

Rules of the ACTMCRC

1 CLASSES

- Novice
- 540 Touring Cars
- 540 Pro
- Stock Touring Cars
- SuperStock
- 19T Spec Mod
- Modified Touring Cars
- Tamiya M Chassis
- Buggy / Sports Truck

2 RACING FEES

- Members

On Line Entry -	\$ 5.00
Entry in first class -	\$10.00
Second or more classes – add	\$ 5.00
- Non – Members

Entry in first class (incl. On-line)-	\$15.00
Second or more classes – add	\$ 5.00
- New drivers will not be charged on their first night of racing.

2.1 Membership Fees - Annual

Memberships are paid annually in June. New members joining after January will only pay one-half the annual fee, up to the next June.

- Standard Membership - \$45.00 per year
- Family Membership - \$60.00 per year
- Concession Membership - \$25.00 per year

To be eligible for a concession membership, the person must be either under 16 years of age or be a holder of concession/seniors/unemployment/full time student or similar card.

A family is defined as a group of people who share the same surname, are closely related or are in a de-facto relationship as determined by the Treasurer.

3 EVENT SCHEDULE/LOCATION

Racing will be held usually on Tuesday evenings at Exhibition Park in Canberra (EPIC), in the Mallee Pavilion (Building M) (unless otherwise advised).

The ACTMCRC Committee will advise the location of each meeting in the following ways:

- Drivers meeting at the preceding race meeting; OR
- Race calendar available from the website (www.actmcrc.org.au)

Competitors can also confirm the timing and location of a race meeting by contacting the club president on 0407 254 412 or via email at info@actmcrc.org.au.

3.1 Race Meeting

At 6.00pm – 6.30pm the doors will be opened, if necessary the track will need to be set up - everyone who is present is requested to assist in this process. R/C cars will not be permitted to operate until the track is ready for racing and declared OPEN by the Race Director. Entries will open after the track is ready and open for free practice.

The track will be closed at 7pm, a drivers meeting will be held and racing will commence between 7pm and 7.30pm.

On a random basis, the Track Committee will conduct Scrutineering with the winners of each class being checked at the end of the night.

The club's computerised scoring system controls meetings. The count down for a race may be paused at the race director's discretion. Where a driver is racing in TWO consecutive races, it is not an accepted reason for pausing the race start. There is a 2 or 3 minute break between races to allow returning drivers to place their cars in *parc ferme (if in use)*, return their transponders to race control and move into position to marshal the next race, and drivers about to race to get into position for their race.

Drivers for the next race should not turn on their transmitters or their cars until just prior to their race start.

3.2 Entries

Entries will be accepted via the club's website. Fill in the form on the following link to enter 'http://www.actmcrc.org.au'. Entries must be received by 5pm on the Monday before the race meeting. If entering on line, entry fee payment via EFT or in person will be accepted. A class will require a minimum of 4 entries to guarantee it being run. A class that receives less than this may be combined with another class, at the race director's discretion. The race director has the right to ask competitors to enter a different class, cancel secondary entries or cancel a round of qualifying or finals.

4 RACE FORMAT AND DURATION

Drivers compete in a multiple round Drivers Championship; one round consists of a race meeting, the committee will determine the number of rounds per championship.

The Classes to be included in each Driver's Championship Season will be determined by the Committee at the start of each Championship.

The Race Director, based on registrations for the day, will determine the number of qualifying and finals races per class at each race meeting. If necessary, the number of races will be adjusted to ensure racing is completed at a reasonable time.

4.1 Points

Drivers will score points towards a championship point's score. Points received are added together for each meeting and then totalled for a championship season, and the lowest two scoring round are 'dropped' from this total. In this way, a driver who misses one or two rounds could still get enough points to win a Season Championship.

Points are awarded for Qualifying position and both Final positions.

Placing	Qualifying points	Finals points
1 st	2	101
2 nd		99
3 rd		98
4 th		97
5 th		96
6 th		95
7 th		94
8 th		93
9 th		92
10 th		91
11 th		90
12 th		89
13 th		88
14 th		87
15 th		86
16 th		85

On completion of the Qualifying races, cars in each class will be re-graded for the Finals; the top 8 qualifiers will be placed into the A Final with the next 8 being placed into the B Final, and so forth. NOTE: Tamiya M-Chassis will run 10 car finals. If the track is large enough the race director may allow 10 cars to run in all finals. Should a B Final not have the minimum number of entries after it has been regraded, the drivers in that class may run their Final in with another class at the Race Director's discretion. The Race Director will first consult with drivers to ensure there are no objections from the group that would host the B final. If there are objections, and another host group can't be found the Race Director may decide that the B group be dropped from the finals round and Final results declared based on the qualifying order.

