## 2016 Reedy 1/12 Race of Champions Competitor Information Pack

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The Reedy Race of Champions is being held in thecentre:mk shopping centre, Milton Keynes, UK, MK9 3EP.

Milton Keynes is a city in the UK around 60 miles north of central London with good transport links by road via the M1, by rail via with regular trains to Birmingham New Street or London Euston or by air via London Luton or Birmingham International airports.





## Format & information

- The competition is split into three sections: LMP1, LMP2 & LMP3.
  - LMP1 is by invitation while LMP2 & LMP3 is by application.
  - The seeding for LMP2 and LMP3 will be undertaken based upon results from timed practice.
  - The first 30 will race in LMP2. The next 40 will race in LMP3.
- All racing will follow a heads-up Reedy format with results decided by competitors' best seven scores from ten rounds of racing.
- All races will be six minutes in length
- The control additive is Spider Grip Blue and will be supplied to competitors in a unique container at registration.
- The racing surface will be Black ETS carpet measuring approx. 32M x 16M
- Track markings will be square white tube with yellow apex markings.
- Race timing will use an AMB RC3 system
- The tech inspection service will begin on Friday during registration. Motors, bodies, and batteries will be sealed and/or marked prior to the start of the event. Additional equipment can also be checked during the course of the weekend.

## Timetable

## Friday

10.00			Pits open
12.00	-	14.00	Registration & tech inspection
14.00	-	17.00	Untimed practice
17.00	-	20.00	Timed practice & qualification

## Saturday

07.30			Pits open	
09.00	-	20.00	6 rounds of racing	

## Sunday

08.00			Pits open
09.30	-	17.00	4 rounds of racing
17.00	-	17.30	Prize giving

It is rare for a competitive RC car event to be shown in front of a live public audience. The last time the BRCA ran an event at this venue (a round of the BRCA 1/12 Nationals in 2014) there were crowds 3-4 deep surrounding the track for most of the weekend. This presents us with a unique opportunity to demonstrate and promote our hobby.

For many of you this will be the first time you've driven your RC car in front of anyone who isn't one of your friends or fellow racers. As a result, we kindly ask that you respect the following in order to help us in showing our hobby in the best possible light;

#### • Conduct yourself in a professional manner

Nobody wishes to see you vent your anger or frustration in public, least of all the event organisers. If we are witness to any such unsuitable behaviour you will be asked to leave. We expect you to race hard, but in a fair manner. Each race will be refereed for your benefit, but we expect a high level of driving etiquette to be observed without the need for referee intervention.

#### • Engage with the public

The pits will be fenced off but spectators will be able to see what you're doing at your pit table and will be close enough to speak to those on the edges and ask questions. If and when they do so, respond positively and enthusiastically.

#### • Prepare your car and equipment to the highest standard

Pay particular attention to body shells – we would like these to be neatly finished and in pristine condition, at least for the start of the event. If you're a regular visitor to the barriers then consider bringing several bodies – there really is nothing worse than a poor repair job!

#### • Dress suitably

Sponsor clothing is actively encouraged. The event will be professionally run, so we would like you to look professional as well please.

#### • Enjoy yourself!

A great deal of time, money and effort has been put in to organising this event. The best way to thank those involved is to make the most of what will be a unique and thrilling experience.

Name

Aretz, Ingo

**Open Class** 

#### Invitational Class

#### Name

Altmann, Tim Askell, Marcus Booth, Scott Catchpole, Adam Cyrul, Josh Ebukuro. Toto Farrell, Mick Hagberg, Alexander Hebert, keven Hillier, Chris Holmes. Daniel Jefferies, Olly Kerswell, Chris Laurent. Alex Levanen, Juho Mobers, Markus Murray, Andy Sieber, Daniel Spashett, David Stiles, Mark White, Matthew Yli, Vesa

