



RADIO CONTROLLED CAR ASSOCIATION OF IRELAND

# 1/10th Electric Off-Road Handbook

# Contents

Foreword .....	3
12.1 Introduction .....	4
12.2 Precedence .....	4
12.3 RCCAOI committee 1/10th off-road representative(s) .....	4
12.3.1 Authority .....	4
12.3.2 Duties .....	5
12.3.3 Contact & Correspondence .....	5
12.4 Information for race organisers and officials .....	6
12.4.1 Applying to host a championship round.....	6
12.4.2 Officials .....	6
12.4.3 Track, facilities and due care .....	6
12.4.4 Racing Classes .....	7
12.4.5 Race format and start procedure .....	7
12.4.6 Timetable .....	8
12.4.7 Registration, driver’s briefing and local procedures .....	9
12.4.8 Scrutiny & Refereeing .....	9
12.4.9 Posting of results .....	10
12.4.10 Force Majeure and the abandonment of the event .....	10
12.5 Championship .....	11
12.5.1 Structure and counting rounds .....	11
12.5.2 Calendar .....	11
12.5.3 Rescheduled events and reruns .....	11
12.5.4 Eligible Competitors .....	11
12.5.5 Eligible cars and classes.....	11
12.5.6 Points and event ties .....	12
12.5.7 Championship Ties .....	12
12.5.8 Awards .....	12
12.6 Racing Rules.....	12
12.6.1 Participant definitions .....	12

12.6.2	Etiquette and sportsmanship .....	13
12.6.3	Racing.....	13
12.6.4	Marshalling .....	13
12.7	Technical Rules & Regulations.....	14
12.7.1	Tyres.....	14
12.7.2	General technical regulations.....	15
12.7.3	Prohibited Equipment .....	15
12.7.4	Batteries.....	16
12.7.5	Motors .....	16
12.7.6	Additional Clubman class specific regulations.....	16
12.7.7	Lap counting equipment .....	16
12.8	Penalties .....	17
12.8.1	Racing and marshalling penalties .....	17
12.8.2	Exceptional penalties and non-partisan behaviour .....	18
12.8.3	Application and announcement of penalties .....	18
12.9	Appeals .....	19
12.9.1	Appeals against racing and marshalling related penalty decisions.....	19
12.9.2	Appeals against exceptional penalty decisions .....	19
12.9.3	Complaints regarding the conduct of an official .....	20
12.10	EFRA and IFMAR Championship Qualification.....	20
12.10.1	Eligible competitors.....	20
12.10.2	Assignment of places.....	20
12.11	Voting at a Race Meeting .....	22
12.11.1	Occurrence.....	22
12.11.2	Eligible voters .....	22
12.11.3	Majorities and decisions .....	22
Appendix 1	.....	23
	Additional Track Layout Guidelines.....	23
Appendix 2	.....	24
	Previous Winners .....	24

## Foreword

Welcome to the RCCAOI 1/10<sup>th</sup> Off-Road National Championships. We are all looking forward to the upcoming race season and wish everyone all the best of luck with their racing endeavours.

Within this document you will see the 1/10<sup>th</sup> Electric Off-Road handbook. This has been prepared to allow racers, organisers and all participants to have a set format and structure for the National Championship.

If you have never competed in a National Championship before, we encourage you to take part – it is a lot of fun, the racing is close and you get the opportunity to race on some different tracks! We are all RC Racing Enthusiasts so come along and enjoy your sport!

Wishing you all racing success in the upcoming race season

Barkley Abernethy  
Chairman – RCCAOI

Denzell McBurney  
1/10 Electric Off Road Section Representative

## 12.1 Introduction

This handbook is valid for the racing year and is applicable to the 1/10th electric off-road class only.

The complete document has been proposed and carried by the members of the Radio Controlled Car Association of Ireland (RCCAIO) at the association's annual general meeting.

No alterations, apart from those related to the health & safety of competitors, and to allow for changes in legislation may be made to this handbook without each alteration being proposed and carried by the attending RCCAIO membership at the annual AGM or an EGM called by the RCCAIO committee. Alterations made for health & safety or legislative reasons can be made by the RCCAIO committee only at any point during the year, but must be announced prior to application and re-announced to the AGM at the end of the year for inclusion into the following year's handbook.

This handbook has been written with the intention of giving drivers, officials, marshals and all other participants a set format and structure for national championship racing in Ireland.

ONLY sections [12.6](#) and [12.7](#) and their respective subsections contain defined rules which are subject to penalty by the organisers and officials. Other sections may contain non-defined rules and standards of etiquette which are also subject to penalty if not adhered to. All other sections lay out the procedures and operational standards which both competitors and officials expect at a national championship event.

## 12.2 Precedence

This handbook should be used in conjunction with the RCCAIO General Rule Book. Where a conflict between the two documents exists, this handbook will take precedence over the General Rule Book.

