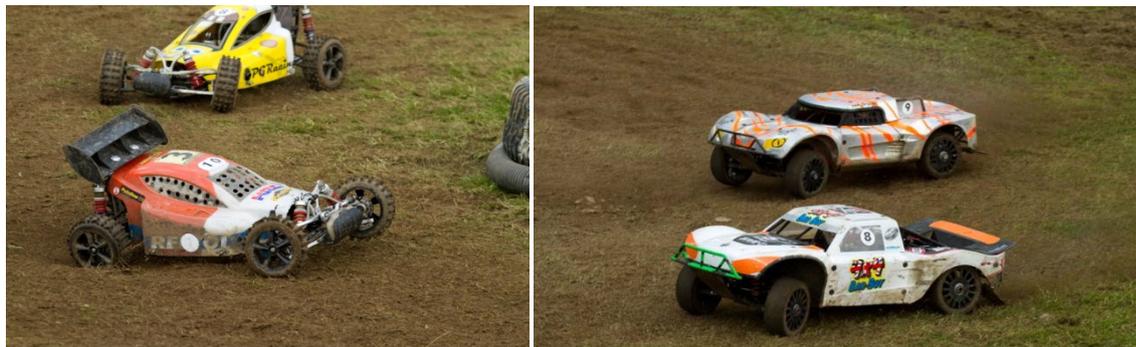


BRCA Large scale off-road



Our vision statement

To provide as uniform as possible a format for large scale off road RC cars, to be able to compete with one another on an open National basis. The intention is to encompass all driver abilities and commercially available large scale off road vehicles, yet still encourage invention and innovation by allowing “one off” home constructed cars and modification of kit products.

What do we have

For 2015 there will be a buggy class and a short course trucks (SC) class which have their own national and junior championships. The buggy class has two national championships, 2 wheel drive & 4 wheel drive for vehicles which conform to their respective technical specifications and have separate heats and finals. We also have the **open class** which welcomes any vehicle which does not conform to the buggy or short course (SC) technical specifications but complies with the BRCA model vehicle scope of not exceeding 1 meter in length, 20kg in weight or a maximum of 30cc engine capacity in its own championship. The open class does not have a national or junior championship. All race classes shall be respectful of the generic BRCA LSOR construction rules and in particular the 2 and 4 wheel drive buggy class technical specifications for the buggy class, and the short course truck technical specification. Drivers are classified as either a National or Clubman driver, and those under 16 at the start of the race season are deemed juniors too competing for their respective titles.

Our championships

Within all three classes raced there will be a national and a clubman championship. The latter excludes those drivers who have regularly achieve an A final from the 2011 to 2014 race seasons and achieved a nominal score per round set by the LSOR committee annually. The national and clubman champion titles will be awarded based upon 5 point scoring rounds from a 8 round series with us travelling across the UK between March and October.

How much does it cost ?

Our race fees for 2015 are £15.00 per Adult entry, £5 per Junior entry and those wishing to enter a second vehicle then its £10.00 for adults and £2.50 for juniors.

How do I do it ?

Prior to the meetings drivers are to pre-register via the sections on-line booking system through the LSOR section area on the BRCA main website at www.brca.org or via the booking option at www.brca-lsor.org or as indicated on our facebook page. For those without computer access



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then please pre-register by texting the sections race director. All pre-registrations are to be done by 5pm the Wednesday preceding the meeting. On the day registration will be allowed but entry can not be guaranteed and will incur a **fee** of **£5** to the advertised race fee..

At the meeting booking in confirmation and payment will commence around 2pm for a couple of hours during the Saturday practice or noon if a round of qualification is required on the Saturday to enable all those present to confirm their meeting attendance. Anyone in attendance on the Saturday who confirms their entry with payment on Sunday when booking is open will incur an additional **fee** of **£5** to the advertised race fee.

Race day timetable

Booking in will be open between 08:00-08:30 for those who can only make the Sunday. This will be followed by a driver's briefing, with racing commencing as soon as possible with the aim for the first heat commencing around 9.15 with the aim of completing the last final around 6pm. Where feasible open practice will be available for those who arrived on the Sunday ahead of the first heat but this can not be guaranteed.