#### Country

Germany United Kingdom United Kingdom United Kingdom United States United Kingdom United Kingdom Sweden Canada United States United Kingdom United Kingdom United Kingdom France Finland Germany United Kingdom Germany United Kingdom United Kingdom United Kingdom Finland

Ashton, Chris Baker Graham Baker, Hayley Baker, Matt Bancroft, Daniel Bandeira, Patrick Barford, Mark Bligh, Kellyann Burley, Luke Campion, Paul Cann, James Chwartacki, Boyd Clarke, John Cleaver, Simon Craig, Peter Cummings, Elliott Dearing, Gaz Diver, Neil Dyson, Gary Ellis. Lee Fiorini, Stephane Fisher, Craig Formosa, Vincent Freitag, Sascha Gale, David Galley, Eugene Giddins, Damian Giles. Russ Goodchild, Mark Hadley, Simon Hale, Nigel Hammond, Liam Hellmann, Oliver Herntrich, Matthias Hicklin, Andrew Hodgkinson, Giles House, Chris Hubber, Alan Kitagawa, Naoya Lau, Paul Wai Lax, Matt Lee, Darren Manders, Kieren Morley, Aaron Mueller, Torsten Newton, Darren Norris, Richard North, Andrew Palmer, Lee Parker, Louis Passingham, Mark Paton, Jamie Payne, Mark Payne, Ollie Rice, Gavin Rice, Matt Ripley, Aidan Rogers, Kenneth Rowley, Stephen Rubet, Simon Sedgwick, David Sieber, Uwe Stewart, James Streeter, Robin Wale, Keith Warren, Rob Wiffen, Ashley Wood, Tim Zottl, John

#### Country

Germany United Kingdom Germany United Kingdom Germany United Kingdom Germany Germany United Kingdom Germany United Kingdom France United Kingdom Germany United Kingdom United Kingdom United Kingdom United Kingdom United Kingdom United Kingdom United Kingdom

As the event is being held in a shopping centre the parking arrangements are a little more complicated than most venues.

We have negotiated a special rate for competitor parking in the NCP carpark immediately outside the John Lewis department store. To take advantage of this, please follow the steps below:

- before the event please printout the parking permit in this pack;
- park in one of the spaces marked on the map below;
- purchase 2 hours pay and display parking at a cost of £4;
- display the ticket on the dashboard along with the parking permit on page 10 of this pack;

This will then cover a full days event parking.