## 12.3 RCCAIO committee 1/10th off-road representative(s)

The 1/10<sup>th</sup> electric off-Road section may be represented on the RCCAIO committee by one person, a couple of people or a group. This is determined by the election process at the RCCAIO AGM.

### 12.3.1 Authority

The Section Representative has the authority to adjust any of the variables relevant to the championship outside of the handbook - host club nomination, control tyre specifications, calendar dates, schedule and format of post event published results/newsletters etc. They also have the authority to contact, or be contacted by, any RCCAIO member on behalf of the association for any section related reason.

### 12.3.2 Duties

- The Section Representative should be familiar with the format and contents of this handbook.
- The Section Representative in conjunction with the RCCAOK Secretary should ensure that the published section rulebook is updated with any changes carried by the AGM including the period of validity. The updated rulebook should be published on the RCCAOK website.
- The Section Representative will contact the clubs in an efficient manner as soon as possible after their appointment. The purpose of the correspondence is to determine which clubs wish to hold a championship round for the section in the upcoming year. All RCCAOK affiliated/participating clubs from the previous and current year will be made aware of the application process and the application closing date. The format and contents of any correspondence will be determined by the Section Representative. Once received, the Section Representative will acknowledge receipt to the applicant and will contact them further in due course.
- The Section Representative shall select successful and unsuccessful applicants, if any, from the applications received by the specified closing date. All applicant clubs will be notified of whether their application has been successful or not. The Section Rep may work with successful clubs to pick dates that work for both Host Club and RCCAOK.
- When all of the Championship round dates have been finalised the Section Representative should publish the dates with at least one rerun date at the end of the season per [section 12.5.2](#).
- The Section Representative (or at least one of, if a couple/group) should attend each event in the championship if possible.
- The Section Representative nominates the control tyre(s) for each event and publishes the information with the calendar per [section 12.7.1](#).
- The Section Representative is expected to keep copies of all correspondence received through official channels till the next AGM, where it can be passed onto the RCCAOK Secretary if necessary.
- The Section Representative should work with the host club to ensure that the track and facilities are as suitable as possible for 1/10<sup>th</sup> off-road racing. This may result in the representative(s) conducting an audit of the venue and recommending changes to be made, if any.
- The Section Representative should relay appeals to the RCCAOK Committee as per [section 12.9.2](#).
- The Section Representative can supply a copy of the competitor database to the host club, if available.
- The Section Representative should retrieve the final event database from the host club, collate and publish the results, as a set of series results in a timely fashion.

### 12.3.3 Contact & Correspondence

The Section Representative should publish all documents, notices and news relevant to the championship on the RCCAOK website and, in addition, through any other official communication channels as required, for example, RCCAOK Facebook page and email.

The contact details for the Section Representative are given on the RCCAIOI website (<http://www.rccaioi.com>). These details are the only official contact channels. Correspondence through official channels will be responded to in a timely fashion. The Section Representative is not expected to respond to any correspondence through non-official channels such as internet forums and chat groups.

## 12.4 Information for race organisers and officials

This section of the handbook contains information for officials and organisers about the manner in which to run a 1/10<sup>th</sup> electric off-road national championship event. It also briefs competitors about what to expect from organisers and officials at an event.

### 12.4.1 Applying to host a championship round

Clubs should receive correspondence ([see section 12.3.2](#)) from the Section Representative in a timely fashion after their appointment at the AGM, regarding applying to host a round of the championship.

The form should be completed and returned as soon as possible and by the closing date for applications.

### 12.4.2 Officials

The host club must appoint all officials for their event. Multitasking is acceptable. Clubs should allow for enough persons to efficiently and effectively carry out the following roles;

- Race director - manages the overall running of the event
- Race Controller - manages race control and event timing
- Scrutineer - enforces technical rules & regulations
- Referee - enforces racing rules

### 12.4.3 Track, facilities and due care

The Section Representative will work with the host club in an advisory capacity to ensure that the track is as suitable as possible for 1/10<sup>th</sup> off-road racing.

The host club must have AMB/Mylaps, or compatible, lap counting equipment, race control software (BBK system is recommended), and a rostrum suitable for a minimum of eight drivers in place for the event.

The following components should be clearly marked on the track:

- Heat start line (min of 3m before the transponder loop)
- Finish line (at transponder loop)
- All marshalling points will be clearly marked around the track. Marshalling points will be spread evenly around the track, to be decided by the Race Director.

- 8 final start positions, a minimum of 2m apart linearly along the length of the track lane – either in grid or straight line layout. For grid layout, two lanes of 8 positions, 1m apart should be marked with the TQ qualifier deciding on which side they would prefer with subsequent cars alternating between lanes.

The host club should exhibit due care to all competitors, participants and spectators at the event. As some tracks may not be permanently fenced off; a barrier separating the track from the pit area and the track from the spectator area should be erected to ensure individuals are protected should any car leave the track lanes – potentially causing injury.

