



BRITISH MODEL FLYING ASSOCIATION
CONTEST RULES
SECTION 3
FREE FLIGHT
OUTDOOR AND INDOOR

To be read in conjunction with the General Rules, Sections 1 and 2, which are available free of charge from the BMFA

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FREE FLIGHT RULES

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Note: FAI class rules have now been deleted from this rule book, where they were a direct copy of the FAI Sporting Code. The FAI Sporting Code can be downloaded at www.fai.org/fai-documents#, then click on 'Section 4 Aeromodelling. They can also be obtained from the BMFA Head Office.

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NOTES

New Rules

For ease of reference, new rules and rule changes are denoted by a side bar as at right

Gender

Words of masculine gender should be taken as including the feminine gender unless the context indicates otherwise.

Synopsis of changes in this issue:

OUTDOOR

3.1.17 Ballast moved to 3.1.1(d)

Minor changes to 3.1.4.1, 3.1.4.3, 3.2.4.1, 3.2.4.2, 3.7.4, 3.11.1, 3.11.8, 3.18 and 3.47

New paras. 3.1.9.3(iv), 3.1.17, 3.1.18 and 3.2.4.1 (j) added

3.5.Q completely changed

3.49 re-numbered 3.14

INDOOR

Minor changes to 3.60.6 and 3.60.15 (now renumbered 3.60.16)

New class included as 3.60.13 and subsequent paras

Paras 3.60.13 to 3.60.15 renumbered to 3.60.14 to 3.60.16.

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 ABR, Section 4B rule B.15.1.(a) which states:

A contest should be interrupted if 'the wind is continuously stronger than 9 m/sec (for free flight), measured at 2 metres above the ground at the starting line for at least 20 seconds, unless specified otherwise in the category rules'.

The following is the definitive FAI method of measuring surface area and is taken from the FAI Sporting Code, Section 4, Volume ABR, Section 4C rule 1.4.1

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 (i.e. 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.

3.1 FREE FLIGHT GENERAL RULES

These rules apply to all Free Flight classes except where varied by special regulations.

3.1.1 Definitions

(a) Free Flight

- (i) A flight where there is no physical or any other connection with the model after the flight has commenced. This prohibits the use of transmissions of any type to the model in flight for the purposes of controlling any of its functions, except as noted below.

The use of a single transmission to the model is permitted for DT in all classes and for motor stop in IC and Electric classes only. This single transmission is only permitted for once-off, irreversible actions. If the single transmission is used to extend a preset DT time there may be no further transmission to the model.

The use of the 40 MHz, 35MHz and 27mHz transmission bands is specifically prohibited. The FFTC recommends the use of the 2.4 GHz band.

- (ii) Outdoor contest flights must take place outdoors.

(b) Builder of the Model

- (i) Outdoor Free Flight

This rule no longer applies to any event featured in the Official BMFA Free Flight Calendar unless required by the individual class rules e.g. Bowden Class.

Joining of materials used in the construction of the model, together with unsupported covering, finishing and painting must be solely the work of the contestant.

The following items may be of any origin:-

Engines, motors and their accessories, wheels, timers, tow-hook assemblies, electronics and batteries of any sort, propellers, propeller assemblies with or without blades, wing and tail mounts, fuselage tubes and booms, trim adjustment assemblies and spars and any other items made of metal or in one piece of plastic (plastic to include fibre/resin mixtures and foam).

In the event of a protest, or, in the Contest Directors opinion, there is the suspicion of any infringement, the contestant in question may be required to describe to the CD's satisfaction how a component or components were made by him.

Although this request may be made at anytime, it must not be allowed to delay, interrupt or upset flying, and answers can wait until after the end of the contest. The penalty for transgression of this rule will be disqualification from the contest.

The CD is at liberty to delegate his responsibility in this matter to a jury of three other contestants selected at random. At all times the contestant under scrutiny retains his right to appeal to the BMFA Council.

- (ii) Indoor Free Flight

The entrant must be the constructor of the model. The constructor may employ generally available building aids or small components in the production of their model but the airframe must be the competitor's own work.

(c) Ownership of Models

The entrant must be the owner of the model before the start of the contest. Ownership of the model shall require that the owner's BMFA number, and/or FAI Licence number, shall be permanently displayed on the model in accordance with General rule 2.3.12. If the model has been previously owned then any numbers arising from this previous ownership shall have been permanently removed.

(d) Ballast

When it is necessary to use supplementary ballast to obtain the stipulated weight, this must be located internally in the machine and fixed in a permanent manner. When moveable ballast is used to regulate the centre of gravity position the model must be of the specified weight without the moveable ballast.

3.1.2 Number of Models

- (a) Competitors may use 2 models for 3 flight events, 3 models for 5 flight events, and 4 models for more than 5 flight events. Competitors in F1E may use five models in any event. Additional models shall not be allowed in fly-offs.

Free Flight Technical Committee clarification - Flyers should be aware that they may utilise any combination of models that they wish within the numbers allowed. For instance, in a three flight event, they may make their three qualifying flights with one model, reserving their second model solely for a fly-off if needed.

- (b) Various parts of models may be interchanged providing the resulting complete model conforms to the rules of the contest. The competitor may use spare propellers, rubber motors, piston engines, electric motors or batteries. No individual engine or electric motor may be used by more than one competitor in a particular contest.
- (c) Repairs are permitted provided they do not in any way alter the specification of the model as defined in the rules.
- (d) In the event of a model being eligible for two or more contests held on the same day, separate flights must be made for each contest. Before making a flight or an attempt at a flight, competitors must declare for which contest the flight or attempt is to count.

3.1.3 Number of Flights

Each competitor is entitled to make three official flights (except where the rules state otherwise). If required a further flight or flights may be made to determine final placing in the contest (see 3.1.4.3).

3.1.4 Scoring

3.1.4.1 Maximums

- (a) The duration of flights will be used for scoring purposes with a maximum of three minutes being recorded for all but fly-off flights (unless specified otherwise in the special rules governing the contest). For Area centralised contests the maximum shall be two and a half minutes unless a lower maximum is already specified in the special regulations governing the class. Before the start of a centralised contest the Contest Director (CD) may vary the maximum to suit conditions but once the contest has started no variation is permitted. The maximum for FAI contests may be varied to suit the conditions before the start of any round.
- (b) In F1E contests the maximum will be any time up to 5 minutes as indicated by the CD before the start of the round concerned.

3.1.4.2 Final Classification

- (a) The aggregate of the competitor's official flight times including fly-offs if required (as specified in 3.1.4.3) shall decide his final placing in the contest
- (b) In F1E contests, scoring will be as a percentage of the maximum time, or (if no maximum is scored) of the highest time scored in the round.

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 10 minute period specified by the CD.
- (b) In Area Centralised 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 Centralised contests the additional flight(s) must commence within the hour following the close of the contest and must commence within 10 minutes of the starting signal being given

3.1.5 Procedure of Starts

- (a) Each competitor must wind the rubber motor, start and adjust the engine or motor, tow his own glider and launch his own model (other than glider).
- (b) Hand launching is allowed in all BMFA contests.
- (c) A competitor when launching a model must be on the ground but nothing contained in this rule shall prevent a competitor making a leap or jump at the moment of launching.
- (d) During a Centralised FAI contest, for classes F1A, F1B, F1C, F1P and F1Q launching must take place within 5 metres of a launch line which will be positioned perpendicular to the wind at the beginning of the round. The line will be of a finite length and marked at each end. For the F1A class the helper must position himself/herself within the required 5 metres before the launch.
- (e) For F1E contests, the Contest Director will indicate any restrictions affecting the launching point. Rule 3.1.8.3 will apply.

3.1.5.1 Glider Launching

(a) Towline Length

The towline length for Vintage, Mini Vintage and Tailless gliders shall be 100m (328ft) maximum, for BMFA gliders (ii) and Classic gliders 75m (246ft) maximum. For all other classes it shall be 50m (164ft). The length shall be measured when subjected to a tensile load which is dependant on the Surface Area of the glider as in the list below. (Surface Area is defined in the notes at the start of this Rule Book)

Up to but not including 16 dm² (248 in²) 1 kg (e.g. Below A1 size)
From 16 dm² (248 in²) up to but not including 32 dm² (496 in²).... 2 kg (e.g. A1 up to A2)
32 dm² and above..... 5 kg (e.g. A2 size and above)

(b) Pennant

To facilitate observing the moment of release a pennant with a minimum area of 2.5 dm² (39 in²) must be fitted near to the glider end of the towline. A parachute may be used in place of a pennant provided that it remains furled and inactive until the moment of release.

(c) Fittings

If towing without the use of pulleys then any fitting at the competitors end of the towline must not weigh more than 15 g.

If towing with the use of pulleys then the end of the cable remote from the glider must be anchored to the ground in accordance with BMFA guidelines.

(d) Winches and Storing

The towline must be detached from the winch before towing commences and must not be reattached until after the glider is released. After release the line must be retrieved quickly by the flyer and stored so that it is not a hazard to people or models.