All Heats and Finals will be 5 minutes in length with the car completing the most laps being declared the winner.

Normally a race meeting will have two rounds of Finals. Both finals will count towards the overall results with points being awarded for positions achieved in both finals.

5 DRIVER RESPONSIBILITIES

5.1 Marshalling

Drivers must marshal the race immediately after theirs, failure to do so will result in the loss of their points for the night, a driver may appoint a substitute marshal, but they must inform the race director. Drivers are required to place the cars in a designated area (*parc ferme*) near race control (unless otherwise directed), for scrutineering, after their race.

Guideline for Marshals:

Marshals are to assist with the smooth operation of the race. They must constantly watch cars in their sector of the racetrack. Marshals should:

- **Stand** – do not sit, unless you are temporarily on the track;
- **Look** - before stepping onto the track ensure that you will not obstruct any on-coming race cars. Check the track for any obstructions – e.g. parts from damaged cars and remove them without disrupting the race
- **Care** – use care in handling all racecars. Be careful of hot motors, keep hands away from wheels, and do not pick up cars by the spoiler.
- **Remove a stalled car** – where a car is damaged or otherwise inoperable, remove it from the track and TURN OFF its electronics. Look to the car's driver to indicate that you are doing this, as the driver will then turn off their transmitter. At the end of the race return the car to the driver.
- **Distractions** – do not use mobile phones, take any food or drink nor talk with others so as to impair you from marshalling effectively during the race.

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5.2 Transmitters

Drivers must not use their transmitters during heats other than in their own heat, without the permission of the Race Director. A driver found using their transmitter within the immediate area of the race meeting would be given one official warning. A second offence will result in that driver being excluded from racing for the rest of the meeting.

Drivers are not permitted to remove their transmitter from the driver's stand during their race. If their car has problems, a Marshall will remove it from the track and turn off the electronics. The driver should also turn off their transmitter, but remain on the Drivers' stand.

Only 27mhz, 29mhz, 40mhz and 2.4Ghz Transmitters are to be used.

Direct physical connection between Transmitter and Receiver by cable is permitted.

5.3 Transponders

It is the driver's responsibility to ensure that their transponder is attached securely to their car. In the absence of an internal transponder mount, it is recommended that the transponder be mounted in the lower half of the car's windshield. If using a Club Transponder the driver must return the transponder to race control as soon as their race has concluded.

Personal transponders are acceptable and MUST be registered onto the timing system. This can be done by informing the Race Director when a driver registers for racing at the beginning of the race meeting.

5.4 Behaviour

Un-sportsman like behaviour will not be tolerated. This may take the form of deliberate barging and blocking of lapping cars to swearing and abusive language, a driver will be given one official warning before being asked by the Race Director to leave for the remainder of the Race Meeting, there will be no refund of race fees.

Bullying and other threatening behaviour is not acceptable in any form. Behaviour of this nature will attract sanction from the clubs committee; the penalty could take any form including a lifetime ban from racing.

5.5 Scrutineering

Scrutineering is a check of each racing car and is aimed at ensuring that all cars meet the technical specifications for the class in which they are raced. Scrutineers will provide

guidance to drivers, where appropriate. The Scrutineers decision to disqualify a car that does not meet specifications for its class is final.

All cars are to be placed in 'parc ferme' – a designated area - immediately following completion of each race to allow the Scrutineer (a Track Committee member) to check each car. On completion of checking, the car will be cleared for the driver to collect it immediately on completion of marshalling duty.

Scrutineering will be conducted on a Ad Hoc, or as requested, basis at club meetings. At major race meetings, such as the ACT Titles and Challenge Cup Cars will be checked randomly.

5.6 Dress - Footwear

All competitors must have closed shoes, no thongs, bare feet or sandals. This is to ensure their safety while attending the race meeting and during marshalling.

5.7 Reverse

Using Reverse is forbidden in racing conditions, driving in the opposing direction to the flow of traffic is also forbidden. It is dangerous to other race cars and to Marshals.

Any car contravening this rule will be removed from a race.