Debris, waste, tools and general mess should be tidied away to reduce the risk of accidents or injuries occurring. It is also every participant's duty to ensure that they do not put themselves in unnecessary danger by engaging in reckless behaviour on the track or in surrounding areas. Any reduced safety areas should be announced as no-go areas at the driver's briefing.

The host club is required to supply adhesive backed race numbers to be displayed on each car competing.

[For additional track layout guidelines see Appendix 1.](#)

#### 12.4.4 Racing Classes

- Two-wheel drive Modified
- Two-wheel drive Clubman
- Four-wheel drive Modified
- Four-wheel drive Clubman

For the purposes of running heats, the classes can be partially or entirely amalgamated to form 1 x 2WD class and 1 x 4WD class.

For Finals, Classes can be amalgamated at the Race Directors discretion

#### 12.4.5 Race format and start procedure

Format: 3 rounds of qualifying (best 2 to count) and 3 leg finals (best 2 to count) for each class.

The track is only open to competitors during scheduled practice periods and races. The track is closed at all other times.

Competitor starting order:

For Round 1 of the championship series, the drivers should be gathered into heats in their championship finishing order from the previous year.

For all other subsequent rounds of the championship, the drivers should be gathered into heats in the order of the current championship standings.

Qualifying type: "BRCA 1/10 off road Round Points"

Track open: At 2 minutes to heat start announcement

Heat duration: 300 seconds + last lap

Heat start type: staggered at 1.5 second intervals

Heat numeric start order: round 1 – 1,2,3,4, etc. thereafter – as per “best time”

Max cars in each modified class heat: 8

Max cars in each clubman class heat: 6

The Race Controller (or timing software) should announce the heat start order at least twice after the 30 seconds to heat start announcement.

Final type: “BRCA 1/10th Off Road 2005”

Final start sequence: 10 second countdown followed by start tone. Cars should be positioned on the start positions in overall qualifying order for all legs.

Track open: At 2 minutes to start of final announcement, until called to the starting grid.

Final duration: 300 seconds + last lap

Max cars in each modified class Final: 8

Max cars in each clubman class Final: 6

Timings can be adjusted at Race Director’s discretion as long as minimum times are maintained.

Prior to the race start, the Race Controller shall endeavour to check that all competitors transponders are registering on the system and inform the driver of any issues.

#### 12.4.6 Timetable

The host club should sequentially facilitate the following timetable;

- No less than 60 minutes of open practice.
- Approximately 30 minutes between practice end and start of round 1 (time for driver’s briefing and battery recharging – also [see 12.4.7](#))
- Intervals between heats should be 4 minutes
- A minimum of 60 minutes between the start of each round of qualifying
- A minimum of 60 minutes between the start of each round of finals
- Intervals between finals should be 4 minutes plus the time required to lay out the cars for the final start sequence.

In the interest of good time keeping throughout the event, races will not be delayed for any driver(s) if they encounter a problem prior the race and/or during the warmup period. Races may only be delayed due to technical issues with the timing system.

Timings can be adjusted at Race Director’s discretion as long as minimum times are maintained. The Race Director may allocate time to serve as a lunch break as per General Rule 6.3, if deemed necessary, this will be between the last round of qualifying and the start of the finals.

#### 12.4.7 Registration, driver's briefing and local procedures

Driver registration or "Booking In" should commence as early as possible on the morning of the event. Competitors should pay attention to announcements from the officials regarding driver registration at the event and comply with their requests. Host clubs and/or the Section Representative can invite competitors to register via their website or by email during the week leading up to the event, but it is not mandatory. Registration on the morning of the event should be closed in sufficient time to allow for heats to be formatted and printed for the driver's briefing. It is at the Race Director's discretion whether competitors arriving after the driver's briefing are permitted to enter the meeting or not.

The driver's briefing should be given in an area away from the pitting area – on the track is suggested. At the drivers briefing, the host club's spokesperson should introduce the Race Director and the Section Representative.

As visiting participants may not be familiar with the local facilities it is recommended that the club spokesperson announces the location of the nearest toilet and food outlet/restaurant. Any other local details or mandatory procedures (such as keep the gate closed, tidy up your rubbish, no go areas, etc.) should be announced at this stage.

The briefing should be closed with a reminder of the race format for the day and a heat 1, round 1 start time. This start time should be no less than 10 minutes after the driver's briefing.

#### 12.4.8 Scrutiny & Refereeing

The Race Director determines and instructs the Scrutineer regarding the frequency, timing, and the intensity of the scrutiny process.

Competitors whose cars are found to be non-compliant before any respective race during pre-race scrutiny will not be permitted to start that race, until their car is subsequently found to be compliant.

Competitors whose cars are found to be non-compliant after any respective race during post-race scrutiny should refer to [section 12.8.1](#).

Transmitter pound will not operate.

