



Official BMFA Rules

for the 2016 Queen's Cup for FPV Racing

As a BMFA competition, the Queen's Cup Competition must comply with the current edition of the BMFA General Regulations & Rules.

1 Competition General Rules

1.1 Entry

- 1.1.1 Entry to BMFA competitions is open to all and entry for this competition is in line with the BMFA General Rules & Regulations.
- 1.1.2 Entry to the event is not guaranteed until a competitor's entry fee has been received.

1.2 Arrival/Registration

Competitors will be required to check-in with the Competition Director (or designated check-in official) upon arrival.

1.3 Failsafe Checking

- 1.3.1 Competitors will be required to demonstrate a fully functioning failsafe (motors cut on loss of signal) before they are permitted to access the track.
- 1.3.2 All models must comply with the model specification rules and pass failsafe checking.
- 1.3.3 Each competitor is permitted a maximum of four models.

1.4 Competitor Insurance

- 1.4.1 All BMFA members must show a valid BMFA membership card.
- 1.4.2 Non-members without evidence of LMA or SAA membership will be enrolled as temporary BMFA members at £5 per person for insurance purposes.

1.5 Safety Briefing

- 1.5.1 All competitors, spotters & flight line coaches must attend the Safety Briefing, the time of which will be advised during registration.
- 1.5.2 Latecomers who miss the Safety Briefing will not be permitted to fly unless the Contest Director is able to arrange a further Safety Briefing for them.
- 1.5.3 Access to the track will not be permitted until a competitor has attended the Safety Briefing.

1.6 Track Status

- 1.6.1 The track will be open for inspection and 'track walking' only until the Safety Briefing.
- 1.6.2 Flying is not permitted on the track during this time.
- 1.6.3 The track will be 'live' once the Safety Briefing is complete and until the day's racing is over.
- 1.6.4 Access to a 'live' track will be granted only by the Contest Director or other Race Officials who will manage the competitors entering and exiting the track before and after each race.
- 1.6.5 Access to the track whilst there are models in the air is strictly forbidden Transgressors will be disqualified from the whole competition.

1.7 Flight Line

- 1.7.1 Competitors may fly only during their race and only from the designated Pilot Area.
- 1.7.2 Competitors not in the race must not interfere with the progress of any competitor in the race.
- 1.7.3 Competitors must only enter the designated Pilot Area as directed by the Contest Director or dedicated Race Officials.
- 1.7.4 Access to the flight line will be closed once the countdown starts

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1.8 Flight Line Coaches

- 1.8.1 Competitors may appoint a flight line coach to provide support during a race.
- 1.8.2 Flight line coaches must be present before the race countdown starts.

1.9 Spotters

- 1.9.1 The pilot will be paired with a 'Spotter' (usually another competitor), whose sole responsibility it is to fulfil the 'competent observer' role.
- 1.9.2 A competitor will be required to spot for the race following their own. Any alternatives to this arrangement will be announced during the Safety Briefing.
- 1.9.3 Flight line coaches may optionally replace the appointed spotter where permitted
- 1.9.4 Spotters must be present at the flight line before the race countdown starts.
- 1.9.5 Failure to spot (or to provide a suitable substitute) as required will result in forfeiture of a competitor's best round score.

1.10 Local Rules

- 1.10.1 Other than competitors' video transmitters (see rule 4.14), 5.8 GHz transmission **of any kind** is prohibited over the whole site for the duration of the competition. Transgressor will be ejected from the site.
- 1.10.2 Unforeseen circumstances may require other local rules to be applied and these must be publicised in advance or announced at the Safety Briefing.

2 Model Specification Rules

2.1 Class

- 2.1.1 The competition for the Queens Cup will be for 250 class aircraft only.
- 2.1.2 Model dimensions are 300 mm maximum diameter across motor shaft centres.
- 2.1.3 Propellers must be 6 inches maximum diameter.
- 2.1.4 Metal propellers are prohibited.

2.2 Airframes

- 2.2.1 The maximum number of motors is six.
- 2.2.2 Motor tilt is permitted up to a maximum of 15 degrees from the vertical.

2.3 Batteries

- 2.3.1 The maximum permitted battery size is 4S.
- 2.3.2 The competitor is responsible for charging batteries safely and within manufacturers' guidelines.

2.4 Radio Control Equipment

- 2.4.1 2.4GHz wideband spread spectrum control only.
- 2.4.2 The competitor is responsible for compliance with regulatory and legal requirements.
- 2.4.3 UK legal equipment must be used.

