

CLASS F5B - ELECTRIC POWERED MOTOR GLIDERS

Definition

- a. Definition: This contest is a multi-task event for RC Electric Powered Motor Gliders including two tasks:

- Distance
- Duration and landing

These two tasks are executed without interruption in one flight. A minimum of two and a maximum of 8 flights must be flown. If more than three flights are flown, the lowest score of each competitor will be discarded.

- b. Model Aircraft specifications:

| | |
|---|-----------------------|
| Minimum weight without battery | 1000 g |
| Minimum surface area | 26.66 dm ² |
| Type of battery | Lithium Polymer |
| Maximum number of only serial Cells in parallel are not permitted. | cells 6 |
| Minimum weight of battery pack | 450 g |
| Maximum weight of battery pack | 600 g |
| Limitation of energy by an electronic limiter that stops the motor | max 1750 Watt-min |

The limiter is checked by the organiser during the contest.

- c. Maximum number of battery packs to enter the contest: 1 pack per 2 rounds; 1 pack for reflights.
- d. Repair of battery packs is permitted providing the cells used in the repair come from battery packs that were checked at the start of the contest for that pilot.
- e. Starting order for World and Continental Championships : the starting order for the first round will be established by random draw. For the next rounds the starting order will follow the reversed ranking list. Frequency will not follow frequency and team member will not follow team members.
- f. Starting order for other competitions:

The starting order for the first round will be established by random draw.

The number of pilots is then divided by the number of rounds giving “x” result.

For each subsequent round, the first number “x” of pilots in the starting order moves to the end of the starting order

Example:

Given that there are 24 pilots and four rounds then the calculation results in 6.

The starting order for the rounds would then be as follows:

Round 1: Starting order 1-24.

Round 2: Starting order – the first six pilots move to the end of the starting order which is now 7-24 and 1-6.

Round 3: Starting order – the first six pilots move to the end of the starting order which is now 13-24 and 1-12

Round 4: Starting order – the first six pilots move to the end of the starting order which is now 19-24 and 1-18.

Course Layout and Organisation

- a. Two imaginary vertical planes at a distance of 150 m from each other determine the turnlines and are named Base A and Base B. A safety plane is established perpendicular to these planes. The sighting devices used to detect the crossing of the Bases A and B are placed at a distance of 5 m from the safety plane.
- b. For landing, the organiser must provide three concentric circles 30, 20 and 10 m in diameter, or a tape or line with marks at the same distance, located at a place on the field where no danger of collision exists with model aircraft simultaneously flying either the distance.

F5B Contest Site Layout

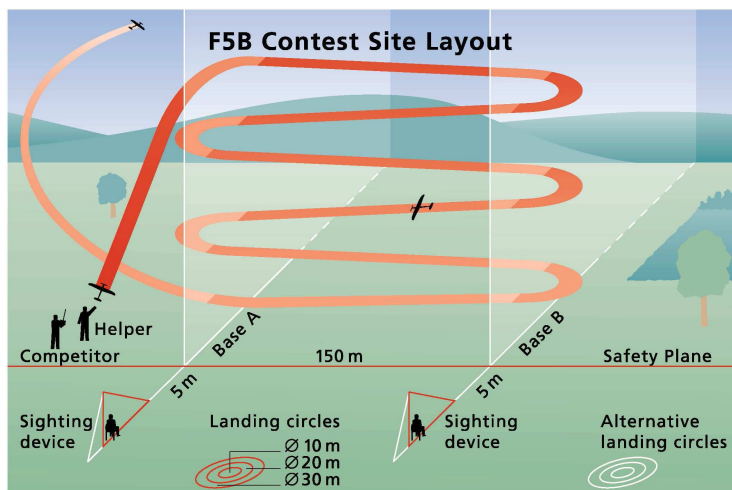


Illustration 1: Base B can either be to the left or right of Base A.

Scoring

- a. For each flight the total score is compiled by adding the partial score A and B for each competitor;
- b. The individual result of each round is normalised to the points of the best competitor

of that round.

$$P_{round} = 1000 * \frac{\text{Individual points}}{\text{Points of the best competitor}}$$

The normalised points shall be recorded to the first decimal number.