Example of items to be checked:

- Check battery voltage (max 8.40v)
- Check control tyre compliance
- Check for gear cover (can be body shell on 2wd mid motor and 4wd layout cars)
- Check ESC is in "blink" mode (Clubman class only)
- Check minimum weight
- Overall width and length measurement
- Check use of approved LiPo batteries and motors

For the purposes of refereeing, the Race Director can observe each race, nominate a separate referee for the entire meeting and/or appoint and nominate a separate referee when they are not available (racing/marshalling/break etc.). If a referee is to be appointed, it should be arranged prior to the start of the relevant heat/final. The referee's duties are as follow:

- Pay attention to the race from a good viewing point (rostrum or elevated position is recommended) and as observed:
- Advise back markers regarding faster cars lapping.
- Advise all drivers on driving and behavioural standards as incidences occur.
- Advise the race director regarding racing incidences (after the race).
- Advise the race director on bad marshalling incidences (after the race)
- Advise the race director on incidences occurring on the rostrum (after the race)

#### 12.4.9 Posting of results

Individual heat and final results as well as overall results after each round should be posted at a dedicated area.

A complete set of printed results for the qualifying/finals round should be posted before the next sequential round starts.

Where an error is found in posted results and a correction is made, the results including correction should be printed and posted as quickly as possible. However, a note made on existing print outs signed by the race director will suffice, the computer may not allow printing if a race is running.

#### 12.4.10 Force Majeure and the abandonment of the event

The RCCAOI committee and/or the Section representative may call off an event at any time due to Force Majeure such as a natural disaster, war, national/local emergency, etc. It is also considered for any weather for the local area receiving a status RED alert from Met Éireann to be unsuitable for conducting an outdoor event – this may result in advance cancellation also. Should an event be called off for these reasons, the RCCAOI will not be responsible for costs incurred by competitors. The decision is only made to ensure the safety of the association's members and no liability will be accepted.

An event in progress may be called off if the track conditions become unsuitable or dangerous for competitors and/or marshals. The decision to abandon should be made by the Race Director. On occasions where the grounds for the decision are marginal, the Race Director may invoke a voting process to assist in the decision making as detailed in [section 12.11](#). The Race Directors decision is final

Where an event is abandoned before qualifying is complete, the event will be declared void.

Where an event is abandoned before the finals are complete, the event will be scored on the combined results of the rounds of finals completed. No partially complete round of finals will be counted, even if all the finals for an individual class have been completed.

Where an event is abandoned after the qualifying is complete, but before any rounds of finals have been completed, the event will be scored on qualifying positions.

Abandoned or void events will be handled per [section 12.5.3](#).

## 12.5 Championship

### 12.5.1 Structure and counting rounds

The championship may consist of between 3 and 6 rounds.

Where the championship has 4 or less rounds each driver's lowest value score will be discounted from their final total score. Where the championship has 5 or more rounds, each driver's two lowest value scores will be discounted from their total score.

To encourage fairness and a level playing field, the championship rounds should be spread evenly between venues, even if several rounds are hosted by a single club, at the Section representative discretion.

### 12.5.2 Calendar

The Section Representative is responsible for compiling the championship calendar. The calendar should be published at least 6 weeks before the first championship round. The calendar may contain a re-run date, this is at the Section Representatives discretion.

### 12.5.3 Rescheduled events and reruns

Any cancelled or abandoned event as per [section 12.4.10](#) should be rerun, if a re-run date is available. The Section Representative must announce the event details no less than 2 weeks before the scheduled date. A rerun event is open to any RCCAOI member registered for the class, not just entrants of the abandoned/cancelled event.

### 12.5.4 Eligible Competitors

Only RCCAOI members who have registered for the class/all classes are eligible to enter national championship rounds.

### 12.5.5 Eligible cars and classes

The championship is for 1/10<sup>th</sup> scale electric off-road cars only.

The championship is divided into the following classes:

- Two-wheel drive Clubman
- Four-wheel drive Clubman
- Two-wheel drive Modified
- Four-wheel drive Modified

### 12.5.6 Points and event ties

Points for each class are awarded based on the event final classification only. 100 for 1<sup>st</sup>, 99 for 2<sup>nd</sup>, 98 for 3<sup>rd</sup> etc.

Event ties are automatically sorted by the BBK software as per the following;

*“In the case of a tie, then this will be decided by reference only to the two leg scores that counted. Firstly, by comparing the best single point scores, and then if still a tie the laps and times of each competitor’s best points score will decide.”*

– BRCA Competitor Handbook

Excluded drivers and drivers registered for the class but not present at a respective event will score 0 points. Points will not be published for a driver till they have scored 1 point or more in the championship.

### 12.5.7 Championship Ties

End of season ties are resolved as follows:

Where two or more competitors total score for their counting rounds are equal, the individual counting round scores will be examined. Discounted rounds [as per 12.5.1](#) will be ignored.

From the counting rounds the driver with the most first place finishes will be deemed the higher placed driver. Should there still be a tie, the driver with the most second place finishes will be deemed to be the higher placed driver. Should a tie still exist, the driver with the most third places will be deemed the higher placed driver and so on. To take account of this, the series will be set to “countback scoring rounds” in BBK software.