Qualification

Final positions will be based upon the drivers' best two scores from the round position points scoring system. Points scored per round are based upon the laps completed and time achieved. For all rounds the maximum number of points given to the fastest driver (most laps in the shortest time) will be 200. The second fastest will score 198, third fastest 197 and thereafter a point less per position in the round table. After the three rounds the driver with the highest 2 round points position is first overall and those scoring less will be ranked on their points below the first place driver. The driver's highest total can come from any combination of 2 from the 3 rounds.

Scrutineering

Will be performed throughout the meeting and will be on a random basis, with a size box, being provided to allow drivers to check their vehicle dimensions. Any driver or marshal can ask for a particular car to be checked, if there are grounds for suspecting its conformity to the rules.

Heats & Finals

The repair time between each round of heats will be at the Race Director's discretion, taking into account such factors as heat numbers, time of year, numbers of drivers, etc. Rolling starts will be employed for the heats. Staggered start positions will be employed for the finals, with a nominal 6 meter gap between cars. The finals will be either double sided with 5 drivers from each semi qualifying or single sided bump up format at the Race Director's discretion, drivers will be notified of race format at the drivers briefing. If double sided semi's are run then the main final will be gridded as follows:-

Semi-Final Finishing Position	A-Final Position
Fastest 1 st Place	1 st Place
Fastest 2 nd Place	3 rd Place
Fastest 3 rd Place	5 th Place
Fastest 4 th Place	7 th Place
Fastest 5 th Place	9 th Place

Class Specifications

	2 WD Buggy	4 WD Buggy	Short Course
Engine CC	26cc (1.5866 Cubic Inch)	30cc (1.8307 Cubic Inch)	Same as 4 WD
Fuel Tank Limit	700cc +5% discretion	800cc +5% discretion	1Ltr Max as supplied
Length*	820mm	900mm	1000mm
Width *	480mm	550mm	600mm
Height*	360mm		400mm
Weight	>8Kg	>8Kg	>8Kg
Wing Size, no greater than	300mm by 140mm	315mm by 140mm	
Overhang"	150mm	230mm	

Notes

* Maximum dimensions are measured with the chassis pushed fully on the ground and the length is measured from the front bumper to the rear wing.

"Overhang is measured from the middle of the rear drive shafts to the edge of the rear wing

Engine rules

The engine must be air cooled single cylinder 2 or 4 stroke piston engine. Only fuel that is available from any UK petrol station may be used, no Avgas or specialist racing fuels allowed. The only additive allowed is 2stroke oil. The following are not allowed: performance enhancing gases such as Nitrous Oxide, Fuel Injection, Boost bottles, Turbo or Super Chargers, Electronic Ignition systems which run off separate battery packs. Engines may be modified internally. Heat sink heads may be used together with long reach plugs. Alternative ignition systems may be used providing they are not battery fed. All engines must be fitted with either a suppresser type plug or suppressed plug cap.

Exhaust Systems

Any exhaust fitted shall comply with noise guidelines laid down by the host club or BRCA\MSA guidelines which ever is the lower. In practical terms no driver will be allowed to run with a car making enough noise so as to cause problems for the club on whose circuit the event is being run. Either kit standard exhausts (Zenoah can style) or 3 chamber exhaust systems are usually sufficient. Open exhausts or pipes are not allowed. The scrutineer will check for excessive noise and appropriate action will be taken, during the 2015 nationals the section will be utilising an automatic recording system to record the noise levels as each vehicle passes a dedicated point on the circuit. It must be understood by all drivers that any failure of the exhaust system whilst out on the circuit will require the car being removed immediately from the circuit



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until the fault is repaired, any driver who does not pull over/off will be penalised accordingly by the loss of their fastest lap in qualification or a 5 lap penalty in their final. In technical terms the maximum permitted sound level is 81 dB, measured at 1 metre above the track and no less than 10 metres from the car.