2.5 Video Equipment

- 2.5.1 5.8GHz RaceBand single channel analogue video only, maximum output power 25mW.
- 2.5.2 The competitor is responsible for compliance with regulatory and legal requirements.
- 2.5.3 UK legal equipment must be used.
- 2.5.4 Dual channel video transmitters (eg Skyzone 3D) are prohibited.
- 2.5.5 Audio may be used where available but the competitor must ensure that he can still hear all race and safety announcements.

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2.6 Electronic Timing Equipment

- 2.6.1 The AMB-compatible I-LapRC system will be used for timing.
- 2.6.2 Competitors using Organiser hand-out transponders will be responsible for providing an appropriate 5V connection for the I-LapRC system and for fitting their transponders in time for each race.
- 2.6.3 Competitors using their own transponders are responsible for ensuring that they work with the timing equipment.
- 2.6.4 In the event of a transponder ID clash, the I-LapRC transponder will be given priority and it will be the responsibility of any competitor using a compatible transponder to switch to an alternative ID.
- 2.6.5 See also 4 Competition Procedures, clause 4.15 Transponder Management.

3 Track Specification

3.1 Track Area

- 3.1.1 The track area consists of the track plus any safety features that separate it from spectators, competitors and race officials.
- 3.1.2 The track area is the only area within which models may be flown and must be clearly defined to prevent unauthorised access.
- 3.1.3 Additional Race Officials who will be in direct contact with the Contest Director may be positioned around the course and they have authority to halt the race should an incident occur. It is the Contest Director's responsibility to ensure the safety of the Race Officials deployed in these cases.

3.2 Track Design

- 3.2.1 Turns shall be marked by a clearly visible turn flag.
- 3.2.2 Sharp or high speed turns shall be directed away from the competitor or spectator areas.
- 3.2.3 The circuit shall consist of at least six air gates, and six turn markers and may include special obstacles to be crossed or avoided.

3.3 Standard Air Gates

- 3.3.1 Air gates shall have a minimum opening that is 2.08 m wide and 1.3 m high.
- 3.3.2 Air gates placed side-by-side count as one.
- 3.3.3 Air gates must contrast with the background and be visible with standard FPV video equipment at a distance of 30 m.

3.4 Standard Turn Markers

- 3.4.1 Turn flags and pylons shall be between 2.4 m and 5.0 m high.
- 3.4.2 Multiple markers may be used to designate high speed turns.
- 3.4.3 Turn markers shall contrast with the background and be visible with standard FPV video equipment at a distance of 30 m.

3.5 Special Obstacles:

- 3.5.1 Special obstacles must be of a height that is appropriate for the venue.
- 3.5.2 Special obstacles that are designed to be avoided must be constructed using impact-absorbing materials on their leading edges to minimise damage to models.
- 3.5.3 Special obstacles must contrast with the background and be visible with standard FPV video equipment at a distance of 30 m.

3.6 Track Markers

- 3.6.1 The circuit shall be marked out along its length using either a single or double row of track markers.
- 3.6.2 Direction-of-travel markers must be used if competitors are at risk of accidentally leaving or crossing over to an adjacent section of the track.
- 3.6.3 Track markers must contrast with the background and be capable of defining the track with standard FPV video equipment at a distance of 30 m.

3.7 Start Grid

The start grid shall be placed on the racing circuit, parallel to the racing line at a point with easy access from the flight line.

3.8 Landing Zone

A separate landing zone shall be designated to provide a safe area within which competitors who have completed their race can land without fear of obstructing competitors who are still racing and without causing video interference.

4 Competition Procedures

4.1 Competition Format

4.1.1 The competition will consist of Qualifying races, Finals and a Grand Final. There will be a Minor Final for those competitors who do not qualify for the Finals.

4.1.2 Competitors have to complete as many laps as possible within the declared race duration.

4.2 Race Duration

See clause 4.5.5.

4.3 Race Start

Races will begin with a mass start for all stages of the competition

4.4 Mass Start

4.4.1 A linear start grid long enough to maintain a minimum separation of one metre between models shall be used.

4.4.2 Models must start entirely from within the start grid.

4.4.3 Competitors shall not start until the start signal is given.

4.5 Heats

4.5.1 Heats will consist of a maximum of six competitors.

4.5.2 If the total number of competitors cannot be divided equally by the heat size, the Contest Director will distribute the remainder of the competitors at his discretion.

4.5.3 Heat sizes will remain the same throughout all the stages of the competition.

4.5.4 Competitors will remain in the same numbered heats throughout the qualifying stage and the heat order will remain the same for each round.

