#### Bike Construction Rules - 2019

### 1.0 Racing Classes

- 1.1 Moto2 (Super Stock class) approved 17.5 turn brushless motors from the BRCA EB approved motors list at the time of publication on the BRCA website. G2/silver can brushed motor with the use of any brushed speed controller (LED flashing) during qualifying and finals
- 1.2 No front brakes or any mechanical brake on either wheel allowed
- 1.3 Only batteries listed in the Electric Board BRCA 2S Stick LiPo list as issued from time to time are allowed. Charging rate must be 1C or the maximum charge rate shown in the 2S Stick Lipo list, whichever is the greater.
- 1.4 No weight restrictions

# 2.0 1/5<sup>th</sup> Superbike Class (MotoGP Electric)

- 2.1 Any 10.5 Turn motor conforming to the BRCA EB approved motors list at the time of publication on the BRCA website run with a blinky/non turbo speed controller.
- 2.2 Front brake allowed
- 2.3 Any battery type allowed up to a maximum of 8.4v nominal including lithium polymer.

# 3.0 1.5<sup>th</sup> Nitro Class (MotoGP Nitro)

- 3.1 To have no restrictions to fuel tank or engine size or type.
- 3.2 No weight restrictions.

#### 4.0 Sidecar Class

4.1 Power source: Stock class motors from the BRCA EB approved motors list at the time of publication on the BRCA website may be used.

Nitro power source is open.

- 4.2 Overall size to be 435mm in length by 220mm in width maximum, sidecar chassis must fit within the shell.
- 4.3 Single rear wheel drive, single front wheel steering.
- 4.4 Any battery type allowed up to a maximum of 8.40v nominal including lithium polymer.
- 4.5 No weight restrictions.

#### 5.0 Construction Rules

### 5.1 Appearance

The essence of the sport is radio control motorcycle racing and as such all Bikes and Sidecars entered should be realistic in appearance, neatly finished, and complete with bodywork and rider, all of which should be painted.

All fairings, bodywork, seat units and rider figures should be to scale and appropriate in both style and colour. Scrutineering has the final decision as to what constitutes a reasonable representation and the penalty for failing to comply.

# 5.2 1/5<sup>th</sup> On Road Dimensions

Wheelbase - Max: 320mm Min: 280mm Rear Wheel Diameter - Max: 95mm Min: 80mm Front Wheel Diameter - Max: 95mm Min: 80mm

Any Tyre Width - Max: 35mm

Height of bike inc rider - Max: 300mm Min: 240mm

Weight - Unlimited

### **5.3 Sidecar Dimensions**

Overall Dimensions Length Max: 435mm

Width Max: 220mm

Height Max: 120mm including rider

Wheelbase - Wheels must fit within the sheel

Rear Wheel Diameter - Max: 63mm Min: 38mm Front Wheel Diameter - Max: 63mm Min: 38mm Sidecar Wheel Diameter - Max: 63mm Min: 38mm

Any Tyre Width - Max: 45mm Weight Unlimited

#### **5.4 Sidecar Construction Limits**

The track of the centre of the driving tyre can have a maximum offset of 25mm from the track of the centre of the front tyre.

Sidecar wheel can be positioned freely, but sidecar wheel centre must be in front of the driven wheel centre. Sidecar wheel steering by radio control is not permitted, but changes to steer and geometry due to suspension movement are allowed. At all times must conform to overall dimensions above.

## 5.5 Tyres

Any solo bike tyre specifically designed for bike use.

Sidecar tyres are open within dimensional limits.

Tyres must be black except for sidewall detail.

Non slimey and odourless tyre additive to be allowed, but only at circuits that allow it.

Tyre caps are allowed in all classes.

### 5.6 Brakes

Brakes either disc or drum are allowed in the 1/5 Superbike or 1/5 Nitro. Only braking via the speed control allowed in every other class.

#### 5.7 Transmission

In keeping with full size motorcycle design.

## 5.8 Body Shells and Rider Figures

The shape must be realistic, scale representations of actual racing motorcycles and sidecars although a generic design is acceptable, and must include a rider figure. Paint scheme is left open to each individual and models can be finished in the rider's own design.

# 5.9 Aerodynamics

Any form of aerodynamics aid not in keeping with the full size sport is not allowed. Fairing, body work and ride cannot be trimmed in a way that detracts from the bikes scale appearance.

Rider figures hands and feet may be trimmed to allow clearance to steering, primary drive and lean angle but arms and legs must retain realistic representation of a full body figure in a racing position.

# **5.10 Exhaust / Induction Noise**

The complete exhaust system should be contained within the confines of the body work and fitted in such a way as to minimise the risk of injury to marshals.