Construction

Bumpers are to be made from a flexible material and are optional at the rear but are mandatory to the front of your vehicle. The front bumper shall have a minimum width of 100mm and a maximum width of 220mm. The manufacturers Kill Switch must be made easy to both access and operate, access provided if necessary, by cutting a hole in the bodywork. A standard cut-out switch marker (available from the scrutineer if needed) to be affixed to the body shell within 1 inch of the location of the switch. All cars will be tested to see if their kill switch works on the start line & if not the car will not be allowed to run in that heat or final. The exhaust system to be mounted such that the manifold does not protrude further forward than the front window post and the system must run as close to the body as possible. Stingers must not be mounted transversely (across) the underside of the rear wing. Forward routed exhaust systems must not protrude from any forward facing part of the body shell. Cars with uncovered exhausts must have shields in place covering the exposed hot areas. Un-silenced or “open” exhausts will not be allowed regardless of location. Also all fuel tanks fitted to vehicles must be *fit for purpose*, commercially available and safe for the desired use. It will be the drivers responsibility to ensure that their tank aligns to the capacity of the class they race in, any displacement material used should be safe and suitable for the purpose. Anyone using LIFE/LIPO type batteries are to charge them in accordance with manufacturers instructions and within a suitable charging sack, it is also recommended that batteries used are of the hard case type.

There are to be no exposed carbon fibre body, wings, or any GRP (glass reinforced plastics) these materials may only be used under the body shell, or in the construction of shock towers or chassis. Wings or bumpers must not be made from metal. Tyre additives are allowed but must not be added in the pit lane area. Scrutineering will be on a random basis, with a size box, being provided to allow drivers to check their vehicle dimensions. Any driver or marshal can ask for a particular car to be checked, if there are grounds for suspecting it's conformity to the rules.

Transponders

All BRCA events are timed using a MYLAPS RC4 decoder and as such all drivers are to ensure their personal transponder works with the timing device. The Race Director is not responsible for any missed laps during the meeting. They will inform any driver of any transponder issues at the earliest opportunity during the meeting. From 2015 the section will no longer have available handout transponders, any new racer will be offered the loan of an Harry transponder for their first meeting. Transponders must be fitted in such a way as to keep them as free from damage as possible, preferably inside the car as close to the ground as possible, as horizontal as possible, and away from any potential heat source. It is also recommended that they are not mounted directly above alloy or carbon fibre surfaces.

Radio Systems

All radio frequencies must be either 40 or 27 MHz, Am or Fm, or 2.4 GHz. If a driver books in on 2.4 GHz and has a problem then it is on the onus of the driver to arrange with Race Control



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to change to a 40 or 27 Mhz. crystal. Under these circumstances a driver cannot request a delay in order to change crystal. The driver must ensure that they have sufficient crystals so as not to clash with any other driver placed either above or below them.

Drivers on 40 and 27 MHz

All drivers will be required to have available no less than 2 and preferably 3 frequencies (per car) and to be prepared to change to the frequency stipulated by the computer. i.e. drivers entering two cars will need a minimum of 4 frequencies available. Frequency changes can be requested on the day, (to cure interference etc), but the heats will not be regenerated and the onus will be on the individual to consult with the Race Director about the change, to avoid a frequency clash. Note drivers should note that the computer, in generating the heats, tries to avoid the same two crystals being used in adjacent heats which are obviously beneficial. No changes to be made without the consent of the Race Director.

Telemetry

The use of electronic parts for "Traction Control & Breaking Control (ABS)" which can control the power of the transmission by means of a feedback system. Active telemetry transmission is prohibited. Sensors are only allowed for the purpose of passive data recording and not for adjusting the performance of the car whilst in motion. The reading of the data must be done with equipment, inside or mounted on the driver's radio. No external devices (i.e. in the pit/handheld by the mechanics) are allowed. The systems are not allowed to log the data.

Marshalling

The Scrutineer will not carry out any marshalling duties. **No one under 16 years of age is allowed to marshal. Marshals must wear high visibility reflective vests or jackets, these are to be worn not only when marshalling but also when you are on the rostrum driving. Marshals to be advised to wear stout shoes or boots and wear heavy duty gloves, safety glasses, and their own high visibility reflective vest/jacket . If a car's engine has stopped, the car must be taken off the track, the marshal is allowed 3 pulls in attempting to restart the engine and that is all. If the car does not start, he must return to marshalling immediately, no other fixes or repairs are allowed to be performed.** Whilst marshalling drivers are reminded that there should be no smoking, drinking, use of mobile phones or cameras trackside.

Track Side Repairs

No vehicle should be worked on track side after the attempted three pulls trying to restart them. If the vehicle does not restart, it is the driver's responsibility to recover their vehicle and in doing so they must not take their radio transmitter onto the track, it must be left within the Parc fermé/rostrum area whilst recovering their vehicle and brought back to the pit table for repair. If your vehicle has been taken out of the track area for repair during your heat then it should be returned to your designated Parc fermé slot to ensure no unfair advantage is gained from additional pit time during your designated marshalling period. Any vehicle returning to the track should do so from the pit lane and exiting such device in the track direction of the meeting. Any one not adhering to this rule will be penalised by the Race Director.