Once a driver is warned about using reverse, the Race Director may disqualify him from further racing.

5.8 Drivers' stands

Drivers may only operate their car on the Track while standing on the Drivers' stand. This enables the driver to clearly see the Track and to let others know who is driving cars.

Don't leave the drivers' stands during your race, even if your car breaks. Marshals will remove from the Track a car experiencing problems and turn off the car's electronics. The driver should then also turn off the transmitter.

5.9 "Frequency Board"

During free practice session, e.g. prior to racing, ALL drivers using the track must ensure that there is no interference between transmitters using the same frequency. A "frequency board" contains clips for each permitted frequency. Drivers should collect the correct frequency clip from the board, attach it to their transmitter and stand on the drivers' stand while using the track for practice. At the completion of their practice they should *immediately* return the frequency clip to the board.

5.10 "Car Operation"

During a race meeting, as directed by race control, RC cars can only be run within the confines of the track. Cars must not be operated within the pit area, table top testing is permitted.

5.11 "Disclaimer"

EXCLUSION OF LIABILITY, RELEASE AND ASSUMPTION OF RISK

MOTOR SPORT IS DANGEROUS (Even RC Racing)

In exchange for being able to attend or participate in the event, you agree to release Australian Capital Territory Model Car Racing Club ("ACTMCRC") and Association of Australian Radio Controlled Model Car Clubs, promoters, sponsor organisations, land owners and lessees, organisers of the event, their respective servants, officials, representatives and agents (collectively, the "Associated Entities") from all liability for your death, personal injury (including burns), psychological trauma, loss or damage (including property damage) ("harm") howsoever arising from your participation in or attendance at the event, except to the extent prohibited by law that ACTMCRC and the Associated Entities do not make any warranty, implied or express, that the event services will be provided with due care and skill or that any materials provided in connection with the services will be fit for the purpose for which they are supplied; and to attend or participate in the event at your own risk.

You acknowledge that:

- the risks associated with attending or participating in the event include the risk that you may suffer harm as a result of:
- radio controlled vehicles (or parts of them) colliding with other radio control vehicles, persons or property;

- □acts of violence and other harmful acts (whether intentional or inadvertent) committed by persons attending or participating in the event;
- and;
- □the failure or unsuitability of facilities • (including drivers-stands, grand stands, track barriers, pit areas, fences and guard rails) to ensure the safety of persons or property at the event.

Motor sport is dangerous and that accidents causing harm can and do happen and may happen to you. You accept the conditions of, and acknowledge the risks arising from, attending or participating in the event and being provided with the event services by ACTMCRC and the Associated Entities.

6 TECHNICAL SPECIFICATIONS

6.1 General 4WD Touring Car Chassis Specs

(M-Chassis excepted)

Touring Car Chassis must have independent suspension to all four wheels. Each driven wheel must have a flexible joint such as a dog-bone or universal joint in its drive shaft. Drive train and suspension design is free from restriction. No part of the chassis, including the wheels may protrude outside the body shell when viewed from above. No part of the motor, battery or electronic equipment (except receiver antenna) may protrude outside the body shell. Rollover masts may not be fitted.

6.2 Dimensions 4WD Touring Cars

Max Width (with body shell) Stock and Modified:	190mm*
Max Length (with body shell):	460mm
Max Height: (from bottom of tyre to highest part of the car)	195mm

Maximum width of 205mm will be tolerated at club meetings only.

6.3 Driver Aids

Mechanical traction control, including slipper clutches and fluid clutches (with the exception of the Off Road classes), active suspension and steering with the use of gyroscopes are **NOT** allowed. Sensors fitted to the car for the purpose of measuring suspension movement, wheel or tire slip are **NOT** allowed. Only two channels may be used in the receiver. Two speed gearboxes or transmission may **NOT** be used.

Traction additives must **NOT** be used on carpet tracks.

Tyre warmers are permitted.

Any other driving aids should be discussed with the Race Director **prior to racing** to ensure there is no confusion regarding their use at ACTMCRC races.

6.4 Batteries

6.4.1 Nickel Metal Hydride

Each battery pack to contain a maximum of six, 1.2 volt, sub C cells (refers to factory label) with a maximum capacity of 5000 milliamp hour.

6.4.2 Nickel Cadmium

Each battery pack to contain a maximum of six, 1.2 volt, sub C cells (refers to factory label) with a maximum capacity of 2400 milliamp hour.