3.1.6 Attempts For Official Flights

Attempts are of three types; scoring, non-scoring and unsuccessful.

The first non-scoring attempt for a flight may be repeated. A second non-scoring attempt for the same flight gives a zero score for the flight. An unsuccessful attempt may be repeated without penalty.

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. i.e. 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 CO₂ 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 of 20 seconds or longer which are not covered by rules 3.1.6.2 or 3.1.6.3 or a flight of less than 20 seconds which is not covered by rules 3.1.6.2 and 3.1.6.3 if the competitor demands that the score be accepted. In addition a flight by any type of glider (including Hand Launch Gliders and Catapult Gliders but excluding F1A Gliders, when flown in contests solely for the F1A class, and also excluding F1E soarers) that is under 20 seconds (10 seconds for Hand Launch Glider and Catapult Glider) and is terminated by dethermalising will score the actual time recorded. 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;

- (a) 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.
- (b) When a glider still attached to its launching cable touches the ground or an object except as detailed in 3.1.6.3.
- (c) When some part of the model (except for rubber bands or equivalent restrainers used for dethermaliser equipment) becomes detached during the launch or in flight.
- (d) When a flight is of less than 20 seconds as detailed in 3.1.6.1 above.

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.

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.

3.1.7 Cancellation of Flights

The flight scores zero:

- (a) If the competitor, after processing, modifies his model by changing any item of the specification required by the regulations.
- (b) When two non-scoring attempts have been made for the same flight.
- (c) When no attempts are made for a flight.
- (d) When a glider competitor commences a flight with the winch attached to the towline.
- (e) When part of a model equipped to receive radio transmissions, as defined in rule 3.1.1 (a) i, becomes detached at any point in the flight.

3.1.8 Timekeeping

3.1.8.1 General

Any BMFA member, or person as may be approved by the CD may act as a timekeeper. The CD may at any time and without giving reasons, restrict a competitors choice of timekeeper as long as alternative timekeepers are available. For fly-offs, the CD may appoint time keepers who are, as far as possible, unconnected with the competitor. A competitor may not act as official timekeeper for his own flight. For Hand Launch Glider and Catapult Glider classes all flights made from the flight box will be scoring flights. Trimming flights must be made outside of the flight 'box' (See 3.13 Hand Launched Glider Class).

At all times competitors, helpers and spectators should allow the timekeeper(s) an unobstructed view of the model whilst its flight is being timed. No competitor, helper or spectator should in any way apply pressure to the timekeeper(s), which may influence them and lead to an unsporting result.

Light Emitting Beacons may only be used on F1A, F1B, F1C, F1E, F1P and F1Q class models; and only when these models are being flown in competitions specifically for their class. i.e. These beacons may not be used if such class models are being flown in BMFA class or Combined class competitions.

3.1.8.2 Recording Times

- (a) Flights and engine runs must be timed by one or more timekeepers using stopwatches recording to at least 1/10th of a second. The flight time recorded shall be the mean, to one place of decimals, of the times registered, which is then rounded down to the whole second below. In the case of power models, the engine run recorded shall be the mean, to two places of decimals, of the times registered, which is then rounded down to the 1/10th second below
- (b) In contests for power models, two stopwatches or a split-action stopwatch may be used by a timekeeper to record the duration of the engine run and the flight time.

- (c) On conclusion of each flight, the flight time and, where appropriate, the time of the engine run are to be entered on the competitors flight card by the timekeeper(s) (who should enter their name plus BMFA number and Club if appropriate) and on the score sheet by the recorder. A competitor's final flight must be entered on the score sheet by the recorder no later than 15 minutes after the close of the contest. Any fly-off flight necessary must be entered no later than 15 minutes after the conclusion of the flight. The averaging and rounding of scores must be done before applying the appropriate maximum. It is the competitor's responsibility to ensure that the flight card is filled in correctly.
- (d) If a timekeeper fails to record a time refer to 3.1.6.3.(d).

3.1.8.3 Timekeepers

- (a) When timing commences the timekeeper must be standing on the ground within 15 metres of the point where the model is released or launched. In the case of gliders, the point of launch shall be taken to be the point where the assistant is standing prior to commencement of the launch.
Free Flight Technical Committee clarification - For timekeeping purposes in class 3.15 (Hand Launched Glider), the point of launch is to be taken as the perimeter of the designated 25 metres square launch box, the timekeeper being outside but within 10 metres of the box.
- (b) During the flight the timekeeper, whilst remaining on the ground, may move freely within a 15 metre radius circle (the centre of which is the point at which the timekeeper is standing at the moment of launch) to obtain the best possible view of the model being timed.
- (c) In the event of poor visibility the CD may allow timekeepers to follow the model on foot whilst timing. Timekeepers may be allowed to follow only when qualifying flights (not fly-offs) are being made.
- (d) When the start and finish of a flying period is marked by a continuous audible signal, the end of that signal defines the period.

3.1.8.4 Time of Flight

The time of flight is taken from the moment the model is released, or in the case of a glider when the towline becomes detached from the model, to the end of the flight when either the model touches the ground, comes to a standstill by striking an obstacle (except as in 3.1.6) or disappears from the sight of the timekeepers. If a model disappears either behind an obstacle or otherwise and in the opinion of the timekeepers might re-appear, then timing shall continue for a further measured or estimated 10 seconds. If in this 10 second period the model re-appears then timing will continue. If the model does not re-appear within this 10 second period then the watches should be stopped and the times registered reduced by 10 seconds.

3.1.8.5 Vision Aids

Binoculars, telescopes or other magnifying aids may be used by the timekeepers to observe all flights. The magnification of such devices shall be no greater than eight.

3.1.8.6 Stopwatch Malfunction

Should a solitary timekeeper have a stopwatch malfunction the CD at his discretion may accept impartial evidence as to the duration of the flight. If impartial evidence is not available, the flight shall count as an unsuccessful attempt.

3.1.9 Contests Types

3.1.9.1 Single Class Contests

Single Class Contests shall be those held for individual classes as defined by the relevant class rules

3.1.9.2 Two Class Contests

Two Class Contests shall be those held for two individual classes as defined by the relevant class rules e.g. F1J/British 1/2A Power, CO₂/E30, HLG/CLG

3.1.9.3 Combined Class Contests

Combined Class Contests shall be those held for a combination of individual classes as defined by the relevant class rules (the rule numbers of these are appended for easy reference).

For these events the combinations of classes shall be:

- (i) Combined Glider: F1A (3.3)
BMFA Glider (3.7.1)
Classic Glider (3.18)
Vintage Glider (3.18)
- (ii) Combined Rubber: F1B (3.4)
BMFA Rubber (3.7.2)
Classic Rubber (3.18)
Vintage Rubber (3.18)
- (iii) Combined Power: F1C (3.5)
BMFA Power (3.7.3)
SLOP (3.19)
Classic Power (3.18)
Vintage Power (3.18)
- (iv) Combined Electric: F1Q (3.5Q)
BMFA Electric (3.7.3)
E36 Electric (3.11.8)

3.1.9.4 Team Contests

- (a) Team contests are those Free Flight events run under the jurisdiction of the BMFA Council in which contestants compete individually (thereby competing for British Free Flight Championship points) but in which affiliated clubs may nominate up to three club members as a team. An individual may only compete as a member of the club specified upon his BMFA/SAA membership card when making his first competition entry of the season, regardless of whether that event was a team or 'club points' scoring event. He will then be tied to that club for the rest of the season. Under exceptional circumstances (e.g. moving to the other end of the country) a move to another club may be permitted. This will require recording with the BMFA/SAA office and receipt of a new membership card before attending his first competition for the new club and will only be permitted where application is made before 1st July. Where such a change is made any points scored before the change shall remain with the club for which they were originally scored. For Area Centralised competitions all members of a team must compete at the same venue.
- (b) A club may nominate more than one team but no member may be nominated for more than one team.
- (c) Scoring for team placing shall be effected by adding together the score of all members of a team. In the event of a tie, fly off times shall be used to decide a team's placing (see 3.1.4.3). In the event of a tie in which no team member has a maximum score the tying teams will share the team placing.
- (d) Each club shall nominate to the CD all members of their team(s) before any flights or attempts are made by any member of such team(s). A club is permitted to nominate further teams at any time after the earlier nominated team has commenced flying.
- (e) No trophy is awarded to the competitor with the highest individual score.

3.1.10 The Plugge Cup

The requirements in this competition on an individual for qualifying club membership are the same as rule 3.1.9.4 (a).

- (a) The Plugge Cup is awarded annually to the club scoring the highest number of points in the following contests:

K & MAA Cup	Halfax Trophy	Duce Trophy
Model Engineer' Cup	Keil Trophy	Farrow Shield

together with additional competitions at each of the eight area centralised events as nominated in the contest calendar

- (b) The points gained by the leading two competitors of each club, irrespective of whether they are in the same team entered by that club, will determine the score for their club, and for this purpose a fly-off may be made in team events, when not required under 3.1.9.4(c), solely for the purpose of determining Plugge points.
- (c) The method of awarding points is as follows: - The top scorer in each contest is credited with 100 points, other competitors scoring according to the formula

$$\frac{100(n+1-p)}{n}$$

where 'n' equals the number of competitors making one or more scoring attempts and 'p' equals the placing of the competitor in the individual results of the contest. In calculating the points allocation, any numbers following the decimal point will be disregarded.