Parc fermé & Marshalling

Upon finishing each heat, each driver is to place their vehicle in the dedicated Parc fermé vehicle slot (car 1 in slot 1 car 10 in slot 10) after returning any handout transponder to the rack and the previous vehicle has left the slot. If your vehicle has been taken out of the track area for repair during your heat then it should be returned to your designated Parc fermé slot to ensure no unfair advantage is gained from additional pit time whilst you are marshalling. Upon placing the vehicle in the slot the driver or nominee should go out to Marshal straight away and marshal their respective heat (vehicle remains in Parc fermé even with a nominee marshalling). Upon receiving notice from the race director that the heat is over the marshal should collect their vehicle from Parc fermé and leave the track area once they have been relieved of their marshalling duties by the next rounds marshal. Any driver who does not adhere to this procedure will be penalised with the loss of their FTD as during the heat the BRCA LSOR Race Director will review the vehicles in the Parc fermé area.

After the running of the Semi B final if double sided files are used the top five vehicles are to be placed in Parc fermé for the duration of the Semi A final (those taken to the pits for work prior to the end of the semi are to be returned to the Parc fermé area) to ensure all main finalists have the same amount of time to prepare for the main final. Any driver caught working on their car will incur a 30 second penalty in the main final.

The Marshal at Point 1 will be responsible for removing the transponders from the cars and returning them to Race Control.

A head of each class "A" final all vehicles (filled with fuel) and drivers should go to scrutineering and a BRCA official will confirm that the drivers vehicle conforms to the class fuel limit requirements.

Rostrum Ref

A driver's ref will be placed on the rostrum where feasible. Marshal post 8 will be declared the rostrum ref's position. This ref has the same powers as the Race Director to call a driver in, warn them of their driving and ethical behaviour.

Refuelling

No refuelling is permitted during qualification heats or finals including warm-up time. Anyone refuelling on the track will be disqualified. Drivers are advised to have a small dry powder fire extinguisher to hand in their pits.

Delays

The cut-off point for calling a delay will be under starter's orders? Delays will not be allowed for heats and minor finals. In unforeseen circumstances, a driver may call a 10-minute delay. This driver will start from the pit lane after the last car on the track passes the pit lane exit (if an incident occurs that delays the last car passing the pit lane then the car(s) in the pit lane will be released at the Race Director's discretion ensuring no advantaged is gained from starting the race from the pit lane). Only one delay per final will be allowed, no refuelling or tyre changing will be permitted. Anyone can work on their car after someone calls a delay, but cars that have been worked on must start from the pit lane. Any vehicle starting from the pit lane will result in



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an associated gap appearing on the grid. Any delay granted will be at the Race Director's discretion.

Driving Standards & Penalties

Penalties for driving infringements will be awarded by the race director as follows

First Warning:	No penalty
Second Warning:	Stop and go penalty
Third Warning:	Ten second stop and go
Jump Start in final:	Car to start from the back of the grid if race is restarted.

All penalties to be taken in the heat/race when offences occur and all stop and go penalties to be taken in an area designated by the Race Director.

Failure to line up properly or stay stationary on the grid will incur a 10 second penalty. Drivers with this penalty must not complete the lap but must drive into the pit lane (or designated area) and wait for the allotted time until released by an official. If a driver puts in an extra lap after being called to the line he/she will be made to start from the back of the grid. Excessive use of bad language on the rostrum or in race control will incur a warning. If this warning is not heeded a one lap penalty will be awarded. Driving or otherwise behaving in a manner likely to cause injury to other drivers or spectators may result in disqualification from meeting. If a driver is being lapped he/she must not intentionally block the overtaking car, neither must the overtaking driver use heavy tactics to enable him/her to pass the slower driver. Drivers missing parts of the track out during the warm-up in order to spread themselves out for a good qualifying run will receive a 10 second penalty if they hit a car that is circulating normally around the track being used for that meeting.

Failure to Marshal, or appoint a deputy to marshal for you, will incur loss of FTD.

