

## **15.0 1:8<sup>th</sup> IC Off Road Rules**

### **AIM**

To provide a uniform format for 1/8th scale off-road racing cars to compete with one another on an open National basis. The intention is to encompass all commercially available 1/8th scale cars, yet still encourage invention and innovation with the aim of developing the hobby by allowing one-off home constructed cars, and modifications of kit products.

### **15.0. TECHNICAL SPECIFICATION**

#### **15.1 Dimensions**

15.1.1 Overall length 730mm maximum.

15.1.2 Overall width 310mm maximum.

15.1.3 Wheelbase 270-330mm.

15.1.4 Minimum overall weight 4WD - 3.2 kilos. (The overall weight includes personal transponder and receiver pack, but not fuel).

15.1.5 Overall height measured from the ground including roll bar at full suspension compression 250mm maximum. [This measurement does not include the receiver aerial.]

15.1.6 The car shall be measured for width by placing it on a baseboard equipped with two side rails of 20mm height spaced 310mm apart constructed in such a way that the car can roll freely between them. Baseboard and rails must be constructed of high quality board suitably stiffened to prevent distortion. The car must roll freely between the side rails with any steerable wheels set in the straight ahead position irrespective of the compression, extension or roll angle of the suspension.

15.1.7 The car shall be measured for length and height in a similarly constructed box of internal dimensions 730 x 310mm, which includes provision for checking maximum height.

15.1.8 The measurement of the wheel base may be made by simple measurement of axle centre distances with the suspension in any position. Race Directors should be prepared to make more exact checks in case of doubt or protest. It is suggested that the wheels are removed and the spindles placed on blocks whilst accurate measurements are made.

15.1.9 It is the responsibility of the driver to ensure that his car complies with the regulations at all times that it is on the track. Race Organisers may check any car for compliance with the regulations at any time during a race meeting.

15.1.10 At the end of each qualification heat, all cars (together with fuel bottle) are to be taken to scrutineering immediately. This applies to all cars that have participated at any time during the race. Cars need to be taken before the one minute to start signal for the next heat or in the case of the final heat of qualifying and for any finals, this needs to be one minute from being requested by the Race Organiser/Committee Official. See Rule 15. Cars should be available for collection at the end of the following race.

15.1.11 If a car is found to exceed the dimension limits on checking immediately after a race, positive proof of race damage may prevent penalty.

#### **15.2 Engines**

15.2.1 Only internal combustion engines with a maximum capacity of 3.5 cubic centimetres are allowed.

15.2.2 A fuel tank capacity of 125cc maximum including all piping tubes and filter up to the carburetor is allowed.

15.2.3 Exhaust noise levels should not exceed those set out by EFRA.

15.2.4 All silencers are to point downwards, i.e. anywhere below the horizontal and must meet EFRA approved regulations and appear on the most up to date EFRA homologation list plus the previous years list (available on request).

15.2.5 Factory fitted pullstart engines to a maximum capacity of 4.6cc will be allowed.

#### **15.3 Tyres**

15.3.1 All tyres must be black, with the exception of side wall lettering.

15.3.2 Tyres must be commercially available.

15.3.3 It is not permitted to reduce the diameter or width of a tyre by cutting material out. Trimming of spikes is allowed.

#### **15.4 Wings**

15.4.1 A wing of maximum overall size 217mm length x 77mm width may be fitted.

### **3. APPEARANCE**

- 3.1 Cars shall be a reasonable representation of the style of car used for off-road, desert or trial racing.
- 3.2 Full bodysHELLs of saloon style are permitted, but they may only be trimmed to expose 50% of the tyres at full suspension depression.
- 3.3 Openings may be cut in the shell to allow access to fuel filler, switch and engine adjustments. Clearance around such items shall be kept to a minimum.
- 3.4 BodysHELLs as described in 3.2 need not conform to scale but should conform to the provisions of EFRA rules. Acceptance of a saloon bodysHELL by another EFRA section shall be deemed to imply approval by the Rallycross Section for racing purposes.

### **4. RADIO CONTROL EQUIPMENT**

- 4.1 It is the responsibility of all drivers to ensure that their equipment does not cause interference to others, and that their receiver is not faulty.
- 4.2 Only approved frequencies are to be used. Any driver using a 2.4 GHz system cannot call for a frequency check at any time.
- 4.3 On the day of the meeting, drivers must be able to provide three crystal choices.
- 4.4 Flags shall not be used on aERIALs during races.
- 4.5 Under no circumstances shall a transmitter be taken on to the track.
- 4.6 All frequency changes must be approved by Race Control.
- 4.7 It is not permitted to add any additional batteries to a transmitter either internally or externally to raise the designed supply voltage above the original manufacturer's design specification, i.e. a six cell transmitter may not be fitted with more than 6 cells, either nicad or dry cell, also any 8 cell transmitter may not be fitted with more than 8 cells, etc. No additional aERIAL or extension should be added to the driver's radio equipment.
- 4.8 No other function than steering and throttle/brake are allowed to be operated by the transmitter. No electronic device can operate within the car other than the two channels back to the transmitter, a fail safe, a switch and a personal transponder.