3.1.11 British Free Flight Championship

- (a) The Championship will be awarded annually to the competitor who gains the most points, on the basis of 3.1.11.(b), in the competitions defined in 3.1.11.(c). The championship is open to competitors aged over 18 years at 1st January of the year of the competitions.

- (b) Points will be awarded as in the following table:

Place	Number of Scores					
	6 or More	5	4	3	2	1
1 st	9	6	4	3	2	1
2 nd	6	4	3	2	1	-
3 rd	4	3	2	1	-	-
4 th	3	2	1	-	-	-
5 th	2	1	-	-	-	-
6 th	1	-	-	-	-	-

At the extreme case of only one score returned that contestant would be awarded 1 point only.

In the event of a tie for any placing, the competitors with that placing will share equally the points which would have been awarded to the placings covered by that number of competitors.

All BMFA free flight competitions, as defined in section (c), are eligible except for team selection competitions for F1A, F1B and F1C and the Women's Cup and junior events at the Free Flight Nationals.

At each competition a competitor may enter and fly in as many classes as desired but from each single-day competition only a maximum of two points scores shall be eligible towards the season's total score. At multiple-day competitions each day shall be treated as a single day competition.

If there is a tie after the season's scores are totalled the number of a competitors scoring places shall be used to resolve this tie. The places used shall start with first and then subsequent places until a resolution is achieved. For example, if two competitors tied with equal points and both had equal numbers of first, second and third places, then the competitor with the highest number of fourth places would be the winner.

- (c) A list of competitions which are scheduled to be used in any particular year may be obtained from the BMFA Competition Secretary after the 31st December of the previous year. If a competition on the list is cancelled then the Championship will depend on the remaining competitions.

3.1.12 British Junior Free Flight Championship

- (a) The championship will be awarded annually to the competitor who gains the most points on the basis of 3.1.12 (b), in the competitions defined in 3.1.12 (c). The championship is open to competitors aged 18 years or under at 1st January of the year of the competitions.
- (b) Points will be awarded as the following table but in this case the number of scores is the number of Junior scores and the place is the place in relation to other Juniors.

Place	Number of Scores					
	6 or More	5	4	3	2	1
1 st	9	6	4	3	2	1
2 nd	6	4	3	2	1	-
3 rd	4	3	2	1	-	-
4 th	3	2	1	-	-	-
5 th	2	1	-	-	-	-
6 th	1	-	-	-	-	-

All BMFA free flight competitions, as defined in section (c), are eligible except for team selection competitions for F1A, F1B and F1C (or P) and the Women's Cup at the Free Flight Nationals.

At each competition a competitor may enter and fly in as many classes as desired but from each single-day competition only a maximum of two points scores shall be eligible towards the season's total score. At multiple-day competitions each day shall be treated as a single day competition.

If there is a tie after the season's scores are totalled the number of a competitors scoring places shall be used to resolve this tie. The places used shall start with the

first and then subsequent places until a resolution is achieved. For example if two competitors tied with equal points and both had equal numbers of first, second and third places, then the competitor with the highest number of fourth places would be the winner.

- (c) A list of competitions which are scheduled to be used in any particular year may be obtained from the BMFA Competition Secretary after the 31st December of the previous year. If a competition on the list is cancelled then the Championship will depend on the remaining competitions.

3.1.13 Club Championship

- (a) The Club Championship is awarded annually to the club gaining most points in the Combined Glider, Combined Rubber and Combined Power or BMFA Glider, BMFA Rubber and BMFA Power competitions at a BMFA Centralised event. The event to be used in any year will be specified in the Competition Calendar for that year.
- (b) Points will be awarded by the same method as used for the Plugge Cup
- (c) A club's points for classification will be the total of the points gained by their highest placed competitor in each competition.

3.1.14 Motor Heaters

Additional heat may not be applied to the motor.

3.1.15 Proxy Flying

- (a) Should a competitor be incapacitated by injury or illness in the course of a contest and wishes to complete the contest then, with the consent of the CD, he may nominate a proxy to do so (subject to 3.1.15.(b).)
- (b) A proxy flyer must be a member of the BMFA.

3.1.16 Protests and Appeals

- (a) A protest about any infringement of the Contest Rules must be made to the Contest Director (CD) in writing as soon as possible after the alleged infringement and not later than 15 minutes after the close of the contest plus any fly-off period(s). The written protest must state, at least, the person(s) protested against and the rule(s) infringed and be accompanied by a protest fee of double the contest entry fee.
- (b) The CD will immediately empanel a jury of three persons to rule on the protest, all of whom shall be members of the BMFA and selected at random. The jury shall reach its decision having first consulted all parties.
- (c) If the protestor, or the person(s) protested against, is not satisfied with the jury's ruling then either may appeal to the BMFA Council. This is done by sending the written protest and any other relevant information to the BMFA Competition Secretary to arrive no later than two weeks after the date of the contest. The Competition Secretary may ask for, and will accept, further information until the appeal is placed on the agenda of the first possible BMFA Council meeting for adjudication.

3.1.17 Snuffer Tubes

All models using burning fuses shall be fitted with a device designed to ensure:

- (a) that the burning fuse is not at any time ejected from the model whilst in flight or on the ground;

- (b) that as soon as practical after the functioning of the operation for which the fuse is fitted, the lighted end of the fuse is extinguished.

3.1.18 Starting and Closing times of contests

All Free Flight contests should start at 09.00 hours and must close at 18.00 hours or 2 hours before sunset at Greenwich whichever is the earlier.

If an Area is unable to gain access to its flying site for Area Centralised events before 13.00 hours, the closing time can be extended by up to 4 hours. If previous notice is given Free Flight Centralised contests may start before 09.00 hours.

(See also General Rule Book rule 2.3.10)

3.2 FAI CONTEST REGULATIONS

3.2.1 Events run for International class models will require such models to conform to the appropriate FAI specifications. FAI Class rules are available at www.fai.org/fai-documents# or from the BMFA. Contests will be run in accordance with the Free Flight Contest Rules (3.1) except as modified below.

3.2.2 Models

- (a) Contests for FAI classes F1A, F1B, F1C, F1Q and F1P when flown by Juniors (see rule 3.2.4.1 (a) paragraph 2), may be of two types; 5 flight events and 7 flight events (not including fly-offs). Competitors may enter and have checked 3 models for 5 flight events and 4 models for 7 flight events. Additional models shall not be allowed for fly-offs.

NOTE - This rule was clarified during 1991 and flyers should be aware that they may utilise any combination of models, within the numbers allowed, that they wish. For instance, in a 5 flight event, they may make their 5 official flights with one or two models, reserving their third model solely for a fly-off if needed.

- (b) In contests for FAI class F1E, competitors may enter and have checked 5 models and are entitled to 5 official flights.
- (c) Competitors may interchange the various parts of their models provided the resulting model conforms to the rules.
- (d) Competitors may use spare propellers, rubber motors, I.C. engines or electric motors. An I.C. engine or electric motor may not be used by more than one competitor in a particular contest.
- (e) Repairs are permitted provided they do not in any way alter the specification of the model as defined in the rules.
- (f) In Area Centralised contests where 5 flights are flown, 3.1.2 Free Flight contest rules apply.
- (g) In F1A, F1B, F1C, F1E and F1Q and F1P when flown by juniors in F1C competitions, any models which are flown in the competition must be the property of the competitor before the competition commences and the only membership number carried on the models must be that of the competitor.

3.2.3 Fly-Offs

In order to decide the winner where there is a tie, additional deciding flights shall be made after the last flights of the event have been completed. Two attempts are allowed for each of these additional flights within the scope of rule 3.1.6.3. Should bad weather,

lack of time or daylight make progressive fly-offs impractical, a single fly-off to rule 3.1.4.3 may be used at the CD's discretion. In Area Centralised events, rule 3.1.4.3. shall apply.

The set maximum flight time shall be incremented by two minutes on the flight time in the previous round, where the 'previous round' also includes the last flight of the event. At any stage in the fly-off the Contest Director may modify these increments to accommodate the prevailing conditions or circumstances.

Note - Increments may be positive or negative but must be applied before the start of the additional round and must apply for the whole of that round.

3.2.4 Team Selection Events

3.2.4.1 Team Selection F1A, F1B, F1C and F1P

- (a) Two FAI Team Selection events (parts 1 and 2) will be included in the Contest Calendar for the purpose of selecting the Senior World and European teams for F1A, F1B and F1C in the following year.

For the Junior World and European teams for F1A, F1B and F1P the Team Selection event will be the British Free Flight Nationals event for F1A, F1B and F1C classes. Juniors only will be permitted to fly F1P class models in the F1C class. Juniors must be a minimum of 12 years of age on January 1st of the year in which the team will compete.