## **Construction Rules**

- 1.1 The essence of the sport of radio-controlled car racing is competition between realistic models of racing automobiles. All cars must comply with dimensional requirements stated in these Rules.
- 1.2 Minimum weight is 730 grams.
- 1.3 Wheel rim diameter maximum is 38mm and minimum of 30mm.
- 1.4 The tyres must be black except for side wall detail.
- 1.5 Only the control additive may be applied to tyres, for this event the control additive is Spider Grip Blue. This will be supplied to competitors in a clear container during the registration process.
- 1.6 Tyres must have a minimum width of 13mm and a maximum width of 40mm.
- 1.7 Wheel nuts and/or axles must not protrude more than 1.5mm beyond wheels. No more than 1.5mm of wheel outer side may be exposed (not covered with rubber) on the outer edge of wheels
- 1.8 Bumpers may be fitted but must be designed to minimise injury that could result from being hit by a car, also to reduce the risk of damage to other cars. Rigid bumpers made from non-resilient materials such as metal are not allowed. Other sheet materials should have an edge radius not less than 1.5mm.
- 1.9 Only one wing is allowed on the car, maximum dimensions to be, width 172mm, chord 51mm, unless the original had more than one wing. The second wing must be to scale within 10% in size and location
- 1.10 Overall maximum width of the rolling chassis to be 172mm.
- 1.11 All cars must have transparent windscreens, unless the actual car did not have transparent windscreens.
- 1.12 Side and/or rear windows, if any, must be clear or open.
- 1.13 A driver figure, if fitted, must be painted in realistic colour and garb.
- 1.14 All cars to have clearly visible identifying numbers to the Race Directors satisfaction.
- 1.15 Numbers must be at least 25mm high with minimum stroke of 4mm. They must be black numerals on a white background.
- 1.16 No portion of the chassis, wheels and tyres or any equipment may extend beyond the body, except rollover masts and four posts for the purpose of mounting the bodyshell
- 1.17 Roll-over masts/antennas must be fitted, and must have a safe blunt end. The minimum height of the rollover mast is 150 mm from the track surface. Rollover masts/antenna will be made from fibre-glass or carbon-fibre only, with a minimum outside diameter of 2.9 mm and a maximum outside diameter of 3.4 mm.
- 1.18 Openings in the body or cockpit floor other than ones appropriate to full size cars shall be kept to a minimum.
- 1.19 Wheel cut-outs may not be more than 10mm larger than the tyre radius. Exception- scale size and/or shape wheel well cut-outs. Wheel wells must be cut out if the original cars are cut out.
- 1.20 When initially entered in a meeting the body shell must be neatly finished and complete.
- 1.21 Body and chassis must be securely joined at all times while the car is on the track.
- 1.22 Only one drive motor is allowed per car.
- 1.23 Body shells must meet the requirements shown in Appendix 1 to these Rules
- Body shells must be approved by the Committee, a list of approved shell will be maintained on the BRCA website.
- 1.24 The recommended minimum ground clearance of the car, not including the spur gear, is 3mm; this will be checked after each qualifying heat and final race.
- 1.25 Only Personal Transponders will be used to record laps. The section will have Personal Transponders available for competitors to purchase.

#### 2 Definition of a Spec motor

- 2.1 Motors allowed Spec, or Stock, class. Any motors listed in any of the Electric Board "Brushless Spec Motor" lists as updated from time to time.
- 2.2 Motors must conform to the relevant technical specifications detailed in the Electric Board Rules.

#### 3 Definition of a Modified Motor

- 3.1 Motors allowed Open modified. Any motor listed in any of the Electric Board brushless motor lists as updated from time to time.
- 3.2 Motors must conform to the relevant technical specifications detailed in the Electric Board Rules.

#### 4 Definition of a Zero-timing Speed Controller

4.1 Speed controllers may not be equipped with any form of automatic or programmable timing advance. If this feature is available on the particular speed controller it must be disabled and placed in an approved mode - i.e. the "ROAR blinking LEDs mode." Brushless Speed Controllers built without automatic or programmable timing advance will be allowed. The BRCA 12th Committee will provide a list of eligible speed controllers. Details of the requirement for the approved mode are contained in Appendix 2 – Zero-Timing Brushless Speed Controllers – and this requirement must be met for a speed controller to be eligible for racing in relevant 12th Classes (see Procedural Rule 1)

#### 5 Batteries Allowed

- 5.1 Any cells conforming to the current Electric Board battery list.
- 5.2 Cars will be powered by cell/s with a maximum nominal voltage of 3.7v

#### The following Appendices are part of the Rules above

The following is the specification for approval of 1/12 Prototype Sports car body shells. They should be used by the Section to enable clear and consistent application of standards for future approvals,