### **5. OFFICIALS**

- The meeting organiser will appoint the following officials familiar with all aspects of the Association Rules:
- 5.1 A Race Director who controls all racing and is responsible for the smooth running of the meeting. Specifically the Race Director controls (and appointed assistants as is required), the maintenance of the circuit, safety, marshal positioning, manning and substitution and start procedures and delivers the Driver's Briefing.
- 5.2 A Scrutineer who will inspect cars at random throughout the meeting and will authorise any change of chassis or side rails.
- 5.3 If, in the event of a decision being required which is not met by the existing rules as stated in the Sectional Rules, a representative from each club present at the meeting and the race director on the day (who shall have the casting vote if required) shall be able to make a decision and that decision shall stand.

### **6. DRIVERS-BRIEFING**

A Drivers' Briefing will be held prior to the race starting. The Race Officials should be introduced to all competitors, The Race Director will give a drivers' briefing as pointing out all race procedures and marshalling requirements for the specific track.

### **7. TRANSPONDERS AND LAP COUNTING**

7.1 All competitors taking part in a National event are to have a Personal Transponder fitted to their car. No Club transponders should be allowed to be used at any National round. Each individual is required to ensure the correct individual transponder number is recorded on the race computer during the booking in process and are responsible for their equipment to be fully functional. Clubs to have available 2 PT's for sale on race day.

### **8. PRACTICE**

Practice will be run prior to the commencement of the meeting. Timing of practice shall be at the race directors discretion. At the end of practice the drivers will be called to the pits and must immediately follow that instruction.

### **9. QUALIFICATION**

- 9.1 Qualifying heats shall be of 5 minute duration with a maximum of 5 heats taking place, with a maximum of 10 cars in a heat.
- 9.2 There will be 4 rounds of qualifying heats. Points will be awarded for each round. Tied positions within a round will receive equal points. The points for subsequent positions will be displaced by the number of tied drivers involved. A driver's best 3 scores will be added together to give a qualifying position. Ties will be eliminated firstly by using discard points and secondly, by use of the fastest overall time.
- 9.3 Qualification will be run using a "rolling start". All cars will be released from the pit-lane by the Race Director,

after Race Control has signaled that the warm up period can commence. The warm up period will last for 2 minutes. Drivers will be notified that there are 2 minutes, 1 minute, 30 seconds and 10 seconds to the start of the 5 minute qualification period. They will be notified when the qualification period has started. The 5 minute qualifying period commences when each car crosses the timing line after the expiration of the warm up period. A car not starting its individual clock prior to 1 minute after the first car has completed its first lap will, at this time, have its clock started and be deemed a late starter.

9.4 When all cars on the track have completed the lap following the expiry of their individual 5 minute period, Race Control will request that all cars return to the pits. Any car not on the track will be given a split time of the last lap completed.

9.5 Drivers and mechanics should wait until the rostrum and pit lane have been vacated before taking up their positions. Radio equipment may be turned on during the prior heat and engines started, as frequency clearance on the prior and following heats should exist.

9.6 On completion of their heat, drivers should go immediately to the marshal point of their car number and relieve the existing marshal. Marshals need to be at their posts prior to one minute to the start of the following race.

9.7 Marshals should wear the distinguishing tabards provided. No marshal shall leave their point whilst fulfilling their marshalling duties [e.g. should not return cars to the pit lane/mechanic] or at the end of a race should not leave until the race has fully finished and has been announced over by race control

9.8 The highest heat number will marshal heat one and marshals must be in place for Practice. Drivers will marshal the appropriate race themselves, unless agreed by the Race Director.

9.9 At the end of each round, qualifying times and positions will be published, as will the points scores.

9.10 A maximum of two mechanics per driver will be allowed in the pit lane to assist with repairs, refueling, etc. All mechanics in the pit lane will be required to wear luminous jackets/bibs so that they are equally visible on the track as marshals (see Rule 5).

9.11 No Track cutting is allowed during the out laps or in laps during the race itself, penalty to be applied.

## **10. FINALS**

10.1 On completion of all qualifying rounds, the top 50 point scorers will be placed in order. The top points' scorer will be No. 1 in the A Final, down to the 50th points' scorer who will run as No. 10 in the F Final. Ties will be decided firstly by discarded points and secondly by using the fastest qualifying laps and time. Finals will be run in single-sided Christmas tree format. There will be 6 finals from A down to F. The F Final will consist of 10 drivers; all the rest will have 8. The top 2 from each final will move up to the next one and fill positions 9 & 10. Each final will run for 20 minutes except the B final that will be 30 minutes and the A final which will be 45 minutes duration. A minimum of 3 cars are required to constitute a final.

