

# **BMFA Free Flight Tech Committee News. Issue 117**

**All correspondence re this news to the FFTC Secretary:**

Stephen Philpott, 14 Durley Drive, Sutton Coldfield, B73 6QT. Tel 0121 354 4448 mob 07939 205047. Email srphilpott@aol.com

The FFTC held an internet virtual Zoom meeting from their homes on 29 September 2021.

## **FFTC 2021 CALENDAR**

### **BMFA FREE FLIGHT AND SPACE CALENDAR 2021 Publication V10.0**

**Please note that Space events appear on this calendar as they are the responsibility of the FFTC. They are not part of the Overall British Free Flight Championship**

**Please also note that ONLY Team Selection events are subject to postponement due to unsuitable weather**

**Changes to version (9.0 ) shown in RED**

Start date	Event	Classes	
3 October	7th Area - Team Rubber Day	CG, Team CR (Farrow Shield, Plugge), CE, F1C (Buskell), Classic RP (Plugge), Classic G (Plugge), H/CLG	Contact: Area Comp Secs.
17 October	8th Area - Team Glider Day Venue: Area Venues	Team CG (Model Engineer, Plugge), CE, F1B (Duce, Plugge), SLOP (Frog Senior, Plugge), Mini Vintage, H/CLG, E30	Contact: Area Comp Secs.
21-24 October	6th F1E Venue: Peak District or Melton Mowbray	F1E One or two events to be flown in the period according to conditions and site availability. <b>No Longer Team Selection Reserve Dates.</b>	Contact: Ian Kaynes 01252 512538 kaynes@btinternet.com
30 October (Saturday)	Midland Gala + Team Selection Reserve Venue: Barkston Heath	F1H, F1G, 1/2A, E36, SLOP, Mini Vintage, P30, H/CLG, CO2.	Contact Phil Ball 07470177947 Phil.ball@ntlworld.com
30 October (Saturday)	Space Team Selection 2 <sup>nd</sup> Reserve Venue: Barkston Heath	S1A, S3A, S4A, S6A, S9A	Trevor Seabrook 07899 030875 contacttrevorseabrook@gmail.com

## **TEAM MANAGEMENT FOR 2022 CHAMPIONSHIPS**

Applications are invited for the posts of Team Manager and Assistant Team Manager for the 2022 European Championships for F1A, F1B and F1C to be held August 15 – 21 at Prilip, North Macedonia.

Applications are invited for the Team Manager for the F1E European Championships to be held July 31 – August 5 at Turda, Romania.

Closing date for applications to be received is December 31 2021.

## RULE CHANGES FOR 2022

### FFTC – Rule Changes Information update

We have received a number of suggestions for rule changes which have been discussed over a couple of FFTC meetings, some have been agreed and adopted (see below) we agreed that others require further debate and consideration.

**Rule Changes Agreed 2022 – FFTC has unanimously agreed to amend the following to come into effect at the start of 2022:**

#### Free Flight Rule Book

##### 3.1.4.3 Fly-Offs

- (a) (i) Competitors who score a maximum on every flight are entitled to make an additional flight
- (ii) If two or more competitors score the same total time then, at the discretion of the CD and when the competitors concerned have been notified, they shall be entitled to make a further additional flight.
- (iii) The additional flights will determine the order of placing. These flights will be subject to the attempt rule 3.1.6, and must be made in a five-minute period specified by the CD.
- (b) In Area contests any competitor returning a maximum score for each of his official flights should make this additional flight even if no other maximum score has been returned in his Area; the additional flight must commence within the hour following the close of the contest and must commence within 10 minutes of the starting signal being given.
- (c) At Area contests the additional flight(s) must commence within the hour following the close of the contest and must commence within five minutes of the starting signal being given.
- (d) For all Rubber classes - there is no restriction on when a model can be wound.**

##### 3.1.8.3 Timekeepers

**(d) The start and finish of a flying period is marked by a continuous audible signal (circa 3 seconds). The start is from when the sound begins and the end of the contest or round when the sound ceases.**

##### 3.1.6.3 Unsuccessful Attempts

An unsuccessful attempt is defined as one in which either:

- (a) The model collides with a person (other than the person who launched it) when being launched.

- (b) During towing the model collides with a model in free flight (but not with a model being towed or a towline) and the towing cannot continue normally.
- (c) During the flight the model collides with another model or tow line.
- (d) A timekeeper fails to record the time of flight or motor run due to circumstances which, in the opinion of the CD, are beyond his control and unless there is other evidence of the time which is acceptable to the CD.
- (e) **At F1E events for which site rules require a flight observer to watch for people entering the flight volume, if the flight observer identifies that people have appeared during a flight and may be endangered by the model the competitor should use radio DT (if available) to terminate the flight. The competitor may demand that the flight be accepted as an official flight.**

In the case of (a), (b) and (c) above, should the model continue its flight in a normal manner, the competitor may demand that the flight be accepted as an official flight, even if the demand is made at the end of the flight.