4.5.5 Heats for all stages of the competition will be of two minutes' duration.

4.6 Seeding

4.6.1 Qualifying: The national rankings table will be used to group competitors by similar ability.

4.6.2 Finals: The first elimination round will be seeded from the overall qualifying results. Subsequent elimination rounds will be seeded only on the results of the previous round.

4.6.3 Grand Final: All the competitors will be seeded equally.

4.6.4 Minor Finals: All competitors will be seeded from the overall qualifying results. The number of Finals races in the Minor Finals will depend on the number of qualified competitors.

4.7 Qualifying Race Format & Scoring

4.7.1 Competitors will have a minimum of three rounds in which to score points that will be used to calculate their qualifying position.

4.7.2 If more than three qualifying rounds are held, points from the best three rounds will be used to calculate each competitor's qualifying position.

4.7.3 Qualifying races will be scored using the Round-by-Round (R-b-R) scoring system.

4.7.4 Competitors will be awarded points for their position in each round. First place in each round will score 1 point, second place will score 2 points, third place will score 3 point and so on.

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4.7.5 In the event of a tie, it shall be broken by the competitors' second best results and so on until the tie is broken. All valid rounds are to be taken into account.

4.7.6 If competitors are still tied after all the rounds are taken into account, then the competitor who completed all the laps in a single round in the fastest time will be awarded the position.

4.8 Finals Race Format

4.8.1 Finals will be an elimination stage for the top 24 pilots and will consist of Quarter-Finals and Semi-Finals leading to a single Grand Final.

4.8.2 Competitors finishing outside the top 24 will go forward to the Minor Finals.

4.9 Finals Race Scoring

4.9.1 The winner of each elimination round, and the winner of the Grand Final, will be the competitor who records the greatest number of complete laps in the declared race duration.

4.9.2 If no competitors complete a single lap then the race will be re-started.

4.9.3 If, after a re-start, no competitor completes a lap then the competitor who makes it furthest around the course will be the winner.

4.9.4 In the event of a tie in races of complete laps, the tie will be broken by the competitor who completes all the laps in that race in the fastest time.

4.9.5 If the tie still exists, then it will be broken by the competitor with the fastest recorded single lap time of that race and so on until the tie is broken.

4.9.6 All remaining places in both the elimination rounds and the Grand Final will be calculated according to these same rules.

4.10 Minor Finals Race Scoring

See clause 4.9.

4.11 Adjustments

4.11.1 If race timings have to be adjusted to take into account imposed penalties then the Qualifying R-b-R positions, the Finals elimination rounds winners, the Grand Final winner and the Minor Finals rounds winners, and subsequent places will be re-calculated from the adjusted times.

4.11.2 No announcement of the winners, and podium places if appropriate, will be made until any adjustments have been accommodated.

4.11.3 All results are provisional until verified after any adjustments.

4.12 Frequency Scheme and Management

4.12.1 The video frequency scheme shall be as described in 2.5.

4.12.2 All competitors will be required to support all legal RaceBand frequencies and, with reasonable notice, will be expected to be able to switch to any alternative frequency in order to facilitate a fair racing format.

4.12.3 It is the responsibility of each competitor to ensure that he can set his allocated frequency.

4.12.4 Competitors may be subject to a random video transmitter inspection by the Contest Director.

4.13 Frequency Discipline

4.13.1 Video transmitters may only be powered on whilst a competitor is racing or at the trackside and readying his equipment during the interval before his next race.

4.13.2 Video transmitters are to remain **off** at all other times, unless permission is granted by the Competition Director.

4.13.3 No other 5.8 GHz transmission **of any kind** will be permitted anywhere on site for the duration of the competition. Competitors found contravening this rule will be disqualified from the competition and may be ejected from the site.

4.14 Transponder Management

4.14.1 It is the responsibility of each competitor to ensure the fitting of a transponder so that laps can be counted by the timing system. The Contest Director will assist where necessary to ensure that the transponder is functioning properly.

4.14.2 Personal transponders are permitted where software allows and they must be I-LapRC compatible.

5 Penalties

5.1 Penalties will be incurred by any competitor deemed by the Contest Director or Race Officials to have intentionally violated the rules or exhibited unsportsmanlike behaviour.