10.2 Frequency clearance for finals will be limited to those running in a specific final. Where a frequency clash occurs, the lower qualifier will be requested to change. If the change cannot be made the lower qualifier will not be allowed to run.

10.3 The interval between finals will be a minimum of 10 minutes. During this period the track is open for the next group of finalists. As in qualifying, the next group may not utilize the rostrum or pit area until it has been vacated by the previous finalists. Unlike qualifying, radio equipment must remain off until the prior final is complete.

10.4 Le Mans type starts will be used for finals. Numbers will be placed along the main straight at intervals of at least 3 metres - Where the track does not allow for this spacing, the whole of the main straight must be used.

10.5 Race Control will call 1 minute before the start for 1 mechanic per driver to go to their car's start position on the straight. No starting equipment may be taken to the start grid by the mechanic.

10.6 Race Control and not the Start Marshal has ultimate say over the start times of each race. When called to the start line by Race Control, the cars must return immediately to their start line mechanic.

10.7 When appropriate, Race Control will commence a count down from 10 and the Starter will indicate with a flag each increment. At 3 the starter's flag will be on the ground and Race Control will call 'cars down' The mechanics must then place the cars on the track, release them and step back when placing down the cars back wheel must be touching the piping of the straight, no throwing of the cars into the centre of the track will be allowed. Penalty to be applied after first lap. The count continues to zero when Race Control will start the race by an audible sound [e.g.

horn] and the Starter will raise his flag. The race is started by the signal from Race Control, not the Starter's flag. All racers and mechanics must be able to hear clearly the starting horn from race control on the starting of the race.

All tracks must have a PA system capable to provide the Racers and Mechanics clear audible sound during the race meeting. This sound should also be clearly audible in the pitting area of the track.

Clarification of the starting procedure is clear, and should be made clear to the racers at the start of the finals.

10.8 Once the countdown has commenced, no mechanic/car may cross between the start grid and pit lane in either direction until the start is underway and all cars have passed. A car starting from the pit lane may only join the race when all other competitors have passed the pit exit.

10.9 The race director may call a restart if they deem it necessary.

10.10 The race will be considered complete when all the cars on the track next cross the timing line after the allotted race time has elapsed. The car must actually cross the timing line between the track markings to have been deemed to finish the race. No car may be pushed over the line. Any car that is manually aided over the timing line at ANY

time during the race will lose that lap counted. Other penalties may apply.

10.11 Drivers moving up may have to make a frequency change.

10.12 On completion of their final, drivers not progressing to the next final should go immediately to a marshal point to relieve the existing marshal. No marshal shall leave their point whilst fulfilling their marshalling duties [e.g. to return cars to the pit lane] or at the end of a race until a replacement arrives.

10.13 Marshals should wear the distinguishing tabards provided. The A Finalists will marshal the first final that runs. Points 3 to 10 will be set out. Drivers qualifying 1st & 2nd will marshal at points 9 & 10 with 3 to 8 on their qualifying positions. For the following finals, drivers will marshal at the numbered point relating to their finishing position in the final they have just completed [i.e. 3 to 10]. It is the driver's responsibility to ensure that they know their finishing position and go to the appropriate marshalling point. Substitute marshals must be competent to carry out duties and be agreed with the Race Director.

10.14 A maximum of two mechanics per driver will be allowed in the pit lane to assist with repairs, refueling, etc.

10.15 A delay may be called at the start of the A final. Only 1 delay may be called in total for a duration of 10 mins, the driver that calls the delay will lose their grid placement and rejoins at the rear of the grid

## **11. RACE INTERRUPTION**

11.1 If in agreement, the Race Director, Section Chairman, may decide to interrupt a Final due to adverse weather conditions. In the absence of one of these Committee Members, the opinion of another Committee Member should be sought.

11.2 If more than half a final has been run and the race has to be stopped, the position at the time of interruption will be the result. Otherwise points will be allocated from the latest qualifying positions.

## **12. PROTESTS**

12.1 All protests must be made verbally within 15min of the posting of Results and in writing by close of Meeting together with a deposit of €30 to the Race Director. If the protest is upheld, this money will be reimbursed.

12.2 Protests must be made within 15 minutes of the publication of the results in question. The protest period of 15 minutes commences when the results are published on the Results Board and announced as such.

12.3 Protests regarding the legality of cars must be made in writing, together with the fee, to the Race Director.

12.4 A copy of the National Rules and Section Rules in printed format, must be available and in the care of any race control hosting a National Round, for the clarification of rules and answering of questions.