At all UK F1C events, in order to provide practice opportunities for a UK junior power team, juniors only may compete with F1P models flying to the same maximum as F1C and with motor runs as FAI class definitions for F1P.

All F1A, F1B, F1C and F1P Team Selection meetings shall be run, where relevant and desirable, as closely as possible to the FAI rules.

- (b) Each event will be held over 2 days and include no more than 7 rounds, although fewer may be held if conditions dictate. A minimum total of 7 rounds must be completed over both meetings for the Team selection process to be valid.
- (c) The maximum will normally be 3 minutes, or 2 minutes 30 seconds, if conditions dictate a reduction. An extended maximum of 3 minutes 30 seconds for F1A Glider, and 4 minutes for F1B rubber and F1C power, may be applied for one round only, at each meeting, if the conditions are appropriate.
- (d) The windspeed limit – measured at height of 2 metres above the ground at the flight line for a minimum of 20 seconds – at which the contest may be interrupted, or the start delayed, is 15.00 mph (6.7 m/s). The measurement will be taken 10 minutes and 5 minutes before the start of the round. If either measurement exceeds the limit the start will be delayed. If the start is delayed then the measurement cycle will be repeated every 15 minutes and the round will only commence when both measurements are below the limit. Once a round has started it will continue to the finish of its scheduled time span, irrespective of changes to windspeed.
- (e) The start time at each meeting (parts 1 and 2) will be 9 am on the first day and 8 am on the second day if required.
- (f) Finish time on the first day at each meeting (parts 1 and 2) may be later than 6 pm to utilise the maximum available daylight. Finish time on the second day at the first meeting (part 1) will be 6pm or two hours before sunset whichever is earlier. Finish time on the second day at the second meeting (part 2) will be 6pm or two hours before sunset whichever is earlier.
- (g) Scoring for the Team Selection Process will be by the total time recorded by each competitor. If after totalling any ties (down to fifth place) result these will be

resolved by fly-offs held at the end of the second meeting and will be progressive: as per rule 3.2.3 para 2. To qualify for selection Juniors must achieve a total time equal to or greater than 50% of the highest total time achieved by an adult in the same class.

- (h) Entry will be by pre- entry only. A single amount to cover both meetings must be sent to the nominated organiser, to arrive no later than 14 days prior to the date of the first meeting. The amount of the entry fee will be announced at the start of the season.
- (i) If the required minimum total number of flights is not completed then a further meeting will be arranged.
- (j) If the weather forecast for the planned venue, 48 hours prior to the event, shows that the wind speed is likely to be above 15 mph (6.7 m/s) for more than 50% of the event, or if the predicted visibility will be unworkable for more than 50% of the event then the event may be postponed. If such is the case then the event organiser will notify the competitors, who have pre-entered, by e-mail or phone no later than 48 hours before the planned event.

3.2.4.2 Team Selection F1E

- (a) Six centralised competitions and a reserve will be nominated each year for the purpose of selecting a team for either the World or the European F1E Championships in the following year. The competitions will be run to FAI rules and percentage scoring in the rounds will be to the FAI Sporting Code.
- (b) Dependant on their placing in these competitions each competitor will be awarded points in accordance with the table in 3.1.11.(b). Only the competitor's best three results will count for team selection points.
- (c) If the selection competitions flown do not produce a team then the FFTC shall take appropriate action.
- (d) The number of rounds planned to be flown must be between 5 and 7 inclusive and must be announced before the start of the competition. The maximum time for each round may be up to 5 minutes and must be announced before the start of that round.
- (e) If fewer than 3 rounds can be flown then the contest shall be null and void.

3.2.5 Launching

3.2.5.1 Launching Devices F1A

Must conform to 3.1.5.1

3.2.5.2 Launching: F1A

- (a) The competitor must be on the ground and must operate the launching device himself.
- (b) All freedom of action and movement is permitted to allow the best use of the cable, except throwing of the launching device.
- (c) The model must be launched within approximately 5 m from the starting line position.

3.2.5.3 Launching: F1B

- (a) Launching is by hand, the competitor being on the ground (jumping allowed).
- (b) Each competitor must wind his motor and launch the model himself.
- (c) The model must be launched within approximately 5 m from the starting line position.

3.2.5.4 Launching: F1C and F1Q

- (a) Launching is by hand, the competitor being on the ground (jumping allowed).
- (b) Each competitor must start and regulate the engine/motor or engines/motors and launch the model himself.
- (c) The model must be launched within approximately 5 m from the starting line position.

3.3 Characteristics of Gliders, World Championship Formula 'A/2' (Class F1A)

Total projected surface area.....32 to 34 dm² (496 to 527 in²)
Minimum total weight..... 410 grams (14.46 oz)

3.4 Characteristics of Rubber Driven models, World Championship Formula 'Wakefield' (Class F1B)

Total projected surface area..... 17 to 19 dm² (263.5 to 294.5 in²)
Minimum weight of model less motor(s) 200 grams (7.07 oz)
Maximum loading50 g / dm² (16.38 oz / ft²)
Maximum weight of motor(s) lubricated..... 30 grams

3.5 Characteristics of Power Driven Models, World Championship Formula (Class F1C)

Maximum cylinder capacity of engine(s) 2.5 cm³ (0.1526 in³) total
Minimum total weight (per engine capacity) 300 g / cm³ (10.58 oz / cm³)
Minimum loading20 g / dm² (6.55 oz / ft²)
Maximum duration of engine run 5 seconds from release of model

One standard fuel formula is prescribed for spark ignition or glow type engines and no other fuel is permitted:

80% Methanol : 20% castor or synthetic oil

Engines of the diesel or compression ignition type are not restricted as to the fuel they use. No extension whatever is allowed to the exhaust opening(s) of the engine.

3.5.Q Characteristics of Electric Motor Driven Models, International Formula (Class F1Q)

Nickel Metal Hydride (NiMH) and Lithium (Li) batteries can be used.

Lithium type battery packs must be in 'as manufactured' condition with the overall covering surrounding the individual cells intact. A balancer connection must be fitted if the battery contains more than one cell.

External battery packs are required to have a safety tether to the fuselage.

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

The motor run time will be determined by a maximum energy amount.

Maximum motor run allowed..... 40 seconds

Maximum permitted energy amount 4 Joules per gram of total weight

For energy calculations, total weight exceeding 500 grams is to be ignored.

Energy limitation will be by a motor run limit related to measured power or by an energy limiter:

(a) **Models without energy limiters**

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) **Models with energy limiters**

The energy limiter must measure the permitted energy amount, in real time, from the release of the start button until the ESC has stopped supplying energy to the motor. When the permitted energy amount has been used-up the motor(s) must stop irreversibly.

If energy verification is required an SET (Static Energy Tester) is to be connected to the model to allow measurements confirming the energy used, from the release of the start button up until the ESC has stopped supplying energy to the motor. The SET must store and display the energy used or time and power data.

Models must be capable of connecting to an SET, between the model's systems and battery, via 3.5 mm male and female bullet connectors. The connectors from the model's battery should be: male positive and female negative. In addition a 'parallel' connection from the models timer start button should terminate in a 2 pin, 2.54mm pitch female connector.

It is the responsibility of the competitor to supply any adaptors needed to connect to the SET.

3.6 Characteristics of Slope Soaring Gliders, International Championship Formula (Magnet Steered) (Class F1E)

Maximum total projected surface area	150 dm ² (2325 in ²)
Maximum loading	100 g / dm ² (32.76 oz / ft ²)
Maximum flying weight	5 kg (176.37 oz)

NOTE: For classes F1A, F1B, F1C and F1E the total projected surface area should be used to calculate the wing loading.

3.7 BMFA Classes

There are no restrictions on model size, weight or design other than those imposed by the General regulations (1.2) and those specified below. Contests will be run in accordance with Free Flight Contest Rules (3.1).

3.7.1 Towline Glider Class (BMFA Glider)

Must conform to 3.1.5.1

Two types of model are permitted:

- (i) Models fitted with bunt launching and/or circle tow devices.
- (ii) Models not fitted with devices to allow bunt launching or circle towing; auto-rudder is permitted.

Clarification from the Free Flight Technical Committee

Models fitted with bunt mechanisms or circle tow hook facility of any type (including swinging or offset) will only be permitted a 50 metre towline allowance. To qualify for the 75 metre towline allowance the model must have a permanently fixed hook that does not permit any movement of the model's surfaces either while connected to the towline or after launch. A once-off rudder movement (auto rudder) is permitted, as is any form of DT.

If the model is capable of circling in any way while attached to the towline then only a 50 metre line will be permitted.

If a flyer wishes to convert a model that has been previously fitted with bunt mechanisms or circle tow hooks of any type then the previous tow hook must be replaced with a solid permanently fixed hook. Temporary or partial disablement of a previously multi functional hook will not be sufficient. A bunt mechanism or its operating line must have been removed.

It is not the intention of these rules that models should be convertible from one status to another during the process of a contest. The object of the variation in towline length is to compensate the users of "less sophisticated" trim technology, and hence lower performance, with longer towlines. All categories within the class are intended to have a similar overall performance potential.