6.4.3 Lithium Polymer

Must not exceed 7.4v – 5400mah. Minimum rating of 20C

ROAR, EFRA, BRCA and AARCMCC approved Lipo batteries only as per current listings.

Approved lists are located at:

http://www.efra.ws/news/download/2009_EFRA%20S%20LiPo%20List%20V4%20pdf.pdf

<http://www.roarracing.com/approvals/lipobattery.php>

<http://www.brca.org/BRCA/elecboard/news/2009%20BRCA%20S%20LiPo%20List%20.pdf>

<http://www.eptitles.com/nsw/ep/onroad/wp-content/uploads/aarcmmc/LiPo%20Batteries%20Jan09.pdf>

Batteries must be factory sealed in a hard case that can withstand impacts as per ROAR testing procedures. No soft cased LiPo's allowed (for car battery). No modifications are allowed to the case and/or the battery. Any physical distortion, denting, splitting of seams,

puncturing or damage to the hard case of the LiPo battery will deem the LiPo battery to be ineligible for use.

Whilst charging and/or discharging in the pit area, batteries must be contained in a LiPo sack or other device (fire mitigation device able to withstand and contain a destructive failure without showing a flame).

Electronic speed controls are to have either an inbuilt or an external cut-off electronic device installed that will not allow the battery to discharge below 6 volts (+/- 0.3v) minimum. It is up to the driver to prove that the cut-off is installed and active in the speed control.

LiPo capable chargers are only to be used. It is recommended that LiPo batteries are charged at a maximum charge rate of 1C.

Overcharging is not allowed (voltage higher than 8.4v).

Failure to follow the above safety precautions may result in immediate exclusion from the event.

6.5 Body Shells

All touring car classes must use a sedan or sports car shell. Group C (GTP/Le Mans) shells are not permitted. M Chassis must use body Shells designed for the M chassis.

6.6 Heat Sinks and cooling devices

Motor Heat sinks for all motor classes are to be made of a non-ferrous material. A cooling fan is permitted as long as it uses either the main battery or a receiver pack for power. No liquid cooling systems.

6.7 Motor Specifications

All motors must comply with IFMAR rules and be generally commercially available through Australian retail outlets.

6.7.1 540 Chrome

6.7.1.1 Brushed

Motor is either the Johnson 683 540 motor (grey end bell) or the Tamiya standard kit motor. No tampering with the motor allowed.

6.7.1.2 Brushless

There are no approved brushless motors for 540.

6.7.2 540 Pro

6.7.2.1 Brushed

Tamiya Sports Tuned 23 Turn single motors or HobbyPro H114 'Fan' motor. No tampering with the motor allowed.

6.7.2.2 Brushless

21.5 BL Motors as defined by the AARCMCC.

6.7.3 Stock

6.7.3.1 Brushed

Re-buildable motors only, 27 Turn single armature .05 can motors with the non-adjustable timing factory set at 24degrees. A factory 24-degree can and end bell must be used. The motor must remain brushed.

6.7.3.2 Brushless

17.5 BL Motors as defined by the AARCMCC.

6.7.4 13.5 Touring Cars

6.7.4.1 Brushed

Re-buildable motors only, 23 Turn single armature .05 can motors with the non-adjustable timing factory set at 24degrees. Tamiya Sports Tuned 23 Turn single motors and 'Fan' 540 motors. A factory 24-degree can and end bell must be used. The motor must remain brushed.

6.7.4.2 Brushless

13.5 BL Motors as defined by the AARCMCC (<http://www.aarcmcc.org/rules.html>).

6.7.5 SuperStock

6.7.5.1 Brushed

Re-buildable motors only, 19 Turn single armature .05 can motors with the non-adjustable timing factory set at 24degrees. A factory 24-degree can and end bell must be used.

6.7.5.2 Brushless

10.5 BL and 13.5 BL Motors as defined by the AARCMCC

(<http://www.aarcmmc.org/rules.html>).

6.7.6 Modified

6.7.6.1 Brushed

Any .05 can, with standard ferrite type magnets as defined by the AARCMCC.

6.7.6.2 Brushless

Motors as defined by the AARCMCC (<http://www.aarcmmc.org/rules.html>).

6.7.7 Mini Motors

6.7.7.1 Brushed

See sections 6.7.1 and 6.7.2.