Point awards

Points will be awarded as follows:- the winning\highest driver per championship will receive 100 points, second place 99, third 98 and so on. The section uses the non scoring rounds count back rule for tied positions within its championships.

Drivers failing to complete a lap in their final will be awarded last place in that final. If this applies to more than one driver then qualifying positions will be used to determine the order, i.e. the higher qualifier will be placed before the lower.

General

There will be a 4-minute break between heats, so drivers will need to be in the start area, with transponders fitted before the previous heat finishes. When feasible a 15-minute break will occur before the main final. Heats, finals and durations will be at the Race Director's discretion, please make sure you are at the drivers briefing. In the event of a 'rain off' situation, there will be a driver's vote to decide on one of the following courses of action: Cancellation of the meeting, re-running of the meeting, or to close the meeting and award the points as per the last end of round overall qualification positions.

Anyone attending LSOR events wishing to fly any kind of aircraft must be a member of the BMFA, hold the required flying licence and is prohibited at all times the track is open and a



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meeting is underway. Where venues allow and you are suitably qualified to fly you may do so away from the track, pitting and attendees camping area.

Anyone attending a national meeting **MUST** wear hi viz jackets when they are within the track area (within the fenced off area), on the rostrum, and includes collecting and placing your car in the pit lane. Any mechanics or anybody marshalling on a racers behalf will also need to be wearing a hi viz top. For the 2015 season the section will no longer be providing the tops and any driver who turns up without there hi-viz will be excluded from the meeting.

National Venues

Clubs are reminded that the ideal track specification is a 4m width with an ideal gap of 1m between the safety fence and outer track edge where possible. Vulnerable marshal points are to have 3 sided protection (infield positions) for added safety. Due to the inclement weather all national venues must have provision for a temporary covered rostrum for their meeting. The section also recommends that during the clubs open practice session that drivers on the rostrum are limited to no more than the venues marshal points. Clubs need to provide toilets, a wired PA speaker system (the section will bring its own amp and mic), if possible, provision for a water proof Parc fermé and scrutinising area along with a suitable monitor and cable set up to display the race results outside of race control once connected to the VGA output on the race directors PC. To help with the drivers experience of attending a national venue it is recommend that the host club provides a track map which can be used to identify the marshal points in use and their number, to help keep the venue tidy and ease of post event tidying up it is recommend that the venue makes use of hiring a skip for the duration of the meeting. Where evening entertainment has been provided for the driver's enjoyment it is anticipated that by midnight it will have died out and any generators will also be turned off too. All racers are reminded that the section rents the host club from 18:00hrs prior to the Sunday meeting and as such the general conduct of entrants must be inline with the BRCA handbook. Likewise in line with the associations constitution if the committee feel a driver is under the influence on race day they will be asked to prove their legibility to race by under going a breath test of which a positive outcome will exclude them from the days racing and recommend that they do not drive straight home. The section wishes to remind all host clubs that it recommends opening your venue from Saturday, opening before is at the clubs own digression. Clubs must not hold club days on National race dates or the AGM date.

Protests at a race meeting

All protests must be made in writing to the Race Director, together with a £10.00 deposit. If the protest is upheld, this money will be reimbursed. The protest period of fifteen minutes shall commence when the results are published on the results board. Protests regarding the legality of cars must be made in writing, together with the fee, to the Race Director.

Post Meeting Protests

All protests must be made in writing and received by the section chairman within 48 hours of the effected national sanctioned meeting, together with a £20.00 deposit. Within 30 calendar days of the effected national sanctioned meeting any protest will be investigated and closed out by the section committee. If the protest is upheld, this money will be reimbursed.



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Notwithstanding the above regulations, the committee reserves the right that, at a race meeting, should a situation arise, requiring a decision, which is not met by the existing rulebook, the committee members, present at the meeting, shall be able to make a decision or interpret on existing rules to make a decision and that such decision shall stand.

AGM Proposals

All AGM proposals (rule changes, committee member nominations and track submissions) are to be submitted to the Large Scale Off-Road section secretary at lsorsec@brca.org by the penultimate national meeting. These proposals will then be available to the Large Scale Off-Road members by the time of the last national meeting. Any proposals not received by this time can only be discussed at the AGM under "Any Other Business" and may then be subject to a time limit rule at the chairman's discretion. At the AGM, no proposals can be accepted with the proviso that the person who proposed them is kept anonymous at the meeting.