Nicad or NiMH 7.2v pack in stick, side by side or saddle configuration
OR

Any 2 cell Hard-cased 7.4v Lipo pack

Gearing Unrestricted

Additional Any hop up from any manufacturer

1.5 13.5 Turn

(Replaces Super Stock)

Chassis Any IFMAR legal ISTC 1/10th scale chassis.

Bodies Any 190mm 4 door touring car body.

Tyres Rubber tyres only permitted.

Motors Any 13.5 turn Brushless motor with any rotor released for that motor

Batteries Any 6 cell Nicad or NiMH 7.2v pack in stick, side by side or saddle configuration
OR

Any 2 cell Hard-cased 7.4v Lipo pack

Gearing Unrestricted

Additional Any hop up from any manufacturer

1.6 Open

(Replaces Modified)

Chassis Any IFMAR legal ISTC 1/10th scale chassis.

Bodies Any 190mm 4 door touring car body.

Tyres Rubber tyres only permitted.

Motors Any IFMAR legal motor – Brushed or Brushless

Batteries Any 6 cell Nicad or NiMH 7.2v pack in stick, side by side or saddle configuration
OR

Any 2 cell Hard-cased 7.4v Lipo pack

Gearing Unrestricted

Additional Any hop up from any manufacturer

1.7 Formula 1

Chassis Tamiya F103 OR F104 Formula 1 1/10th scale chassis. 4 Wheel, rear wheel drive chasis only.

Bodies Any true F1 or Indy style body. Front & rear wings must be fitted. No concept bodies. Body cut outs are allowed (air intakes) as detailed by the body moulding lines or in the same place as on the original car. Any cut outs must be the correct scale size as on the original car. A driver figure moulded into the body with a helmet fitted in the correct position.

Tyres Rubber tyres only permitted.

1.7 Formula 1 (Continued)

<u>Motor/ESC</u>	540J or any 17.5T Brushless with any SPEC ESC. <u>The ESC must not have a Turbo Function or Dynamic Timing adjustments</u>
<u>Batteries</u>	Any 6 cell Nicad or NiMH 7.2v pack OR Any 2 cell Hard-cased 7.4v Lipo pack
<u>Chassis & Modifications</u>	Cars must be assembled as per Instruction Manual with no chassis or powertrain modifications allowed, with the exception of: F103 – Aftermarket Battery/Top Deck mount that provides more space for standard LiPo packs to fit F104 – Removal of ESC/Receiver tray hinge loops to allow standard LiPo pack to fit Plastic/Metal bushes in diff, rear axle and front wheels can be replaced with bearings Tamiya Hot-ups only permitted, with the following exceptions – Official Tamiya optional Hot-up components may be replaced with an equivalent aftermarket part. e.g. Front steering blocks, Heatsink motor mount, servo mounts, shock, steering linkages.
<u>General</u>	The F1 class is open to experienced drivers as approved by the STMCC Committee.

2 Safety

General

- No car may be constructed in such a manner or with materials that may cause injury to spectators/marshalls or damage to other cars
- Only closed toe shoes are to be worn when marshalling
- All spectators must remain behind the track fence line (koppers logs)

Charging Battery Packs

- Only Peak Detection type chargers are to be used when charging battery packs
- Over charging battery packs is dangerous and should not occur
- Competitors must use a “Lipo Sack” or other approved device (fire mitigation device able to withstand and contain a destructive failure without showing a flame) when charging/re-charging LiPo packs
- Any physical distortion, denting, puncturing or damage to any battery pack will deem the pack to be ineligible for use at any STMCC event

3 Weights & Dimensions

3.1 Minimum Weights

Mini	Minimum weight in racing trim, regardless of battery type	1330gm
Formula 1	Minimum weight in racing trim, regardless of battery type	1000gm
All Touring Car Classes	Minimum weight in racing trim, regardless of battery type	1350gm

3.2 Dimensions (all Touring Car classes) All measurements are Maximum

Body Width	195mm
Wing Width	190mm
Wing Cord	40mm
Wing End Plates	20mm x 40mm
Wing Height	Must not extend above the body roof line

4 Appearance

Foam bumpers must be fitted (Touring Car Classes only).

No part of the motor, electrics or chassis, including wheels and tyres may protrude outside the body shell when viewed from above (Mini and Touring Car Classes only).

Aerodynamic shaped parts (splitters / diffusers /tunnels etc) may not be fitted to the underside the chassis or the chassis may not be modified to gain an aerodynamic advantage.

Bodies may not be cut above the lower door line or above the rear bumper line.

Bodies must be securely fixed to the chassis at all times during a race.

The only cut outs allowed on the body are clearance for the wheels (wheel arches), mounting drill holes and antenna drill hole(Mini and Touring Car Classes only).

Windows may not be cut out or drilled (Mini and Touring Car Classes only).

5 General Technical Information

- ESC's may have reverse fitted, but reverse must not be used during racing
- Pneumatic tyres are not allowed
- Tyre warmers and Tyre additives are allowed
- Antennas must be of a flexible non-metallic material. NB. Piano wire or fibreglass not allowed.
- Only single speed drive train allowed
- Battery packs cannot be charged or changed during a race.
- On-board Traction control, active suspension and steering control by gyroscopes are not allowed
- Sensors fitted to the car for the purpose of measuring or recording movement of any component, temperature or RPM are not allowed
- Only two channels may be used in the receiver for controlling the car. Using spare receiver slots to power auxiliary equipment (e.g. personal transponder, cooling fans) is allowed

6 Radio Equipment

The only frequencies to be used are:

27 MHz 29 MHz 40 MHz 2.4 GHz

Drivers must have a spare frequency to change to upon request of the Race Director. In the event of a frequency clash the lower qualifier must change.

The race director may delay the start of a race due to radio interference. Anyone not on his or her assigned frequency may be disqualified from that heat or final.

7 Driver's Responsibilities

- You are responsible for your actions and must be courteous to all other competitors, officials, marshals and spectators.
- Failure to be courteous will result in penalties or disqualification from the event.
- Immediately after each race, drivers are move to their marshalling position
- You MUST marshal the race immediately after yours – failure to do so, or leaving your marshalling position early, will result in a 1 lap penalty from your best qualifying or final race time.
- It is a driver's responsibility to arrange a suitably experienced person to act as a substitute marshal if required. The Race Director must be informed of any substitute marshals being utilised.
- Cars failing scrutineering or failing to be presented for scrutineering will loose the result of their previous race.

8 Marshal's Responsibilities

- Marshals are not to return a stopped car to the pit area or driver
- All marshals are asked to marshal in the manner you would want your car marshalled when you are racing. Keep alert and concentrate on your section of the track
- Do not leave your marshalling position until the completion of the race

9 Scrutineering *It is the responsibility of each driver to ensure their car meets all specifications.*

- Cars may be checked at the completion of each race
- Cars may be impounded at the completion of finals for further technical inspection
- Failure to pass scrutineering will result in disqualification from that particular race, after one (1) warning has been issued
- Cars may be inspected at any time during the racing program.