6.7.7.2 Brushless

EZRUN-35A-SL Combo - 35A EZRUN ESC + 13T-3650S-3000KV motor + Program Card or

EZRUN-25A-SL Combo - 25A EZRUN ESC + 13T-3650S-3000KV motor + Program Card.

6.8 Technical Specifications

6.8.1 Novice

Description This class is intended for drivers who are new to racing

Car Type Any 4WD Touring Car

Motor Refer to section 6.7.1.

Min. Weight 1425g (4WD) including timing equipment

Driver Novice drivers might compete in the same races as 540 touring cars, in which case a separate Novice points score will be run.

A driver may be asked to change to a different class at the Race Director's discretion. A driver who has won a Novice driver's Championship is expected to move to another class in future.

6.8.2 540 Chrome

Description This class is aimed at providing a competitive environment for drivers who race on a budget.

Car Type Any 4WD Touring Car

Motor Refer to section 6.7.1.

Min. Weight 1425g (4WD) Including timing equipment

Modifications All modifications are permitted as long as the car remains within the scope of the rules

6.8.3 540 Pro

Description This class is aimed at drivers who race on a budget, who are looking for a more competitive environment and to race with Rubber tyres only.

Car Type Any 4WD Touring Car

Motor Refer to sections 6.7.1 and 6.7.2.1

Min. Weight 1425g (4WD) including timing equipment

6.8.4 Classic

Description This class is aimed at reproducing a form of accurate scale racing reflecting classic cars.

Car Type Any 4WD Touring Car

Motor Refer to sections 6.7.1 and 6.7.2

Min. Weight 1425g (4WD) including timing equipment

Wheels and Tyres HPI Vintage Series, part numbers: 3806, 3807, 3808, 3809, 3815, 3816, 3817, 3854, 3855, 3856, 3857, 4793, 102993, 4791, 3811, 3812, 3813, 3814, 3822, 3858, 3859, 3860, 3861, 4797, 102994 and 4792. Others may be used at the discretion of race control.

Body Shell Must be representative of Classic cars. Other body shells maybe permitted at the discretion of the race director.

6.8.5 Stock Touring Cars

Description Stock provides a highly competitive environment for drivers wishing to compete in a control motor class with an even level of power

Car Type Any 4WD Touring Car

Motor Refer to section 6.7.3.

Min. Weight 1425g (4WD) including timing equipment

6.8.6 13.5 Touring Cars

Description 13.5 Touring Cars provides a highly competitive environment for drivers wishing to compete in a control motor class with an even level of power

Car Type Any 4WD Touring Car

Motor Refer to Sections 6.7.3 and 6.7.4.

Min. Weight 1425g (4WD) including timing equipment

6.8.7 SuperStock

Description SuperStock Provides a highly competitive environment for drivers wishing to compete in modified class like environment.

Car Type Any 4WD Touring Car

Motor Refer to Sections 6.7.4 and 6.7.5.

Min. Weight 1425g (4WD) Including timing equipment

6.8.8 Modified Touring Cars

Description The ultimate in racing. This is the fastest class requiring high levels of driver experience

Car Type Any 4WD Touring Car

Motor Refer to sections 6.7.3, 6.7.4, 6.7.5 and 6.7.6.

Min. Weight 1425g – 6 cell

6.8.9 Tamiya M Chassis

Description This class is designed specifically for Tamiya's front wheel drive M- series of cars, e.g. mini

Car Type Tamiya M-01, M-02, M-03, M-04 and M-05

Motor Refer to section 6.7.7.

Min. Weight 1325g (2WD) including timing equipment

Modifications The largest pinion to be run is 20 tooth. Tamiya Hop ups permitted as per the Tamiya Radio Control Guide Book - ie parts must be used on the chassis it was designed for. No re-engineering or lightening of cars allowed. The use of GPM steering knuckles for M03 is allowed.

Wheels & Tyres Rubber Mini Wheels and Tyres only, no traction additive agents are to be used.

6.8.10 Off Road

Description Off Road Buggy or Stadium or Monster Truck, 2WD or 4WD.

Motor Any motor as described at rule 7.7 Motor Specifications –

Monster trucks may run up to two 540 or 550 sized motors. 1/8th EP Buggies are not permitted.

Min. Weight 1588g (4WD) 1455 (2WD) including timing equipment

Modifications No protruding or unfinished parts

Wheels & Tyres Off Road Tyres only.