## **13. PENALTIES**

Penalties will be handed out in the following order, the race director has the right to ignore any or all of the stages of penalties and move straight to disqualification if he/she deems the offence requires such action to be taken. Failure of scrutiny for the car not meeting the correct specification will result in loss of that rounds time, whereas blatant cheating i.e. incorrectly sized fuel tanks or engines may result in disqualification.

1. Warning

2. 10 second penalty applied to the race time that the penalty was incurred.

3. Loss of FTD, the driver will lose his best qualifying time for the day.

4. Disqualification from the entire event.

Each of these penalties may be applied by the race director for any infringements relating to sportsmanship, driving or marshalling.

Examples of infringements, failure to marshal, late marshalling (arriving at the track to marshal after the race has started), corner cutting, deliberate collision with another car on the track, use of bad or inappropriate language whilst on the rostrum, please note it is also possible for a drivers mechanics or substitute marshal to incur penalties on their behalf.

## **14. TRACK AND SAFETY Guidelines**

Please note that due to the lack of track options the following comments are simply guidelines that clubs should aspire to achieve when constructing a track for use at RCCAOI national level. The final decision as to whether a track is suitable for use or not will be made by the section chairman.

14.1 Tracks must be a minimum of 4 metres wide and at least 250m long when walking the shortest route.

(Guidance to organisers: should aim for a lap time of minimum 35 seconds). There may, however, be a single point of the track layout where the width may be reduced by 1 metre [i.e. to 3 metres] for a maximum length of up to 10 metres.

14.2 No public access to the track Area allowed. Spectators and marshals are to be protected from the risk of being hit by cars. A suitable safety fence is to be constructed to protect marshals in dangerous areas such as the end of the straight, or points where traffic on another part of the track is travelling towards the marshal from behind.

14.3 Track markers and design should reduce the ability of cars to cross lanes or cut corners, be such that they minimise the risks of cars becoming airborne and to minimise the risk of damage to cars.

14.4 The rostrum must be a minimum of 10 metres in length, 1.83 metres high and able to accommodate 10 persons safely (i.e. with good margin). The front must have a safety rail and a kickboard and the floor should be constructed of solid material and be all at one level. All steel-constructed rostrums must be fully earthed in at least two places. The rostrum should be marked into equal sections so that 10 spaces are marked out, enabling drivers to see which space is available to use. Where possible the raised pit area to be located safely below the raised podium.

14.5 Any person inside the safety fencing must be directly involved with the racing, i.e. marshals and mechanics. At the start of a heat or final, mechanics, on the release of the cars, must return to the pits as soon as possible and marshals must be standing at their designated points.

14.6 Track features will be 'vetted' by the section chairman before the commencement of a meeting and, with the agreement of the majority of Committee Members present, removed if deemed necessary.

14.7 No car shall be used outside of the track vicinity at any time of a race week-end (including periods when the race event is not taking place). See Rule 15. A small controlled area can be set up for use, to be completely fenced in by double fencing, at the Race Organiser's discretion. This is not compulsory on the Race Organiser.

14.8 No motorised bike/bicycle/scooter is allowed to be used within or outside of the track vicinity at any time of a race week-end (including periods when race event is not taking place). See Rule 15. This does not include motorised vehicles required for disabled members of the public.

14.9 There should be no "blind spots" on the track at no point should it be possible for driver to lose sight of their car (including the pit lane) regardless of what point on the rostrum they stand. A significant amount of the car should be visible at all times (not just a portion of the wing or aerial).

## **15. TRUGGYRULES**

150ccm fuel tank and monster truck wheels.

Exhaust pipes: All silencers are to point downwards, i.e. anywhere below the horizontal and must meet EFRA approved regulations and appear on the most up to date EFRA homologation list plus the previous years list (available on request).

Truggy A finals will be 30 minutes and any subsequent finals will be 20 minutes.

## **16. APPROVED FREQUENCIES**

16.1 27MHz

26.975 grey/brown 27.075 red/orange 27.175 yellow/green

26.995 brown 27.095 orange 27.195 green

27.025 brown/red 27.125 orange/yell 27.225 green/blue

27.045 red 27.145 yellow 27.255 blue

16.2 40MHz

665 675 685 695 705 715 725 735 745 755 765 775 785 795 805 815 825 835 845 855 865 875 885 895 905 915

925 935 945 955 965 975 985 995

16.3 2.4 GHz (however, see rule 4.2)

## **17. NATIONAL POINTS ALLOCATION**

Winner 100pts, Second place 99pts, third place 98pts etc .....

There will be 6 national rounds with 4 rounds to count, in the event of a tie count back (count back means the addition of the next best round to the points scored), followed by number of highest finishes will be used to separate them.

## **18. MANDATORY TRACK FEATURES**

18.1 All tracks must feature a raised pit area suitable for refueling of cars, including provision for cars to be lifted out of the driving lane through the pit area.