## **FAI Outdoor Free Flight Rules – Clarifications.**

The FAI rule concerning the **wind speed** at which a contest may be interrupted is FAI Sporting Code, Section 4, Volume F1, rule F1.5.2 which states:

The interruption of contests is defined in CIAM General Rules C.17.2. For Free Flight contests the contest should be interrupted when the wind measured at two metres above the ground at the starting line is stronger than 9 m/s for at least 20 seconds.

The following is the definitive FAI method of measuring surface area and is taken from the FAI Sporting Code, Section 4, Volume CIAM General Rules, rule B.4.22

The surface area includes the total surface of the wings and that of the horizontal or oblique stabilising surface or surfaces. The surfaces taken for calculation are the orthogonal projection on to a horizontal plane of the surfaces in question with each surface at zero incidence (ie place the wing on a flat surface with the tips propped up at the correct dihedral angle and then project its outline vertically downwards on to the flat surface - Ed).

When wings or stabilising surfaces are built into the body of the aeroplane the surface taken into account shall include that area contained within the normal contours of the flight surfaces extended so as to meet at the plane of symmetry of the model.

**When flying a FAI class of model – Precedent dictates that BMFA Rules apply. FAI Rules only apply where a specific rule is not detailed/specified within the BMFA Rules.**

### **3.2.4.1 Team Selection F1A, F1B, F1C and F1P (See also General Rule Book rule 2.1.3)**

- (e) The competition (over two days) shall cease after a maximum of ~~10~~ **7** rounds (not including fly offs). A minimum total of five rounds must be completed at the competition for the team selection process to be valid.

### **3.1.13 Club Championship**

- (a) The Club Championship is awarded annually to the club gaining most points in the Combined Glider, Combined Rubber, **Combined Electric** and Combined Power or BMFA Glider, BMFA Rubber, **BMFA Electric** and BMFA Power competitions at a BMFA Centralised competition. The competition to be used in any year will be specified in the Competition Calendar for that year.

### **3.1.6 Attempts For Official Flights**

**Attempts are of three types;**

- Scoring
- Non-scoring
- Unsuccessful

**The first non-scoring attempt for a flight may be repeated. An unsuccessful attempt may be repeated without penalty.**

**The duration recorded for a flight is**

**a) the time recorded for a scoring attempt**

**b) the time recorded for a first attempt which was non-scoring for reason 3.1.6.1(d) and a second attempt has not been made**

**c) the time recorded on the second attempt if this was non-scoring for reason 3.1.6.1(d)**

**d) all other non-scoring attempts result in a zero duration.**

### 3.1.6.1

#### **Scoring Attempts**

For any flight to qualify as a scoring attempt it must be launched using the method appropriate to its type. ie. Towline launched Gliders must be towed; Rubber powered models must have their motors wound and be running at or shortly after launch; I.C. Power, Electric and CO<sub>2</sub> models must have their motors running; Hand launched Gliders must be hand launched and Catapult Gliders must be catapulted.

**Scoring attempts are defined as flights which do not classify as a non-scoring attempt or an unsuccessful attempt.**

**In addition:**

**a flight by a glider that is under 20 seconds and is terminated by dethermalising will score the actual time recorded (except for Hand Launch Glider and Catapult Glider, and for F1A and F1E when flown in contests solely for the F1A or F1E class).**

**Note: For a flyer to appear in the results he must return a score greater than zero.**

### 3.1.6.2

#### **Non-Scoring Attempts**

Non-scoring attempts are defined as;

- When the engine of a mechanically powered model runs for more than the prescribed time. The engine run shall be deemed to have terminated at the time when all audible noise from the engine ceases.
- When a glider still attached to its launching cable touches the ground or an object except as detailed in 3.1.6.3.
- When some part of the model (except for rubber bands or equivalent restrainers used for thermaliser equipment) becomes detached during the launch or in flight.
- When a flight is of less than 20 seconds **unless overruled by the glider exception in 3.1.6.1 above** as detailed by the glider exception in 3.1.6.4 above.

### 3.1.6.3

#### **Unsuccessful Attempts**

An unsuccessful attempt is defined as one in which either:

- The model collides with a person (other than the person who launched it) when being launched.

- (b) During towing the model collides with a model in free flight (but not with a model being towed or a towline) and the towing cannot continue normally.
- (c) During the flight the model collides with another model or tow line.
- (d) A timekeeper fails to record the time of flight or motor run due to circumstances which, in the opinion of the CD, are beyond his control and unless there is other evidence of the time which is acceptable to the CD.

In the case of (a), (b) and (c) above, should the model continue its flight in a normal manner, the competitor may demand that the flight be accepted as an official flight, even if the demand is made at the end of the flight.

## General Rule Book

Amendments to FAI model Identification will be added.