3.7.2 Rubber Class (BMFA Rubber)

The amount of rubber used shall be restricted to 50 grams (lubricated).

3.7.3 Power Class (BMFA Power)

The maximum engine run allowed from the moment of release of the model will be:

- (i) For models fitted with mechanisms to enable bunt transition from power on to glide: 5 seconds
- (ii) For models not fitted with bunt transition mechanisms but fitted with other moving trim surfaces: 7 seconds.
- (iii) For models not fitted with any moving trim surfaces other than DT: 9 seconds

N.B. category (iii) above are not SLOP models. SLOP models and contests have different rules. However, if a competitor wishes to fly a SLOP model in an Unrestricted class contest he/she will receive the 9 seconds run allowance of category (iii). (Note that in 2006 the run allowance would only have been 7 seconds.)

Clarification from the Free Flight Technical Committee

All models fitted with bunt mechanisms will receive only a 5 second motor run allowance unless the mechanism is disabled. Those models with the mechanism disabled for which fliers wish to receive the 7-second motor run allowance must have the mechanism permanently disabled. Temporary disablements using, for example, tape, rubber bands or blocks of wood will not be sufficient. The bunt mechanism or its operating line must have been removed.

It was not the intention of these rules that models should be convertible from one status to another during the process of a contest. The object of the variation in engine runs is to compensate the users of "less sophisticated" trim technology, and hence lower

performance, with longer runs and/or towlines. All categories within the class/classes are intended to have a similar overall performance potential.

3.7.4 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
 - For Brushed motors (with functions) 12 seconds
 - For Brushless motors (no functions) 12 seconds
 - For Brushless motors (with Functions) 10 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 shall 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.

3.11 'Mini' Classes

3.11.1 Mini Contests

- (a) Mini contests are contests for classes F1G (Coupe d'Hiver), F1H (A/1 Glider), F1J, BMFA 1/2A Power, CO₂ Duration, Mini Vintage, E36, P30 and E 30.
- (b) Contests for the mini classes shall be run in accordance with the free flight rules 3.1 except as modified below. The general regulation 1.2 applies to all classes.
- (c) In mini contests competitors are entitled to make five official flights for F1G, F1H, F1J. For BMFA 1/2A Power CO₂ Duration, Mini Vintage, E30 and P30 competitors shall be entitled to make three official flights. Please note that in E36 there is a schedule of flights as defined in rule 3.11.8. In all cases the maximum shall be 2 minutes, or less at centralised contests if conditions dictate.

3.11.2 Class F1G (Coupe d'Hiver)

- (a) Model specification:
 - Minimum weight of model (less motor(s)) 70 g (2.46 oz)
 - Maximum weight of motor(s)(lubricated) 10 g (0.352 oz)

3.11.3 Class F1H (A/1 Glider)

- (a) Model specifications:
 - Maximum surface area 18 dm² (279 in²)
 - Minimum weight 220 g (7.74 oz)
- (b) Launching. See 3.1.5.1

3.11.4 Class F1J

- (a) Model specification
- Maximum swept volume of engine 1 cm³
Minimum total weight (less fuel) 160 g (5.63 oz)
Maximum duration of engine run 5 seconds
The engine run will be timed from the moment of release of the model.
Fuel constituents are not restricted.

3.11.5 CO₂ Duration

- (a) The combined capacity of the Carbon Dioxide tank and piping system shall not be greater than 3.25 cm³.

3.11.6 Mini Vintage

- (a) Mini Vintage models are built in accordance with the Vintage rules under 3.18 with the following additional specifications as set out below. Otherwise they are an all class event flown in accordance with 'Mini' rules.
- (b) Rubber models - The flat (i.e. not projected) span shall not exceed 864 mm (34 inches).
- (c) Gliders – The flat (i.e. not projected) span shall not exceed 60". For launching see 3.1.5.1
- (d) Power models - To Vintage rules but excluding 3.18.3.(j). Models must only be powered by diesel engines of maximum capacity 0.85 cm³. Engine runs to be 20 seconds maximum.

Technical Committee Clarification

Models must be built in accordance with the original design and size, subject to 3.18.3. No 'scaling' from the original size is allowed.

3.11.7 BMFA 1/2A Power

- (a) Model specification
- Maximum swept volume of engine 0.85 cm³ (0.052 in³)
Maximum duration of engine run 8 seconds
The engine must be a plain bearing unit.
The engine run will be timed from the moment of release of the model.
Fuel constituents are not restricted.

3.11.8 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:
- Only 2 models in any one contest are permitted.

2 minute maximum [or less as per rule 3.11.1 (c)]

2 flights to be made with a 15 second motor run. If the maximum is reduced (due to prevailing conditions) the motor run will be 10 seconds.

A 3rd flight 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 3 flights score maximums a fly-off will be made with a 5 second motor run (as per rule 3.1.4.3).

All motor run timing will be as 3.7.4e (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

3.13 Hand Launched Glider Class

- (a) The glider must be launched by hand without mechanical aids.
- (b) The launch must be from within a 'box' 25 m. square designated by the CD. All flights made within this box must be recorded as counting, official flights.
- (c) The Free Flight General Rules apply except for the following:
 - (i) The competitor is allowed 7 official flights, all flights to count. (ref. 3.1.3)
 - (ii) The maximum time recorded for any official flight is one minute.
 - (iii) A scoring attempt is a flight of 10 seconds or longer. (ref. 3.1.6.1)
 - (iv) A competitor may use up to three different models and the combination of parts of these models.
 - (v) Flights do not have to be recorded on the score sheet after each is made (as per rules 3.1.8.2. (c)) but must be recorded on the score sheet at least at the conclusion of every third flight.

3.14 Catapult Glider Class

- (a) The glider must be launched by means of a catapult, powered only by rubber
 - (i) The maximum weight of rubber allowed is 2 grams and can be made up into any number of strands of any width. (Note: a 12 inch length of 0.25 wide strip weighs close to 2 grams)
 - (ii) The rubber may be attached to a handle. The maximum handle length shall be 6 inches.
- (b) The competitor must launch the glider himself with the catapult held in one hand and the glider in the other.
- (c) If a Catapult Glider competition is being held at the same time as a Hand Launched Glider competition then both shall be flown from the same 'box'.
- (d) Rules as for Hand Launched Glider Class - 3.13 (b) and (c) shall apply.

3.17 Tailless Classes

3.17.1 Definition:

Tailless aircraft will be considered as models having no horizontal or oblique stabilising surface separated from the main plane.

3.17.2 Launching

- (a) Gliders – See 3.1.5.1

- (b) For power models - the maximum engine run allowed shall be 30 Seconds. Engine capacity shall not be over 3.5 cc. There is no exhaust muffler requirement for this class.
- (c) Neither CO₂ nor electric power is permitted.

3.18 Classic and Vintage Models

These models may be flown in either single discipline events (Vintage Glider, Classic Power etc.) or in all class events (Vintage or Classic)

3.18.1 A vintage model must be built in accordance with a design that was published prior to 1st January, 1951, or was kitted by that date. (January 1951 issues of magazines are accepted as published in 1950).

A classic model must be built in accordance with a design that was first published or kitted after 30th December 1950 and before 1st January 1961 (January 1961 issues of magazines are accepted as published in 1960). Designs published in the Frank Zaic 59/61 Year Book will also be admissible

3.18.2 Competitors are responsible for proving the eligibility of their models and engines to the satisfaction of the Contest Director if required, and must be prepared to produce photo-copies (or originals) of plans and magazines on the day of the contest which include or confirm the date of publication.

Guidance from the FFTC

The eligibility of the model must be based upon the existence of a plan which was published between the specified dates. The purpose of additionally specifying "kitted" is to include those plans which were supplied as part of a kit but were not "published" elsewhere. Where multiple sizes of a design were published or kitted between the specified dates the plan must be for the actual size model entered.

In the special case where a table of model sizes, including lists of material sizes referenced to a plan, was published between the specified dates this information will be sufficient and need not be accompanied by an actual size plan of the model entered.

In all these circumstances the plan, or table of sizes must be supported by photo-copies (or originals) of material which was published between the specified dates and confirms the date of publication or kitting.

Statements, publications or any other material created outside the specified dates (other than in 3.18.1 paragraph 2 above) are not acceptable as proof of either design features or publication dates.

3.18.3 Construction

Models should follow the construction shown on the plan. No major alteration should be made to structures. Minor modifications may be made as follows:

- (a) Materials may be substituted, e.g. spruce for obechi.
- (b) Balsa laminated sections may replace bent cane.
- (c) Conversion from a one piece to a multi piece wing, multi piece fuselage or detachable fin and vice-versa are permissible but associated changes must not significantly change the external geometry of the model. Plywood dihedral braces and local bandaging are permissible.
- (d) Local sheeting to improve handling of fuselage is allowed and also local sheeting and/or subspars on flying surfaces to take the strain of fixing bands and wing to fuselage contact.