If that process is exhausted and a tie still exists, the driver with the most TQ positions from their counting rounds will be deemed the higher placed driver. Should there still be a tie, the driver with the most second qualifying positions will be deemed the higher placed drivers and so on. This will need to be completed manually by the Section Representative.

If that process is also exhausted and a tie still exists, the position will be deemed a draw.

### 12.5.8 Awards

Awards will be presented at the RCCAOI AGM at the end of the year.

## 12.6 Racing Rules

### 12.6.1 Participant definitions

A participant is defined as anyone who is participating in any aspect of the event regardless of whether they are a driver or not. Typical participants at a meeting are as follows – drivers, officials, mechanics, pit men, club volunteers, driver’s family members in attendance, persons attending the event as a

guest of a driver etc. Spectators who do not fall into any of the afore mentioned or similar other categories are not participants.

### 12.6.2 Etiquette and sportsmanship

Every participant, as defined, should maintain the highest standard of personal conduct both on and off the track. Drivers can be held responsible for the behaviour of non-racing participants who are directly associated with them. For example, penalties can be issued to drivers as a result of their mechanic's, parents or guests behaviour.

Drivers are expected to exhibit good sportsmanship at all times. Distracting drivers on the rostrum, arriving to the rostrum late for your race causing a distraction, arriving at your marshalling post late, bad marshalling, leaving the rostrum before the race is over, causing a distraction etc. are all examples of bad behaviour which may result in a penalty being applied.

### 12.6.3 Racing

A driver may be penalised for either gaining an advantage or causing another competitor to suffer a disadvantage as a result of intentional actions or actions judged to be intentional by the Race Director which are widely considered to be unsportsmanlike.

Cutting a corner or crossing the track markers to gain an advantage may result in a penalty being applied.

Failure to start your heat/final when instructed to do so (either too early or too late) can lead to a driver gaining an advantage and may result in a penalty being applied.

On the rostrum, lapping drivers may call "*lapping*" to alert back markers regarding their approach. Holding up a driver who is lapping, and who has called "*lapping*" is deemed to be causing a disadvantage to the lapping driver and could result in the driver being lapped receiving a penalty.

Whilst a race is in progress the rostrum is deemed to be a quiet area. However, drivers may announce that they are lapping, and they may call for a marshal's attention when it is obvious that the marshal is not reacting to the on-track incident. However, excessively raising your voice/shouting, distracting other drivers, being abusive to any participant or spectator may result in a penalty being applied.

Drivers have a duty of care to all persons inside the confines of the track area. Drivers must be careful during the race warmup laps as the marshals move around the track to their assigned positions.

When being marshalled after an incident, drivers must wait to be released by the marshal before applying any pressure to the transmitter's throttle. Drivers who apply throttle, resulting in the drive wheels on the car accelerating, before the car is released may be penalised. If an injury is caused the penalty will be more severe.

### 12.6.4 Marshalling

Marshals should exhibit good sportsmanship and attend to their duties as they would want to be attended to by others.

All drivers must marshal at least the race after their own race(s) unless instructed otherwise by the Race Director. The Race Director may directly assign additional marshalling duties to any competitor(s) or call for volunteers to facilitate the running of races/finals.

Only registered drivers may marshal at an event, except under the following 2 circumstances;

1. Where a circumstance arises at an event where the amount of registered drivers not competing in a race is less than the amount of marshals required for the same race
2. Where a competitor is not physically able to efficiently marshal, the Race Director may appoint any participant as defined in [section 12.6.1](#) as a marshal. Before the start of the race, the Race Director should confirm whether the participant is familiar with marshalling 1/10th off-road cars, and if not, brief them on the process.

Competitors may nominate another competitor to marshal on their behalf at the Race Director's discretion. The nominator or the nominee must make the substitution known to the Race Director before the 1 minute to race start announcement. Any rule book infringements by the nominee whilst marshalling, will result in penalties being applied to the nominator even though they were not marshalling.

Marshals not at their designated marshalling position at the 30 second to race start announcement may be penalised.

Slow or bad marshalling where the marshal is deemed not to be making an acceptable level of effort may be penalised.

Slow or bad marshalling as a result of doing any other activity whilst marshalling may result in a penalty. Examples of other activities are as below:

- Eating/Drinking or holding food/drinks
- Using a mobile phone/radio or other electronic devices such as iPod/iPad/cameras etc.
- Talking with or being distracted by other participants/spectators
- Fixing broken cars
- Watching racing in another area of the track away from your marshalling position

## 12.7 Technical Rules & Regulations

### 12.7.1 Tyres

The Section Representative nominates the control tyre(s), which must be commercially available, for each event and publishes a list of tyres and relevant information with the calendar.

Once a control tyre specification has been published, it cannot be removed from the list.