**Others for discussion/ debate – We welcome the wider Free flight Communities opinion on the following 4 proposals to assist us in deciding whether to amend our current rules.**

### 1. Proposal for Classic Glider events only - to reduce the towline length to 50m.

The reasons stated:

*“Currently, Classic G is essentially a copy of BMFA Glider, but if flown on 50 metres could employ a 2 minute max, making it a viable second- string class on reasonable weather days.*

*Models would be much less likely to outfly venues.*

*Most of the eligible models were originally flown on 164 ft. lines and therefore this would be closer to the 'spirit' of the original period.*

*Classic A1 gliders now probably outnumber 'big' Classics in the UK and could constitute an informal classification (I would be happy to administer this), increasing participation.*

*Classic G. has been flown to this format for many years at the Oxford (and more recently Buckminster) Galas and proven to work very well.*

*Note that this would apply only to single- category Classic G events because in Combined contests all Classics are automatically eligible to 75 m. by virtue of being straight- tow non- bunters”.*

Note: The initial FFTC stance is that the current Rules should not be altered

## Proposal regarding F1Q UK Electric

*“Currently we allow a full motor and energy allowance in fly-offs. This seems pointless when the FAI rules require a reduced motor run and energy allowance. Further when staying within site limits is seen as desirable it would make sense to follow the same reductions in motor run and energy allowance.”*

The reasons stated:

### 3.3.5 Characteristics of Electric Motor Driven Models (Class F1Q UK)

The requirements for F1Q UK are as F1Q (3.3.4) above except that:

- a) For all UK domestic competitions (not UK internationals) competitors may use either an energy limiter or a timed and measured motor run as below:

The motor run will be controlled by a timer. The motor run, in seconds, is calculated by dividing the permitted energy amount by the measured power rounded down to the nearest whole second. The power measurement process should be carried out with a

Wattmeter and a fully charged battery: When the motor has been started and has reached full power, the start button is released (the normal moment of launch) and the power measurement taken at 'half' the time to motor cut-off. The final calculated motor run should be clearly marked on the model. The motor run time will be checked statically, on the ground. The motor run will not be timed in flight.

- ~~b) In addition for UK Combined Electric competitions only fly offs will be made using a 30 second motor run limit and a 3 Joule energy amount.~~

### Proposal regarding BMFA Electric

The reasons stated:

*Currently we allow full motor runs in fly-offs. This seems to be counter to staying within site limits which is seen as desirable. it would make sense to follow the same reduction in motor run allowance as has been shown to work very effectively in the E36 electric class.*

#### 3.4.4 Electric Class (BMFA Electric)

- (a) Maximum weight of batteries

Ni Based..... 120 grams

Li Based ..... 90 grams

- (b) Motor run, maximum time from launch:

For Brushed motors (no functions) ..... 15 seconds, Fly off..10 seconds

For Brushed motors (with functions)..... 12 seconds, Fly off... 8 seconds

For Brushless motors (no functions) ..... 12 seconds, Fly off... 8 seconds

For Brushless motors (with Functions) ..... 10 seconds, Fly off... 6 seconds

- (c) No camber changes to wings or tails, surface area changes or bunt functions are permitted.

- (d) Safety locks must be used to prevent unintentional restarting of motor(s) after the motor(s) have been stopped.

- (e) Timing of motor run:

The motor run is to be verified by the timekeeper check timing on the ground before flying. The motor run will be deemed to begin when the motor timer starts and end when the prop ceases to rotate. The timekeeper must mark the flight card to affirm this (it is only required that the ground timing procedure is carried out before the first flight), unless the motor run needs to be changed when the process must be repeated. The motor run shall not be checked in flight.

### 4. Proposal regarding E36 Electric

The reasons stated:

*Currently we allow an extended motor run for this class when it is flown in Combined Electric contests. Originally this was seen as necessary to provide some equality against the other classes flown in these contests. The present state of development in the E36 class has now made this unnecessary. Hence it would be sensible to remove this extended motor run.*

#### 3.5.11 Class E36 Electric

- (a) Model specification

Maximum projected wing span ..... 36 inches

Minimum total weight (ready to fly) ..... 120 g (4.24 oz)

Maximum cells permitted ..... Lithium - 2 cells; Nickel - 6 cells

Any type of motor, gearbox and prop is permitted.

No timed moving surfaces, apart from dethermalisers, are permitted.

(b) Contests shall be run as follows:

Three flights to be made with a 10 second motor run. If the maximum is reduced (due to prevailing conditions) the motor run will still be 10 seconds.

If all three flights score maximums a fly-off will be made with a five second motor run (as per rule 3.1.4.3).

All motor run timing will be as 3.4.4(e) (BMFA Electric)

~~When E36 models are flown in Combined Electric contests the motor run will be 15 seconds for all flights including any fly-off.~~

Please email your comments and observations to [mark.benns@btinternet.com](mailto:mark.benns@btinternet.com) by 19<sup>th</sup> October. We intend to resolve these last four items for the start of 2022 season, however this will be dependent on the responses received and the FFTC ability to meet and decide on the outcome.

Mark Benns

FFTC Rules Officer