- 1. Lower body cut line is to be used as the reference plane for all height dimensions.
- 2. Minimum cockpit height Closed cockpit 55mm (Excluding any air scoops / air boxes)
- 3. Minimum cockpit width Closed cockpit 70mm (Measured at the point it intersects with the side pod)
- 4. Minimum cockpit width 55mm (measured at the lower window line)
- 5. Minimum Roll bar height Open cockpit 55mm
- 6. Maximum distance from Drivers helmet to top of roll bar Open cockpit -11mm
- 7. Minimum cockpit width Open cockpit 65mm (Measured at the point it intersects with the side pod)
- 8. Minimum front wheel arch height 46mm (Including vents) (measured at a point 15mm from edge of body)
- 9. Minimum rear wheel arch height 50mm (measured at a point 10mm from edge of body)
- 10. Maximum overall width 176mm
- 11. Minimum overall width 168mm
- 12. Max wing / spoiler height 65mm
- 13. Max front overhang (From centre of front wheel)- 70mm
- 14. Max rear overhang (from centre of rear wheel) 70mm
- 15. Max length overall 340mm
- 16. Minimum side pod height 30mm
- 17. The side dam must blend fully (disappear) into the main body shape within 110mm of the rear edge of the body/side dam.
- 18. Max side dam height 72mm
- 19. The body side forward of the side dam must have a radiused edge, no lips or upward extensions are acceptable
- 20. Bodies must be a representation of a full size LMES / ALMS / LMP / WSC prototype.
- 21. Open cockpit cars to have twin roll bars as current LMES / ALMS
- 22. Open cockpit cars must have a representative driver's helmet and cockpit opening
- 23. The name of the prototype must be used for the homologation process.
- 24. The name of the prototype does not have to be used for general sales and marketing.
- 25. Only fins or strakes that are present on the full size prototype will be allowed.
- 26. The body must not be cut above the lower cut line
- 27. Cut-outs in the shell will be allowed only if clearly defined on the full size prototype
- 28. Once Homologated there must be no changes to the design, trim lines, detail lines or any feature of the body. All changes will require resubmission for approval and an additional revision letter added to the part number- Example 15001A Original 15001B for a 2nd Rev. Etc. The manufacturer's part number must be clearly marked on the shell alongside the windscreen area.





Body Specifications 1/12<sup>th</sup> Scale On Road

#### Appendix 2 - 'Zero timing' brushless speed controllers - (Construction) Rule 4

#### 'Zero timing' brushless speed controllers

A speed controller that has a 'zero timing profile', that does not alter the fixed position pre-set mechanical timing of the motor in any way and disables any advanced motor control; functions (ie. Boost, Cheat mode, Turbo etc.). This profile is known as 'Boost 0'.

The commutation sequence is limited to "6-step" type and commutation of the Speed control must follow the motors hall sensor signals 1:1. Therefore no change of timing (either advance or retard) is allowed at any RPM. When the "Boost 0" profile is activated, it will be identified by a blinking LED or LEDs while the ESC is armed and in neutral position.

The BRCA 1/12 Electric Circuit Section reserves the right to retain a speed controller and motor after the conclusion of a meeting to measure its performance against the above criteria in a controlled environment. The equipment, or identical new replacements, will be returned to the competitor within five working days. Sanctions may be taken against a competitor and/or manufacturer if a controller is found to be non-compliant.

## Approved Zero-Timing/Blinky ESCs (LMP2 & LMP3)

http://www.brca.org/34-brca-approved-blinky-esc-s-v6-3-2015-16-pdf/

## **Approved Bodies**

http://www.brca.org/35-brca-approved-bodyshells-v2-4-2015-pdf/

## Approved 10.5 Motors (LMP2 & LMP3)

http://www.brca.org/101-eb-05-brushless-motors-10-5t-spec-2015-v8/

## **Approved Modified Motors (LMP1)**

http://www.brca.org/73-eb-05-brushless-motors-modified-2015-v5/

## **Approved 1S Batteries**

http://www.brca.org/59-2015-brca-1s-stick-lipo-list-11-15-v2/

The homologation lists for motors, ESCs, and bodies are updated on a rolling basis; usually on the first Monday of the month. The lists may be updated with new additions prior to the event.



We would like to place on record our thanks to the following organisations for their support in making this event possible.













NTROLCAR







# **Competitor Parking Permit**



(fold along dotted line)

Please park in spaces indicated on map in information pack. Purchase 2 hours pay & display parking and display ticket on dashboard together with this parking permit. This will allow you a full days event parking.