Should a nominated tyre become commercially unavailable in the period between publication of the list and the relative event, an additional tyre(s) may be nominated not less than 4 weeks before the event.

The 2wd rear tyre/assembly and 4wd rear tyre/assembly should be the same item to allow for cross usage. The purpose of this is to keep costs down for drivers racing in two classes.

### 12.7.2 General technical regulations

#### Dimensions

- Maximum overall length: 460mm
- Maximum overall width: 250mm

#### Minimum weights

- All cars running in all 2wd classes: 1474g (race ready)
- All cars running in all 4wd classes: 1588g (race ready)

#### Drive axles

- All cars in the 2wd classes must have a driven rear axle only.
- All cars in the 4wd classes must have a driven rear axle and an optional driven front axle.

#### Numbers

- Each car should display its assigned number for the relevant heat/final as per the published race listing. It should be displayed clearly on the front windscreen area of the body shell. The Race Director may instruct drivers to display more than one number label.

#### Safe Construction:

- No car shall be constructed so as to be dangerous or capable of causing damage to other cars, marshals, officials or spectators. Gear covers, or bodies which act as gear covers must be fitted.
- Radio equipment and esc should be calibrated so that the drive wheels do not turn without any radio throttle channel input.

### 12.7.3 Prohibited Equipment

Use or attempted use of the following equipment is prohibited at an RCCAIOI event:

- Tyre treatment/additive
- Any radio transmitting equipment which uses frequencies other than 27mHz, 40mHz and 2.4gHz
- Any gyro or sensor mounted into the car which may lead to a competitive advantage, excluding factory supplied motor sensors.

- Cars designed to be front wheel drive only

#### 12.7.4 Batteries

Only 2 cell (3.7v per cell) Lithium Polymer (LiPo) batteries, which are approved by any of the following bodies, may be used.

- BRCA
- EFRA
- ROAR
- IFMAR

Under exceptional circumstances, batteries not on the list can be used at the race directors discretion, however all batteries must be housed in a hard case.

The maximum voltage permitted for a battery pack (2 cells wired in series) is 8.40v. Cars found with battery packs charged above this value will not be permitted to race until the voltage has been dropped to 8.40v or less.

All LiPo batteries (including transmitter battery packs) must be charged in a safety case specifically designed to limit damage should a LiPo fire/explosion occur.

#### 12.7.5 Motors

Only one drive motor may be used per car.

Only brushless motors which conform to EFRA rules on motors shall be permitted.

#### 12.7.6 Additional Clubman class specific regulations

Clubman class motors must be 10.5 turn or greater. The factory label/engraving supplied with the motor indicating the amount of turns must be clearly visible when fitted to the car. Physical motor end-bell timing adjustment is permitted.

No boost, timing advance or turbo features may be activated on the electronic speed controller (esc) in clubman classes. Only an esc with the “blinky” feature may be used. The “blinky” feature is a factory programme which flashes an LED on the esc when default/factory timing advance settings are selected. In exceptional circumstances, a non-blinky esc can be used at the Race Directors discretion, but the driver will have to prove that no advance timing settings have been selected.

#### 12.7.7 Lap counting equipment

The driver is responsible for providing their own lap counting transponder. All transponders must be MYLAPS (AMB) RC4 compatible. Drivers may use the host clubs transponders, if available.

It is the driver’s responsibility to check that their transponder number is correct on the published race listings. If it is not correct the driver must inform race control immediately. It is also the driver’s responsibility to ensure that the transponder is functioning correctly.

If a race start time is applied to a car as the transponder is detected at the start line, but a subsequent lap(s) is missed; race control can examine the race times and correct the result with the Race Director's permission. All corrections are at the Race Directors discretion.

If the transponder does not start the race clock, then no laps or time will be awarded

In the case where the lap counting equipment failed and no transponders were being counted, the race should be rerun.

## 12.8 Penalties

### 12.8.1 Racing and marshalling penalties

Penalties for racing incidents and handbook infringements as per sections [12.6](#) and [12.7](#) as applied by the Race Director.

- First Incidence  
Warning ([See 12.8.3](#))
- Second Incidence  
10 seconds added to respective race time ([See 12.8.3](#))
- Third Incidence  
Loss of highest placed score from qualifying/finals ([See 12.8.3](#))
- Forth Incidence  
Subtraction of 5 points from final event score ([See 12.8.3](#))
- Further Incidences  
All of the above and referral to the RCCAOI committee ([See 12.8.3](#))

A competitor cannot be excluded from the event for racing and/or marshalling incidences.

A competitor whose car is found to be non-compliant at post-race scrutiny will have their time and/or score from the respective race discounted. The points score for all other compliant competitors in the same race will be adjusted to reflect the deleted score. Example. If the winner's car is found to be non-compliant and their respective score is deleted, the second placed competitor will receive the points allocated for first place etc.

The Race Director is not bound by how many concurrent incidences have occurred when applying a penalty. The penalty should reflect the advantage gained or the disadvantage given and include an addition toll to discourage the incident reoccurring. All penalties are at the Race Director's discretion.