- c. In order to decide the winner when there is a tie, the best discarded flight shall be taken into account.

Launching

- a. Before launching, the competitor has to show to his timekeeper how he controls his motor(s) on his transmitter (on, off, reversing);
- b. The launch will occur behind the safety line within 10 m from Base A.
- c. The model aircraft is released into flight directly from the hands of the competitor or his helper, without assistance. The model aircraft shall not be launched from a height greater than the flier's normal reach above the ground.

Distance Task

- a. a) This task begins when the model aircraft releases hand-launched and ends after 200 seconds. Time of release is to be taken by one timekeeper.

This task must be carried out with at least two climbs with motor running however no more than ten climbs with the motor running are allowed. No points will be awarded for the legs completed after an eleventh or more climb with motor running.

The competitor has to decide how much time he will use for each climb (motor run) and how much for gliding.

- b. Starting and stopping the motor must be announced to his timekeepers;
- c. When after stopping the motor the model aircraft first crosses the Base A in the direction of Base B, the timekeeper starts counting the legs. The model aircraft must complete as many legs as possible from the starting point Base A to the Base B and return;
- d. Restarting the motor stops counting the legs, as does the expiration of the 200 seconds.
- e. A timekeeper announces to the competitor when his model aircraft crosses the Base A and a flagman or audio system is used to signal crossing of Base B. The absence of a signal will indicate that the model aircraft has failed to correctly cross the base. The instruments used to check the crossing of the vertical plane must assure the parallelism of such planes.

During the scoring in this task, flying with any part of the model aircraft on the forbidden side of the safety plane will give ZERO points for the whole flight, distance and duration.

- f. The competitor, his helper(s) and the team manager must remain at Base A until the distance part of his flight is completed. Nobody, other than the flagman, may stay in the B line and give signals.

- g. Every completed leg will be awarded 10 points. When the model aircraft fails to complete at least one leg after either of the first two climbs, 30 points will be deducted from the score of this task;

After 200 seconds of this task, which will be indicated by an audio signal, the duration task begins immediately.

Duration and Landing Task

- a. This task must be completed within 600 seconds from the moment the audio signal is given;
- b. The competitor has to decide how much and how often he will switch on the motor;
- c. The gliding-time timekeeper (1) starts his stopwatch every time the motor is switched off. Gliding time ends either when the motor is switched on again or when the model aircraft comes to rest after landing. The competitor must announce the switching on and switching off of his motor to the timekeeper with the word "ON" and "OFF";
- d. Gliding time is cumulative and one point will be awarded for each full second the model aircraft is gliding;
- e. One point will be deducted for each full second flown in excess of 600 seconds;
- f. Additional points will be awarded for landing; when the model aircraft comes to rest in the 30m circle, 10 points will be given while coming to rest in the 20 m circle gives 20 points, and when coming to rest in the 10 m circle 30 points will be given. The distances are measured from the centre of the circle to the nose of the model aircraft;
- g. No additional points will be awarded if the landing occurs more than 630 seconds after beginning of this task (as per a)).

Site

The competition must be held at a site having reasonable level terrain with a reasonable low probability of slope or wave soaring.

F5F – 4 CELL MOTOR GLIDERS (PROVISIONAL)

Same rules as F5B except:

Model Aircraft Specifications:

Minimum weight (ready to fly) 1500g

Minimum surface area 36 dm²

Maximum surface loading 75 g/dm²

Type of battery Lithium Polymer

Maximum number of only serial cells 4

Cells in parallel are not permitted.

Minimum weight of battery pack: 300 g

Limitation of energy by an electronic limiter that stops the motor max 1300 watt-min.

The limiter is checked by the organiser during the contest.

Maximum number of battery packs to enter the contest: 1 pack per 2 rounds; 1 pack for reflights.

Repair of battery packs is permitted providing the cells used in the repair come from battery packs

that were checked at the start of the contest for that pilot.