- (e) Power models may have noses altered to suit engine mounting.
- (f) Minor alterations may be made to enable a D/T to be fitted to a design which was not originally so fitted.
- (g) Wheels must be of the same diameter as shown on the plan but the cross section may be changed.
- (h) Rubber model propeller block sizes must be adhered to, as must the type; single bladed or twin bladed; free wheeling or folding. Note: The pitch, diameter and blade width of the propeller must not be altered from that which is outlined by the propeller block size. Free wheel clutches, rubber hooks and tensioning devices may be to the competitor's choice. Propeller hubs must be of the style and material shown on the plan (e.g. replacement of wooden hubs with bent wire or wire hubs with machined metal etc. are not permitted). Gears are not permitted unless shown on the original plan and vice versa.
- (i) Engine and D/T timers of a type not used on the original design may be used, but auto rudders and other trim-changing devices may only be used if shown on the original plans, except in the case of gliders, where an auto rudder operated by the release of the launching cable, and constructed in accordance with designs published prior to 1st January 1961 is permitted.
- (j) Power models may use any type of engine and propeller, other than folding propellers, and mechanical engine brakes cannot be used.
- (k) Turbulators may be added to any component of the model provided that the type of turbulator used has been described in a publication dated prior to 1st January 1951 for vintage models, or prior to 1st January 1961 for Classic models (refer to 3.18.1).

3.18.4 For power models, the maximum engine run allowed from the moment of release of the model will be:

- (i) For Classic models, 12 seconds.
- (ii) For Vintage models 18 seconds.

3.18.5 For rubber models, the maximum amount of rubber used shall be:

- (i) for Classic models restricted to 75 grams (lubricated)
- (ii) for Vintage models restricted to 100 grams (lubricated)

3.18.6 For glider launching see 3.1.5.1

3.19 Slow Open Power

- (a) Slow open power contests will be run in accordance with the Free Flight rules (3.1) except as modified below.
- (b) Models shall have no timed moving surfaces apart from dethermalisers.
- (c) Fuel supply shall be suction only, i.e. no pressurisation of tank either from the engine or from a self pressurising tank.
- (d) Engines up to a maximum of 3.5 cm³ may be used but they shall have plain journal bearings as manufactured and not have modified bearing systems. Mechanical (friction) engine brakes are not permitted. Folding propellers are not permitted.
- (e) The maximum engine run allowed from the moment of release of the model will be 10 seconds for glow ignition and 12 seconds for diesel or spark ignition.

3.40 The Wakefield Rules

3.40.1 Prior to its adoption by the FAI as the world international free flight rubber class, F1B, there were two main sets of rules in force at different periods of the Wakefield competition. These model specifications are reproduced here for the historic record. They have been extracted exactly as set out in the official literature of events run at the time.

For those wishing to run BMFA sponsored competitions to these rules, models shall conform to the original specification and design, in accordance with Section 3.18, Vintage Models, and shall be flown under Section 3.1.

3.40.2 The 1934 - 36 Rules

(a) The contest shall be for rubber driven fuselage models. The rubber motor must be concealed, and the fuselage or fuselages must be fully covered and conform to the formula:

$$\text{Minimum value of maximum cross sectional area of fuselage} = \frac{(\text{Overall length of model})^2}{100} \text{ (in}^2\text{)}$$

(b) The following conditions must be complied with regarding the wing area and weight of the model.

- (i) Total area of mainplane to be 200 in² plus or minus a tolerance of 10 in²
- (ii) No model shall have a weight of less than 4 ounces.

Note - The following rules (c) to (f) are procedural relating to model use and are included for historic interest only. However they may be used for guidance by those wishing to run competitions under the original conditions.

- (c) The competition shall be for duration flight, such duration being taken from the time the model is released until it first touches some solid obstacle or until passing out of sight of the judges.
- (d) Each model must rise from the ground from a standstill entirely under its own power, no push whatever being permitted.
- (e) Each entrant shall be allowed three attempts during the competition. The average duration of the three attempts to be counted.
- (f) Minor adjustments may be made between competition flights, but trial flights may only be made with the consent of the judges.

3.40.3 The Pre - 1951 Rules

Several rule changes were made in the years after 1936 and these resulted in a class which was substantially the same up to the end of 1950. These rules are often called

'the 'pre - 1951 rules'.

(a) The contest shall be for fuselage rubber driven models. The rubber motor or motors of which must be enclosed, and the fuselage or fuselages must be fully covered and conform to the formula:

$$(\text{Overall length of model})^2 / 100 = \text{Minimum area of the maximum cross section.}$$

(b) The following conditions must be complied with regarding the area of the surfaces and the weight of the model:

- (i) The total area of the main plane or planes to be 200 in² with a plus or minus tolerance of 10 in². The area being the actual plan area of the cambered

surfaces measured on the chord line without allowance for dihedral angle or polyhedral angle etc.

- (ii) The area of the tailplane shall not exceed 33% of that of the mainplane(s).
- (iii) No model shall have a total weight of less than 8 ounces.
- (c) The model, including the propeller(s), must be constructed by the entrant. Gearboxes (when used) must also be constructed by the entrant, with the exception of the gear wheels. Commercial timer units may be employed.
Note - The following rules (d) to (j) are procedural relating to model use and are included for historic interest only. However they may be used for guidance by those wishing to run competitions under the original conditions.
- (d) Each model must rise from the ground from a standstill, entirely under its own power, transmitted by the propeller(s), and no push is permitted. Models, when starting, may only be held by the propeller(s) and by the wing tip. Holding the model for release by any other part shall lead to immediate disqualification from that round.
- (e) No part of the model shall become detached in flight.
- (f) Models shall be check weighed prior to each round.
- (g) Each entrant will be allowed three flights during the contest, the average duration of the three flights shall be recorded as the entrant's score. An attempt of 5 seconds duration or under will be recorded as a 'no flight', but only three such attempts for each round will be allowed. In the latter event the highest 'no flight' time shall constitute the recorded time for that round.
- (h) In each of the three rounds 5 minutes (300 seconds) will be the highest times recorded. At the end of the third round any competitor having the maximum score of 15 minutes (900 seconds) shall fly-off a fourth round in which no time limit of duration shall be imposed. In the event of a model being lost or irreparably damaged in the third round, a reserve model may be employed for the fly-off.
- (i) Minor adjustments or repairs, but no replacements other than rubber motor(s) and/or propeller(s) may be made between competition flights. Repairs or trial flights may only be made with the consent of the judges, and after each repair the model must be re-weighed and re-checked and must possess the same characteristics as originally

3.40.4 The other rules mentioned in the official literature of these events are purely procedural and do not refer to the model specifications or use.

3.41 P.30 Rubber

3.41.1 The Model

Maximum projected span 30 inches
Maximum length of fuselage including propeller and any release D/T wires..... 30 inches
Minimum weight of model, less motor 40 grams
The model shall have no timed moving surfaces apart from dethermalisers

3.41.2 The Propeller

Only a commercial plastic propeller with a maximum diameter of 9.5 inches may be used. The hub may be modified to fit the shaft and for freewheeling purposes but not for folding. Plastic may be removed from the surface of one blade for balancing purposes only. The diameter, pitch and blade shape may not be altered.

3.41.3 The Motor

Maximum of 10 grams (lubricated) rubber motor which must be enclosed within the fuselage.

3.42 E.30 Electric

Model Specification

Maximum projected span 30 inches
Maximum overall length 30 inches
Maximum propeller diameter 6 inches
Minimum weight 100 Grams
Maximum battery size..... 3 x 50 mAh Nickel based cells
or..... 1 x 70 mAh Lithium based cell

Models shall have no moving surfaces other than for DT.

The Maximum motor run from launch of the model shall be 60 seconds.

3.47 The Bowden Class

These full rules are in the spirit of the original Bowden contests and should be adhered to when weather conditions permit. However in adverse conditions at the discretion of the CD the flying requirements and associated scoring may be appropriately modified prior to the commencement of flying. Any such modification(s) must then apply throughout the contest.

3.47.1 The contest is a two-flight contest.

3.47.2 Models shall be powered by Petrol, Compression Ignition (Diesel), or Glo-plug engines only. Radio control is not permitted. The model shall have a cabin with clear glazing or a cockpit with a suitably sized aperture and a clear windscreen.

3.47.3 Only 1 model may be entered by each competitor & the Builder of the Model Rule (3.1.1(b) (i) will apply. Proxy flying will only be allowed for overseas entries or for competitors who have a relevant disability and have obtained prior permission from the CD.

3.47.4 Each competitor shall be allowed two flights, each with a target duration of 45 seconds. Flights below the minimum of 30 seconds or above the maximum of 60 seconds will be disqualified. Engine & d/t timers are allowed but flights where a dethermaliser, or other device to cause a rapid descent, operates before the model lands shall be disqualified.