When a non-racing participant is appointed to marshal as per [section 12.6.4](#), no penalty can be applied to a competitor associated with that non-racing participant as a result of bad marshalling.

Competitors found to be using any prohibited equipment as outlined in [section 12.7.3](#), will not be permitted to continue racing till compliant equipment is used and will have all recorded scores/times up to that point deleted.

### 12.8.2 Exceptional penalties and non-partisan behaviour

Exceptional penalties such as exclusion from the meeting can be only applied by the Race Director.

Exceptional penalties can only be as a result of a competitor's gross misconduct or other major incidences such as:

- Threatening and/or abusive behaviour
- Physical assault
- Mistreatment of junior and underage (<18) competitors.
- Intentional damage to club and/or competitor's property

All cases of exclusion must be reported to the RCCAOI committee and Section Rep as soon as possible after the incident by the Race Director.

When a competitor is observed to intentionally defy the wishes of the Race Director or not participate in the group function of the event, for no justifiable reason, they will be deemed to be non-partisan. Non-partisan behaviour is deemed to be in the area between a handbook infringement and gross misconduct. Non-partisan judgements can be made at any time on the day of the event inside the confines of the racing venue and pit area:

The penalty for non-partisan behaviour is the subtraction of 5 points from your total event score and referral to the RCCAOI committee and Section Rep as soon as possible after the incident by the Race Director. Multiple infringements at various venues throughout the season may result in the competitor being excluded from the championship and all international events which require a licence granted by or through the RCCAOI.

### 12.8.3 Application and announcement of penalties

Warnings can be announced to drivers at any time during or after a race by the Referee and/or Race Director either in person or over the PA system.

Any penalty more severe than a warning should not be applied to a competitor's results until the competitor has been informed by the Race Director in person. Announcements over the PA system or by indirect message will not suffice. It is recommended that the competitor is called to race control immediately after the race in which the rule infringement, which resulted in the penalty decision, was made.

It is recommended that the Race Director makes the announcement in four parts:

1. Description of why a penalty decision has been considered and made
2. Announcement of the relevant rule including section number
3. Announcement of the exact penalty being applied
4. Recommendation from the Race Director as to how a further penalty may be avoided.

Competitors who wish to challenge the facts on which the penalty is based with the intention of getting the penalty dropped and decision overturned or severity reduced, should appeal immediately as per [section 12.9](#).

Contradicting the Race Director, engaging in any argument, unsportsmanlike behaviour or ignoring the Race Director whilst receiving the penalty will incur immediate application of the penalty and may incur further and more severe penalties being applied.

## 12.9 Appeals

Competitors in receipt of a penalty can appeal the decision as follows:

### 12.9.1 Appeals against racing and marshalling related penalty decisions

Should a competitor wish to appeal a Race Director's penalty decision, their intention to appeal should be made known to the Race Director, in person, immediately after the penalty is announced. The competitor has no longer than 15 minutes from the penalty announcement to prepare and submit their written appeal. The appeal should contain all facts regarding the incident, references to witnesses if available, and must state whether the competitor seeks a reduction regarding the severity of the penalty or a complete decision reversal.

Appeals against racing and marshalling related penalty decisions will be considered by the Race Director.

Once a written appeal has been received by the Race Director, no new round of racing may start until a verdict has been reached and the decision announced to the appealing competitor by the Race Director.

The Race Director should call the competitor to race control to announce the appeal decision as soon as it is made. Once done, the next sequential round of racing may commence.

The Race Directors decision on the day will be final. The Race Director may consult the Section Representative for clarification of rules, but the section rep may not be involved in the decision.

### 12.9.2 Appeals against exceptional penalty decisions

An appeal decision against an exceptional penalty decision as outlined in [section 12.8.2](#) may only be made to the RCCAOI committee.

A written appeal must be submitted to the Section Representative within 24hrs of the exclusion decision being made. It must be accompanied with an "appeal payment" of €100. The Section Representative will forward the appeal and payment to the RCCAOI secretary within 24hrs of the

meeting close. The RCCAOI committee and Section Representative may then consider the appeal and contact the competitor in due course. If the appeal is unsuccessful, no points will be awarded to the competitor for the relevant event and the meeting results will be adjusted accordingly.

### 12.9.3 Complaints regarding the conduct of an official

A complaint against a race official may only be dealt with by the RCCAOI committee.

If a Participant feels that a Race Officials behaviour reflects that referred to in [section 12.8.2](#), they may make a complaint to the RCCAOI committee in writing detailing all relevant aspects of the incident. The complaint should be sent to the committee no longer than 24hrs after the incident occurred.

Any other complaints or comments regarding any official other than the Section Representative should be made directly to the Section Representative, in person, at the event.

Any complaints or comments regarding the Section Representative should be sent to the RCCAOI Secretary in writing no longer than 24hrs after the incident occurred.

