

## **12.0 Appendix A 1/10<sup>th</sup> Electric Off Road**

### **12.1 Classes**

- 12.1.1 2wd Standard – 2 wheel drive (rear) using standard motors as at current defined rule
- 12.1.2 2wd Modified – 2 wheel drive (rear) using modified motors as at current defined rule
- 12.1.3 4wd Standard – 4 wheel drive using standard motors as at current defined rule
- 12.1.4 4wd Modified – 4 wheel drive using modified motors as at current defined rule

### **12.2 Track Layout**

- 12.2.1 The track must be laid out so that there are no hidden areas when viewed from the rostrum.
- 12.2.2 Corner cutting must be discouraged by the placing of barriers of a suitable material which will not cause damage to the cars hitting them. Corners are also to be of such construction that they will not trap the car.
- 12.2.3 The minimum track width is to be 2M, the straight will be minimum of 3M wide. The straight will be a minimum of 20M in length.
- 12.2.4 Marshalling points 1 to 8 will be clearly marked around the track. (Where possible all heats and finals should have 8 marshal's, heats may be ran with a minimum of 6 marshal's, who will be spread evenly around the track, at the race directors/referees direction. Finals must have 8 marshal's.) Voluntary marshal's must be capable of the task. Marshal's must ensure that their marshalling point is free from distractions.(e.g. accepting / making phone calls, talking to spectators, eating / drinking etc.) Marshal's MUST NOT work on cars.
- 12.2.5 The start line for the heats shall have a further line marked 1M in front of it for the use in the adjudication if jump-starts.
- 12.2.6 For the finals, a grid shall be laid out in front of two lanes of 2M apart, the gap between each car should be 2M, if straight accommodates (the full length of the straight should be used for the grid with at least a 1M gap from the back of car 1 to front of car 2 etc.) Option will be given to the given to the pole position as start lane and cars will be alternated down the grid.
- 12.2.7 For the finals the first corner shall NOT be a hairpin.

### **12.3 Appearance**

- 12.3.1 Cars entered for racing should be reasonable representations of the style of full-sized cars generally accepted as being suitable for rally cross, rallying, trail or desert racing.
- 12.3.2 Any commercially available 1/10th scale body shell may be used.
- 12.3.3 All cars must make suitable arrangements for racing numbers to be displayed facing to the front and one side as directed by race control.
- 12.3.4 No car may be driven without a body shell being securely fitted at all times.
- 12.3.5 When initially entered in a meeting the body must be neatly finished and painted.

### **12.4 Race format**

- 12.4.1 Heats should consist of no more than 8 cars.
- 12.4.2 Final will consist of a maximum of 8 cars.

### **12.5 General Construction**

- 12.5.1 No car shall be constructed so as to be dangerous or capable of causing damage to other cars, marshal's officials or spectators.
- 12.5.2 The overall width of the front bumper (if fitted) must not exceed the overall width of the front of the car including wheels.
- 12.5.3 The bumper must be constructed of resilient material such plastic or rubber, minimum thickness 2.5mm and edges to be rounded.
- 12.5.4 Gear covers must be securely fixed to the car at all times.
- 12.5.5 Only one drive motor may be used.
- 12.5.6 The use of electronic sensors or devices fitted to wheels/drive or suspension units to enhance performance is strictly prohibited.  
(Factory fitted sensor as part of a sensored brushless motor is permitted.)

### **12.6 Measurements & Weights**

- 12.6.1 Max. Length 460mm(including bumper)

- 12.6.2 Max. Width 250mm
- 12.6.3 Max. Wing Width 220mm
- 12.6.4 Max. Wing Length 80mm
- 12.6.5 Min. Weight 2WD 52oz. Or 1474g
- 12.6.6 Min. Weight 4WD 56oz. Or 1588g
- 12.6.7 Weight applies to cars complete and ready to race, excluding any lap counting equipment.
- 12.6.8 to be eligible to compete in the 4WD class 2WD cars must race at 1588 grams minimum weight.

## **12.7 Tyres**

- 12.7.1 Wheels and tyres must conform to the following, no form of metal or plastic spike, tubes or anything similar shall be attached to the tyres. Max. Outside diameter 90mm, any combination of commercially available tyres and wheels may be used. No tyre additive may be used.
- 12.7.2 Control tyres, to be used in all classes. Control tyres will be announced alongside the championship dates.

## **12.8 Standard Motors**

- 12.8.1 Standard motor are taken to be 19t brushed motor or 10.5t brushless.
- 12.8.2 Motor should be on the BRCA 19t brushed / 10.5t brushless motor list. Motors not on list may be used at Race director discretion.

## **12.9 Modified Motors**

- 12.9.1 Any 540 size EFRA approved motor brushed or brushless motor. There is no limit on the turns for modified motors. Motors not approved by EFRA may be used at the Race directors discretion.

## **12.10 Batteries**

NiCad / NiMh

- 12.10.1 Drive batteries must conform to the following; Drive batteries must conform to the following; the cars will be driven by a maximum of six rechargeable batteries. Only Sub C sized cells are approved. The size of the individual cell is 23mm in diameter and 43mm in length. The nominal voltage rated as 1.2 volts. All cells must have their manufacturers heat-shrink substantially intact.
- 12.10.2 Batteries may not be changed during a race.
- 12.10.3 Only rechargeable cells approved by EFRA / BRCA are allowed.
- 12.10.4 Batteries will have a maximum price of £61.00 (or euro equivalent).

Lithium

- 12.10.5 Lithium based (LiPo/LiFe) battery packs must have a hard, protective case that completely envelopes the cell(s). The case should be made from ABS or a similar material. The two halves of the case must be factory sealed in a way that any attempt to open the case will destroy the case. The only opening in the case that is allowed, is for the exit of wires.
- 12.10.6 Individual cells used in the construction of the battery pack shall be rated at (LiPo 3.7v/LiFe 3.3v) nominal. Individual cells may be wired in parallel. The maximum connection 'In Series' is two, to give a Final pack voltage of (LiPo 7.4v/LiFe 6.6v) nominal.
- 12.10.7 2 Cell Lipo battery packs must not exceed a total pack voltage of 8.40v – drivers found to have exceeded this charge voltage as part of pre-race scrutiny will not be permitted to race.
- 12.10.8 Any Lithium batteries EFRA / BRCA approved can be used.
- 12.10.9 Batteries not approved by EFRA may be used at the Race directors discretion

## **12.12 Points & Scoring**

- 12.12.1 Points shall be awarded for qualifying and final results, the result for that event shall be deemed to be the total score of the final and the qualifying points. (100pts for tq/win, 99pts for second and so on.)
- 12.12.2 Where a two leg final has been scheduled for the event. The best 2 of 3 points score will decide the event result. Points will be awarded for overall qualifying positions (100pts for tq, 99pts for second and so on.) Points will be awarded for overall positions in each leg of the two finals (100pts for win, 99pts for second and so on.)

## **12.13 Qualification For Worlds & Euros Events**

12.13.1 In the event that not all places are filled places will be offered to the top ten or number of allocated places plus 50% of the allocated places (whichever is the greater) drivers in the opposite modified class, unless they already have a place. I.e. 2WD places will be offered to the top appropriate number of 2WD mod. Drivers by order of merit. If in the event that all places are not filled then the places will be offered to the top appropriate number of drivers in the 4WD mod. Class, if they do not have one.