



The purpose of this category is to provide an electric powered radio-controlled thermal duration soaring event for models up to 3 meters wingspan with altitude/motor time limitation.

The key to the event is to perform the greater number of 6 minutes flights in the contest Working Time of 3,5 hours.

Unlike other similar events, in this contest the competitors during the launches can freely activate the motor but the total motor run time for the event is limited to 600 seconds; the motor is also disabled when the total altitude gain (with motor running) is greater than 1.200 meters. The competitors, within the 3.5 hours window, can fly their model aircraft at the same time and can freely decide when to perform their launches, based on their personal understanding of the local situation.

Maximum number of competitors is limited to 24.

A precision landing point is awarded if the model lands in a 10 meters landing circle.

Each competitor, or his/her helper, is requested to record his launches flight time and landing score.

## 1 - General Specifications

- a - maximum wingspan: 3 meters
- b - power source shall consist of any kind of rechargeable batteries that can be charged or changed any time during the competition
- c - any type of electric motor, with or without gearbox, may be used but climb rate, recorded by the data logger on board, must not exceed 5 m/s
- d - each model must be fitted with an approved electronic altimeter/motor run time limiting device and data logger
- e - all ballast must be carried internally and fastened within the airframe
- f - any device for the transmission of information from the model aircraft to the competitor is prohibited; RC receivers that, for safe operation of the model, transmit to the competitor transmitter information related to signal strength (RSSI) and receiver battery voltage only are allowed
- g - model aircrafts with fully molded composite wings are not allowed
- h - two model aircrafts can be used for the contest

## 2 - Altimeter/Motor run time limiter and data logger

- a - each model aircraft must be fitted with an electronic altimeter/motor run time limiting device called "Multi 2" by RC Electronics ([www.rc-electronics.org](http://www.rc-electronics.org)) running with the new firmware "AUTONOMY F5J 2016" (available from RC Electronics)

With the new firmware "Multi 2" records, for all the launches of the event, total motor run time and total altitude gain with motor running. Motor is disabled when motor run time is greater than 600 seconds or the altitude gain, with motor running, is greater than 1.200 meters, whichever comes first

- b - to take account of altitude gain due to accumulated kinetic energy (zoom) the logger will record the altitude gained for 10 seconds after the motor is stopped; during this 10 seconds delay motor activation is disabled

- c - the Contest Director (CD) may choose to change total motor run time and total altitude gain based on local conditions
- d - "Multi 2" must be installed via series connection to motor ESC in accordance with the requirements detailed in Autonomy F5J site ([www.autonomy-f5j.it](http://www.autonomy-f5j.it)). The logger must not be enclosed in any material other than that provided by the manufacturer and the model aircraft must include sufficient static venting to ensure that outside pressure is duplicated inside the model at the "Multi 2" location.

### **3 - Launching**

- a - before the start of the Working Time all "Multi 2" must be initialized by the CD on the designated time and altitude parameters
- b - the start of the Working Time is defined by the CD and is indicated by an audible signal, as for the end.
- c - the launches of the model aircraft are done by the competitor or by his/her helper and must be straight forward, with motor running; any other type of launch is not allowed
- d - flight time for a specific launch will start as soon as the motor is activated and ends when the model aircraft touches the ground or any other ground object
- e - models still flying at the end of the Working Time can conclude that flight

### **4 - Landing**

- a - Organizers must allocate at least 6 landing spots
- b - before the end of each 6 minutes flight the competitors must choose for that specific flight a landing spot where the precision landing task will be performed
- c - a landing point will be awarded if the model aircraft nose during the landing stops within 5 meters radius of the landing spot
- c - no landing point will be awarded if the model touches the pilot or if the model loses parts during landing or if the flight time is less than 6 minutes

### **5 - Scoring**

- a - each launch with flight time longer than 6 minutes will score 360 points; no penalties for flights longer than 6 minutes
- b - each correct landing will score 40 points
- c - the seconds of the last flight (less than 6 minutes) will be counted

*Note:*

*In Italy we decided to count on fair play; each pilot will keep track of the flight score based on the number of 6 minutes flights and on the number of precision landing performed. In any case "Multi 2" log data must be available for flight time, motor run time and altitude gain verification.*