## 12.10 EFRA and IFMAR Championship Qualification

### 12.10.1 Eligible competitors

Competitors must meet the following criteria to qualify for a 1/10<sup>th</sup> electric off-road EFRA and/or IFMAR Championship place:

- Be a member of the RCCAOI.
- Have competed in the 2wd Modified and/or 4wd Modified classes in the qualifying year
- Have competed in at least the set amount of counting rounds (total rounds less discounted rounds) in either of the Modified class as per [section 12.5.1](#). This does not have to be the class in which the place is being applied for.

### 12.10.2 Assignment of places

Places will be assigned by the RCCAOI to the top 10 drivers only in each class in the following sequence:

Sequence	Position Attained in Nationals	EFRA/IFMAR entitlement
#1	1st placed in 2wd Championship	1 x 2wd place
#2	1st placed in 4wd Championship	1 x 4wd place
#3	1st placed in 2wd Championship	1 x 4wd place
#4	1st placed in 4wd Championship	1 x 2wd place
#5	2nd placed in 2wd Championship	1 x 2wd place

#6	2nd placed in 4wd Championship	1 x 4wd place
#7	3rd placed in 2wd Championship	1 x 2wd place
#8	3rd placed in 4wd Championship	1 x 4wd place
#9	4th placed in 2wd Championship	1 x 2wd place
#10	4th placed in 4wd Championship	1 x 4wd place
#11	5th placed in 2wd Championship	1 x 2wd place
#12	5th placed in 4wd Championship	1 x 4wd place
#13	2nd placed in 2wd Championship	1 x 4wd place
#14	2nd placed in 4wd Championship	1 x 2wd place
#15	3rd placed in 2wd Championship	1 x 4wd place
#16	3rd placed in 4wd Championship	1 x 2wd place
#17	4th placed in 2wd Championship	1 x 4wd place
#18	4th placed in 4wd Championship	1 x 2wd place
#19	5th placed in 2wd Championship	1 x 4wd place
#20	5th placed in 4wd Championship	1 x 2wd place
#21	6th placed in 2wd Championship	1 x 2wd place
#22	6th placed in 4wd Championship	1 x 4wd place
#23	7th placed in 2wd Championship	1 x 2wd place
#24	7th placed in 4wd Championship	1 x 4wd place
#25	8th placed in 2wd Championship	1 x 2wd place
#26	8th placed in 4wd Championship	1 x 4wd place
#27	9th placed in 2wd Championship	1 x 2wd place
#28	9th placed in 4wd Championship	1 x 4wd place
#29	10th placed in 2wd Championship	1 x 2wd place
#30	10th placed in 4wd Championship	1 x 4wd place

## 12.11 Voting at a Race Meeting

### 12.11.1 Occurrence

During an RCCAOI race meeting, the race director may ask the competitors to assemble and vote by a show of hands on an issue (excluding appeal decisions) which cannot be solved by the officials alone.

### 12.11.2 Eligible voters

Votes may only be considered from competitors who have entered the respective event.

### 12.11.3 Majorities and decisions

In the case of where the voting procedure is invoked, the Race Director's decision should be supported by a 2/3rd majority of eligible voters. Where less than a 2/3rd majority is achieved, the race director's decision is final

## Appendix 1

### Additional Track Layout Guidelines

1. Hidden areas. The track must be laid out, where possible, so that there are no hidden areas when viewed from the rostrum. The use of “crossover” bridges are permitted as long as they are constructed that they do not trap cars.
2. Preventing corner cutting. Where the track marking is easily crossed, corner cutting must be discouraged by placing barriers of a suitable material which will not cause damage to the cars hitting them. Any barrier intended for this use should be placed outside the track lane marking hose or fixed apex (such as concrete curb). Corners are also to be of such construction that they will not trap the car.
3. The track width should be 2 meters wide where possible. The straight should be 2.5 Meters wide where possible. The straight is a minimum of 20 meters in length. However, if a 1/10th off road club has been racing on a track with some narrower lanes and a shorter straight, and the club have found it suitable, allowances must be made for this.

## Appendix 2

### Previous Winners

Year	2wd Modified	4wd Modified	2wd Clubman	4wd Clubman
2016	Dylan McBurney	Dylan McBurney	Jacek Zadrozny	Tony Dorney
2015	Denzell McBurney	William White	Kevin White	Tony Dorney
2014	Mark Penney	Bradley Baird	Kevin White	Graham Parkes
2013	William White	Derek McCloskey	-	-
2012	Mark Penney	Derek McCloskey	Ray Power	Alan Thompson
2011	Derek McCloskey	Derek McCloskey	Michael O'Leary	Ian Hunter
2010				
2009				
2008				
2007				
2006				
2005				
2004				
2003				
2002				
2001				
2000				
1999				
1998				
1997				
1996				
1995				
1994				
1993				
1992				
1991				
1990	Denzell McBurney	Denzell McBurney		