5.2 Penalties may be escalated upon repeated infractions.

5.3 Disqualification from the whole competition nullifies any points already scored.

5.2 Table of Infringements & Penalties

Infringement	Penalty
Jumping the start	Must land and wait for all other competitors to pass before continuing.
Missing a gate:	Must retry the gate without obstructing other competitors; competitors who are not retrying a gate have right of way.
Missing a corner	Must retry the corner without obstructing other competitors - competitors who are not retrying the corner have right of way.
Missing agreed spotter duty	Forfeiture of the competitor's best round score
Accessing the track without permission while models are in the air	Disqualification from the whole competition and ejection from the site.
Accessing the track without permission	Verbal warning. A second violation will be penalised by disqualification from the whole competition and ejection from the site
Flying dangerously	Disqualification from the heat.
Further flying dangerously	Disqualification from the whole competition and ejection from the site.
Switching on a video transmitter without permission	
Deliberately causing another competitor to lose video	
Flying outside the designated track area	A verbal warning. A second violation will be penalised by disqualification from the whole competition and ejection from the site
Not following explicit instructions such as "to land immediately"	
Unsportsmanlike behaviour	Disqualification from the whole competition and ejection from the site. Post-competition penalties may be applied.
Other flagrant breaches of the rules.	Disqualification from the whole competition and ejection from the site.

6 Official Practice

6.1 Practice format

The Contest Director will announce the practice format during the Safety Briefing.

6.2 Minimum practice time

6.2.1 All competitors are entitled to the same amount of practice time to aid familiarisation with the track and which will be conducted during officially designated practice sessions.

6.2.2 The Contest Director will take all reasonable precautions to prevent access to the track outside of the designated official practice sessions.

6.2.3 The Contest Director shall set a limit for each competitor to ensure that all competitors get a chance to practice.

6.2.4 The Contest Director may provide an official track-walking session. Flying is not permitted during any track-walking session.

7 Protests & Appeals

7.1 Protests and Appeals are those laid down in the current edition of the BMFA General Rules, clause 2.3.9, paragraphs (a) – (h) and reproduced here for ease of reference:

- (a) It is the right of a competitor to protest against any decision by a Contest Director(CD). Any such protest, however, must be made officially to the CD and must be made on the day The protests and appeals procedure to be followed at the contest is also set out in the General Rules section of each of the Contest Rule Books. In the event of discrepancies this rule shall take precedence.
- (b) If not satisfied with the CD's decision the competitor must, on the day, hand the CD the protest in writing, together with a fee of double the standard entry fee. The CD will then immediately empanel three appropriate persons to deal with the protest.
- (c) The panel's decision is final, subject to the right of the competitor who submitted the protest to appeal to the BMFA Council
- (d) Appeals to Council about a decision made at a contest must be made as follows:
 - (i) Notification that an appeal is pending must be sent to the BMFA Competition Secretary to arrive not later than two weeks from the date of the contest.
 - (ii) The appeal itself, together with any supporting evidence, must be sent to the BMFA Competition Secretary to arrive not later than two months from the date of the contest
- (e) Protests made to Council after the contest may only be made direct to the BMFA Competition Secretary who, after considering the details of the protest, may bring such protests to the attention of BMFA Technical Council. Notification of an "after the contest" protest must be made to the Competition Secretary within 7 days of the contest and the protest and evidence submitted not later than two months from the date of the contest
- (f) Protests or appeals arising from a decision made by a Technical Committee on contest related matters may only be made directly to the Competition Secretary and must be accompanied by a £50 fee. The Competition Secretary will then convene a Panel comprising three Technical Committee Chairmen and not including the Chairman of the Technical Committee concerned. This Panel, plus the Competition Secretary, will study the appeal and examine the reasons for the Technical Committee's decision.
- (g) If the protest or appeal is not upheld, then the appellant(s) must be informed of the reasons for the decision. This procedure does not preclude an appellant(s) taking a failed protest or appeal to the BMFA Full Council.
- (h) If the written protest or appeal is upheld, the protest fee will be returned, however if the protest or appeal is unsuccessful the fee will be allocated to the team travel fund of the relevant discipline.

8 Interruption Procedures

8.1 Abandonment Criteria

8.1.1 In the event of an isolated transient incident, any single heat may be abandoned and restarted at the discretion of the Contest Director.

8.1.2 In the event of a prolonged interruption (eg adverse weather conditions) the Contest Director shall consult with the Contest Organiser to decide if racing can continue.

8.2 Abandonment and Qualifying Competition eligibility

8.2.1 If at least three rounds of qualifying races have been completed at the point of abandonment then the results shall be accepted as the final result.

8.2.2 If fewer than three rounds of qualifying races have been completed at the point of abandonment then the competition must be declared void and will be re-run for the same competitors at a later date.

8.3 Competition Re-Run

Any re-run competition must meet the same criteria as the abandoned competition.

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