3.47.5 The model must rise off the ground following release in a horizontal attitude from a line defined by the judges. One assistant only is allowed to accompany each competitor to the Take Off Area for the purpose of carrying &/or retrieving the model or starting accessories only. No assistance whatever is allowed to the competitor whilst starting the engine or during takeoff. If this rule is broken the flight will be disqualified. Should the model not be released within two minutes from a signal given by the judges, the flight will be disqualified. Within this 2 minutes one false start will be allowed, namely, a run or flight of less than 5 seconds. Pushing or assisting the model in any way during take off will involve automatic disqualification from that round. On release the arms must be raised sideways from the model and any forward movement of the arms will count as a push.. Timing commences on release of the model. The model may be in contact with the ground in the first ten seconds after release. After the first ten seconds the BMFA rule for Time of Flight (3.1.8.4) applies.

3.47.6 A competitor will be credited with 100 points for each flight (subject to cancellation or disqualification under the terms of 3.47.4 and 3.47.5 above). One point will be deducted

for each second or part of a second flown above or below the target duration of 45 seconds.

3.47.7

For each flight further points will be deducted at the judges' discretion for failures to conform to the guidelines in the following categories:

- (a) General Design and Appearance Guidelines:
 - A stylish model with cockpit details, cowlings, fairings and undercarriage well executed.
 - Neat building and finish. Clean and well presented.
 - Repairs may be effected between flights as necessary, up to 10 points may be deducted on the second flight for any signs of damage from the first flight.
 - Maximum deduction 20 points
- (b) Starting and Release Guidelines:
 - Prompt starting
 - No stopping and restarting
 - Calm handling of model and accessories.
 - Maximum deduction 5 points
- (c) Take Off Guidelines:
 - A long straight take off with wings level during the run with the model becoming airborne within 10 seconds of release.
 - Any excessive swing or an immediate leap into the air following release will incur penalty points.
 - Maximum deduction 5 points
- (d) Power Flight Guidelines:
 - Steady climb without power stalling
 - Consistent engine run, does not speed up excessively before cut out
 - Good turn radius, no spiral instability.
 - Maximum deduction 5 points
- (e) Glide Guidelines:
 - Smooth transition to glide
 - Steady glide without stalling
 - Good turn radius
 - Maximum deduction 5 points
- (f) Landing Approach Guidelines:
 - Gentle rate of descent
 - Flares nicely on nearing ground
 - Not upset by low level turbulence.
 - A good shallow approach flaring out for touch down will not incur penalty points. If the model lands on grass following a good approach & noses over no points will be deducted.
 - Maximum deduction 5 points

3.47.8

The aggregate score awarded for the 2 flights will determine the competitor's placing. If this does not produce a result then the tied competitors will be required to make further fly-off flights as necessary

3.47.9 The General Competition and Power Model Rules apply where relevant.

3.53 Operational Guidance for Bowden Class Contests

3.53.1 Object

This trophy is intended to encourage the design & flying of Sports Models with cabins or cockpits able to hold an imaginary pilot. The flying of these models in a controlled manner is an exacting competition of Precision, Flight Stability & Appearance.

Models may be powered by either Petrol, Diesel or Glow-plug motors.

Proxy flying will only be allowed for overseas entries or for competitors who have a relevant disability and subject to the permission of the CD.

3.53.2 Officials

There should be a team of 4 officials. 2 Judges, 1 Timekeeper and 1 Marshall. The Marshall should be in the competitors area to call forward fliers to the Flight Line in the correct sequence.

3.53.3 Identification

When competitors are called forward they should confirm their name & model to the Marshall before approaching the flight line.

3.53.4 Starting Order

Competitors draw for their starting order & should be called forward to fly in sequence from the Take Off area. A nominated length of time should be allowed from the time the judge says GO to when the model must be airborne.

3.53.5 Spectators.

Spectators should at all times remain behind the Flight Line for their own safety & must not encroach into the flying area.

INDOOR RULES

3.60 Indoor General Rules

3.60.1 Ceiling Height Categories

The following ceiling height categories are recognised for contests and records:

- I. - less than 8 metres.
- II. - between 8 and 15 metres.
- III. - between 15 and 30 metres.
- IV. - higher than 30 metres.

The height of the ceiling is defined as the vertical distance from the floor to the highest point at which a circle of 15 metres diameter can be inscribed, below the primary structure of the building.

3.60.2 Protests and Appeals

- (a) Any competitor wishing to register a protest must do so at the event to the Contest Director (CD).
- (b) If not satisfied with the CD's decision the competitor must, at the event, hand him the protest in writing together with a fee of double the standard entry fee. The CD will then immediately empanel a jury of three persons to deal with the protest
- (c) The jury's decision is final, subject to the right of the competitor to appeal to the BMFA Council.
- (d) Notification that an appeal is pending must be sent by the competitor to the BMFA Competition Secretary to arrive not later than 2 weeks from the date of the event.
- (e) 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 event.
- (f) If the written protest or appeal is upheld, the protest fee will be returned.

3.60.3 FAI Classes F1D, F1L, F1M and F1R

For these class rules please see the FAI Sporting Code is available at www.fai.org/fai-documents# or obtainable from BMFA Head Office.

3.60.6 Class F1N (Hand Launch Glider with BMFA Amendments)

I Definition

- a) An indoor hand launched glider is a model aircraft which is flown in an enclosed space from a hand launch with the aim of achieving maximum flight duration.
- (b) The flyer must be the constructor of the model.
- (c) A model shall have a loading of at least 0.5 g / dm² (0.164 oz / ft²), based on total surface area (projected).
- (d) An entrant may use up to three models or parts thereof in a contest.

2 Characteristics

Models with variable area (e.g. folding wings) are not permitted. The number of models eligible for entry by each competitor is three.

3 Number of Flights

The competitor shall be allowed 9 flights.

4 Definition of an Official Flight

- (a) The duration achieved on the first attempt unless this is unsuccessful as defined in 3.60.6 Section 5 below. In this case the competitor can elect to have a second attempt.
- (b) The duration achieved on the second attempt.

5 Definition of an Unsuccessful Attempt

An attempt is classed as unsuccessful if the model is launched and at least one of the following events occur. If this happens on the first attempt then the competitor is entitled to a second attempt.

- (a) the model collides with a person or an object held by a person (the competitor excluded).
- (b) the model collides with another model in flight.

6 Timing of Flights

The flights must be timed by two timekeepers with electronic stopwatches with digital readouts. The time recorded is the mean of the times registered by the timekeepers, but reduced to the nearest one tenth of a second below the resulting mean time, unless the difference between the times registered shows evidence of an error in the timing, in which case the organiser should determine, with jury assistance, which time should be registered as the official time or what other action should be taken.

The timing of each flight shall commence when the model is launched. Timing will terminate when:

- (a) the model comes to rest on the floor of the building.
- (b) the model comes into contact with any, part of the building or its contents other than the floor and translational movement ceases.

7 Classification

The total of the three best flights of each competitor shall be taken for the final classification. In the case of a tie the fourth best flight decides and so on in the case of a further tie.

8 Launching of Models

- (a) Launching is by hand, the competitor standing on the ground. Jumping is allowed. The requirement in 1.3.1 of Section 4C that models must be launched with one hand holding the fuselage does not apply to F1N.
- (b) No device shall be fitted to the model for the purpose of increasing duration by thrust or any other form of motive power

3.60.8 Limited Pennyplane

1 Specification

- (a) Minimum weight 0.109 oz (3.09 g) (equal to that of a new US copper penny) without rubber.
- (b) Overall length excluding propeller 18".
- (c) Projected wing span perpendicular to motor stick 18", monoplane only.

- (d) Wing chord 5" maximum.
- (e) Distance from front of thrust bearing to rear rubber hook 10" maximum
- (f) A single direct drive motor shall power a single propeller. The rubber motor may not be enclosed.
- (g) Tail dimensions 12" maximum span, 4" maximum chord.
- (h) Solid motor stick and boom.
- (i) Maximum propeller diameter 12". No mechanical means of varying the propeller pitch or wing incidence are permitted.

2 Flights

The competitor shall be allowed 6 flights of which the two best flights will be taken for classification

4 -11 FAI F1D rules 3.4.4 Definition of an Official Flight to 3.4.11 Launching shall apply.

3.60.9 Living Room Stick

1 Specification of Model

- (a) Wing : Maximum projected span 7 inches. Maximum chord 2.5 inches. Monoplane only.
- (b) Motor stick and tail boom to be of solid construction.
- (c) Maximum motor stick length from front bearing to rear hook 5 inches
- (d) Maximum overall length from front of bearing to rearmost point of model 10 inches.
- (e) Maximum tail span 7"
- (f) Maximum tailplane area is 50% of the projected wing area.
- (g) Propeller to be of solid wood construction, maximum diameter 7 inches.
- (h) Weight : Minimum flying weight less motor is 0.43 gm.
- (i) No composite construction using materials such as boron or carbon fibre is allowed.

2 Flights

The competitor shall be allowed 6 flights of which the two best flights will be taken for classification

4 -11 FAI F1D rules 3.4.4 Definition of an Official Flight to 3.4.11 Launching shall apply.