If any part of the exhaust / silencer system fails or becomes detached during a race the rider has to return to the pits immediately to have the problem rectified. Further laps with a noisy engine will result in a penalty decided by the Race Director, whose decision is final.

# 5.11 Battery / Charger

All Batteries used as the main power source to power a bike/sidecar during a race must be charged with an appropriate charger and charging profile.

All Batteries used as the main power source to power a bike/sidecar during a race must be charged inside a suitable fireproof container as to minimize the risk of damage.

### 6.0 Racing Rules

Any point brought up at a meeting not covered by these rules is to be rectified by a majority vote of committee members in attendance and must be confirmed by a vote at the next section conference.

#### 6.1 General Rules

Entrants can choose any number of classes to enter at each meeting, but must make sure proxy marshals are in place if needed.

All bikes to have correct numbers applied, any incorrectly numbered will be placed at back of grid.

All Qualifying heats are to be of at least 8 minutes long, but may be increased at the discretion of the Race Director if the schedule allows.

Qualifying is to be a rolling start up to 2 minutes before the start of the heat.

All Finals will be of 10 minutes duration.

Start flag to be used for Nitro Finals (sin Le Mans Format) on main straight if possible or suitable part of the track.

Electric Finals are to be a line start with a designated marshal for each heat, to be identified by the Race Director.

Starts are to be done as quickly and smoothly as possible, with a 30 second warning before the start by which time all bikes must be present for the starter to assemble the grid. Missing numbers or late arrival at the grid will result in a start from the back of the grid.

All Finals to be multiplies of 6 with the exception of the bottom Final which will cater for all those racers up to where there are enough racers to create another race of 3 or more.

All electric classes will be subject to a random voltage check on the way to the grid, any 2S lipo found to be over 8.40V will be deemed to have been charged incorrectly, and for safety reasons removed from the grid. The race or heat will not be held up for a battery change.

Booking in Process - The booking in and payment process to be followed when registering for a National meeting is on-line via the BRCA Booking In portal and in accordance with the Section cut-off dates for entries in the Handbook.

Making a Protest - All protests to be submitted in writing within 10 minutes of the end of the race and made to the Race Director of the Event and secured with the payment of £20.00 made to a member of the Bike Section Committee. All protests to be submitted on a BRCA Bike Section Protest Form (form to be provided). Copies of Protest Forms to be found in Section Race Folders

### 6.2 Points System

Points only to be scored from the finals, max 100 points for each separate race, e.g. then 98, 97, 96 etc.

At least one lap must be counted in a race to be eligible to score points.

Rookie Championship awards a trophy to the highest overall points scoring person not having done a BRCA Bike National before the start of the new season.

In the event of a Championship draw a count back on meetings where points counted, e.g. your 8 finals (4 rounds) would be used.

### **6.3 Racing Format**

For the first round of the new season, qualifying heats will be seeded from previous championship final standings, thereafter after the heats will be arranged in current Championship Order.

# 6.4 Tyre Warmers

Tyre warmers will be allowed in all classes.

### 6.5 National Meetings

#### 6.5a General Rules

The National Championship will be contested over 6 rounds, with 2 final races per meeting scoring separately, leading to a maximum of 12 individual race results for the season. The best 8 results will count, meaning that riders who can only attend 4 of the 6 meetings still have the opportunity to compete.

All national meetings consist of 4 qualifying rounds and 2 leg finals for all competitors

#### 6.5b

All Circuits hosting a national meeting must accommodate the following: Practice available on the Saturday.

Nitro heats.

Meetings to be run automatically and only stopped / interrupted by bad weather or emergency.

Marshal technique, duties and etiquette to be specified at the drivers briefing, including:-

- Marshals must wear a high visibility jackets where supplied
- Marshals must recover and launch the machines as instructed at Drivers Briefing
- Marshals must be in place by the announcement of 30 seconds prior to the race start and remain in position until Race Control indicates that the race is over and all vehicles have finished.

Penalties will be made for late, absent marshal or going missing before the 'Race Over' signal

Penalties include loss of FTD, followed by a 5 place grid penalty for persistent offenders. Exclusion from meeting remains the final sanction. This applies to stand in marshals also, but the penalties will apply to the pilot being accommodated not the substitute.

Penalties for poor conduct of any driver or his associated party at any National Meeting will result in loss of their FTD for the first offence, and dismissal from the event for a second offence.

Each venue will be required to supply a scrutineering area for machines and radios which shall be covered where possible.

Closing date for National Entry will be 23:59 on the Thursday preceding the event. Entry fee £25.00. Refunds will be given for no shows if notice is given via the BRCA booking-in portal or to a Bike Section Committee Member before 23:59 on Friday preceding the event.