3.60.10 No-Cal Profile Scale

1 Specification

- (a) The model should be a recognisable model of a full sized aircraft, with a wingspan not exceeding 16 inches.
- (b) Minimum airframe weight without rubber 6.0 g
- (c) Balsa wood and jap-tissue shall be the main construction materials. The use of hi-tech materials such as boron, carbon fibre etc. is not permitted.
- (d) The model must have control surface outlines, window outline and registration markings as per the modelled full sized aircraft.

- (e) The model must have the full landing gear as per the full sized aircraft. No profile gear is allowed. Models of aircraft with retractable gear may be depicted with the gear retracted.
- (f) No mechanical means of varying the propeller pitch or wing incidence are permitted.

2 Flights

The competitor shall be allowed 6 flights of which the two best flights will be taken for classification

4 -11 FAI F1D rules 3.4.4 Definition of an Official Flight to 3.4.11 Launching shall apply.

3.60.11 Gyminnie Cricket

1 Specification

All model dimensions shall be as the plan supplied with the standard Gyminnie Cricket kit.

Wing span 15" (382mm). Monoplane only.

Overall length 17" (430mm)
 Max motor stick length 9" (228mm)
 Minimum weight without rubber..... 3gm

No mechanical means of varying the propeller pitch or wing incidence are permitted.

2 Flights

The competitor shall be allowed 6 flights of which the two best flights will be taken for classification

4 -11 FAI F1D rules 3.4.4 Definition of an Official Flight to 3.4.11 Launching shall apply.

3.60.12 Legal Eagle

1 Drawing Requirements

- (a) The drawing must fit on one side of one sheet of legal size paper (8.5" X 14")
- (b) No drawing of any component may be superimposed on another and must leave a clear gap of at least 1/8" between another component and between it and the edge of the paper.
- (c) The wing(s) and tailplane(s) must be drawn full span, tip to tip and the fuselage drawn full length side view from nose to tail, in one piece.
- (d) Fin(s) may be drawn separate from the component to which it/they are attached.
- (e) Landing gear must be drawn in its place on the fuselage side view showing its full length.
- (f) The drawing must be presented to the Contest Director on demand.

Note: No top or front views are required.

2 Design Requirements

- (a) The smallest wood size shall be 1/16" sq except for the propeller.
- (b) The fuselage measured to its outside surface must contain a space 1" X 1.5" X 3".
- (c) The fuselage shall either have a cabin or an open cockpit.

- (d) The windshield of the cabin or cockpit must be of an angle of at least 30 degrees to the fuselage datum.
- (e) The cabin or cockpit must have a windshield and side windows of a clear or translucent material.
- (f) Flight surfaces: The leading and trailing edges of the must not be parallel to each other.
- (g) The tip shall be curved apart from the trailing edge which can be straight.
- (h) Any twin surfaces e.g. fins or wings may be built using the same component plan.
- (i) All flight surfaces shall be covered with tissue and may be single or double covered.
- (j) The fuselage shall be covered with tissue except for parts covered by flight surfaces or where access to the rubber motor is needed. The windshield and windows may be covered using an ultralight film.
- (k) The landing gear shall use at least one wheel of at least 1" diameter.
- (l) The use of a motor stick or tube is permitted and, if used, must be shown on the side view of the drawing in the correct position.
- (m) No mechanical means of varying the propeller pitch or wing incidence are permitted.

3 Flying

- (a) The model must R.O.G from the floor.
- (b) The competitor shall be allowed 6 flights of which the two best flights will be taken for classification

4 -11 FAI F1D rules 3.4.4 Definition of an Official Flight to 3.4.11 Launching shall apply.

3.60.13 Catapult Launch Glider

1 Specification of Model

- (a) Maximum projected span of model is 12 inches.
- (b) Maximum wing chord is 3 inches.

2 Catapult

- (a) Maximum length of catapult handle is 6 inches.
- (b) Catapult to be powered by one loop of rubber strip which has a maximum width of 1/4 inch.

3 Launching of Models

Both the catapult handle and the catapult glider must be hand held by the competitor at launch with the competitor standing on the ground.

3.60.14 Index Competitions

Index competitions allow different classes of model to compete against each other directly. A challenging and satisfying contest can be held which would not be possible for individual classes.

All types of indoor model as defined in 3.60.2 to 3.60.11 shall be eligible.

1 Scoring

Each official flight time shall be recorded and the score for that flight expressed as a percentage of the target time for that class of model (see below). The best score from six official flights shall determine the placing in the contest. In the event of a tie, the next best score shall determine the placing, this procedure being repeated as often as necessary.

2 Target Times

The target time shall be chosen by the Contest Director from the following criteria as deemed appropriate:

- (a) The UK national record for that ceiling category.
- (b) The flight time from a previous recognised index competition at the same site.
- (c) A target time defined by the Indoor Technical Committee if the criteria above give an unrealistically low target time.

A complete list of target times shall be posted at the start of each competition.

3.60.15 Nationals Championship Points

Each competitor who makes at least one flight in a published contest at the National Championships shall be awarded points according to the following table:

No of entries	1st	2nd	3rd	4th	5 th	6th	7th	8th	9th	10th
1	1									
2	2	1								
3	4	2	1							
4	5	3	2	1						
5	6	4	3	2	1					
6	7	5	4	3	2	1				
7	8	6	5	4	3	2	1			
8	10	8	6	5	4	3	2	1		
9	11	9	7	6	5	4	3	2	1	
10	12	10	8	7	6	5	4	3	2	1

If the number of entrants who record a score is increased by n, each placing shall receive n more points so that the last placed entrant receives one point.

In the event of a tie, a count back system shall be employed to determine the winner.

3.60.16 F1D Team Trials Rules

1 General Format

- (a) The GBR Team places will be offered to a maximum of three entrants who gain the highest points totals over a series of events.
- (b) The points will be gathered from each entrant's top 3 placings from a maximum of 5 scores (refer to item 21).

- (c) Dependant on the venue, the Indoor Technical Committee may choose to fly the event on quarter, third, half, or full motors. (The date and opening times shall be announced a minimum of 14 days prior to the event through the BMFA website or BMFA News) Any part motor must not exceed the overall weight of its percentage (1/4, third or half) of 0.6 grams.
- (d) The entrant will choose how many events he/she wishes to partake in.
- (e) Each Trials event will be flown over a maximum of two days.
- (f) Each contest day will be run in rounds, with a minimum of three rounds on any one day with the aim to evenly space the rounds throughout the day (exact time for the rounds will be confirmed and announced at the start of each days flying)
- (g) Each entrant will have a maximum of six competitive flights per event, which may be taken over 1 or 2 days.

2

Scoring

- (a) The entrant who gains the highest total flight time (two flights added together) in each event will place 1st and will be awarded 100 points (100%).
- (b) In the event of two entrants having identical times the third best flight will be reviewed on a count back basis to establish the 1st place.
- (c) The scores from the first placed entrant will form a benchmark (100 %) for points to be calculated for every other entrant.
- (d) All other entrants will be awarded points based on the percentage of the winner's time.
- (e) All scores will be rounded down to the nearest single point.
- (f) The event scores will be carried forward to an overall league table to be published and distributed shortly after each Trials date through personal Email to all those attending and via the BMFA Website.
- (g) Flight cards will be issued to all entrants before the start of the event.
- (h) Timekeeping must be carried out by two BMFA members and both names must be clearly marked & signed on the flight card.
- (i) Flight times will be returned immediately after each flight and recorded at contest control prior to the next attempt commencing.

3

Events

- (a) Models will be checked and scrutinised as necessary by the BMFA nominated Contest Director/ helper during each trial event – all to current FAI rules/ model specifications.
- (b) It will be the Indoor Technical Committees decision to postpone/ alter or cancel an event due to extreme weather forecasts etc and to notify the entrants of this.
- (c) The contest Director may alter the format of the contest for any day affected by unusual conditions or circumstances.
- (d) The contest Director's decision on the day will be final. The usual protests and Appeals procedures apply as per 3.60.2.
- (e) In the event of a Trials date being cancelled, where possible the published reserve dates will be utilised.

4 **Qualification**

The ITC shall determine, for each Trial event, minimum flight times for Senior and Junior contestants which the contestant must achieve for at least 2 flights in each Trials date. Achievement thereof ensures the contestant's eligibility for team selection.

5 **Classification**

If between 3 and 5 Trials events are flown, the competitor's best two Trials results are added together to give his/her final score.

If only 2 Trials events are flown, the competitor's better score is taken to give the final result.

Example:

1st Flier A total 60mins 100% = 100points = 100

2nd Flier B total 55mins 92% = 92

3rd Flier C total 10mins 17% = 17

Carried forward to league table formatted as shown below.

Name	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	Total	Position
Flier B	100	50	60	90	92	282	2 nd
Flier D	10	22	55	80	17	157	5 th
Flier C	DNF	80	90	100	DNF	270	3 rd
Flier E	40	60	100	90	DNF	250	4 th
Flier A	97	100	87	90	100	297	1 st

Therefore: - The team places would be offered to Flier A, Flier B & Flier C with reserve place being Flier E etc.

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