

E-RES Class Rules

(AEFA Variant 03/08/2021)

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0. Preamble

The E-RES rules attempts to combine the popular European E-RES concept with aspects of existing Australian events. It is intended as a low cost, low stress event for both experienced and inexperienced flyers.

An alternative event format has been provided based on the Millennium Cup, which suits small venues and small events. Having the event suitable for use at small club fields encourages small electric gliding in general, particularly with new CASA regulations.

1. Introduction

This is a low technology Radio Controlled Thermal Soaring glider class for 2.0m RES (Rudder-Elevator-Spoiler) models launched employing electric motor power. The event is designed to introduce less experienced pilots to electric gliding contests, but no-one is excluded from joining in. More experienced pilots who can share their knowledge are welcome.

The class is for predominately timber-constructed models, but moulded foam models (such as the Radian and similar) and those with timber skinned foam wings are permitted to render the event as inclusive as possible. Carbon Fibre LE, spars and tail booms are permitted.

2. Model Specifications

The aircraft can be either a Standard or Tailless model with the maximum projected wing span of the aircraft not exceeding 2000mm.

Standard Model – a model aircraft consisting of Wings, Fuselage and Tail Surfaces. The tail surfaces can either comprise of separate Fin and Tailplane in cruciform configuration, T-tail or combined as a ‘Vee’ tail with mixed rudder and elevator functions. Ailerons are not permitted.

Tailless Model – a model aircraft that has no discernible tail surfaces and is controlled by wing mounted elevons providing directional and pitch control with a maximum of two servos utilised for control of the elevons.

The aircraft may be equipped with spoilers (of any size) fitted to the upper surface of the wing. These may be activated by one or two servos (one per wing) but must operate simultaneously and be triggered by a single transmitter channel. If used, spoilers must be on the wing upper surface at least

5 cm ahead of the trailing edge.

The competitor may use a maximum of two competing models.

Ballast may be carried within the aircraft. It must be securely fastened and non-adjustable in flight.

Fixed and retractable devices for braking the model when landing (e.g. bolts, serrated protruding devices, etc.) are not permitted. Nothing may protrude from the bottom of the aircraft in the forward fuselage. Fins and rudders projecting below the fuselage at the rear are permitted. No telemetry is permitted from the model except battery condition and received signal strength.

3.Competition Terrain

The competition shall be conducted on a site that is relatively flat and will not unduly support wave or slope soaring. The contest director will notify competitors of the boundaries of the contest field.

4.Cancellation

The contest director may elect to either postpone or cancel a contest if the wind strength increases beyond 6 metres/second any time within one minute of testing. This will be measured at a height of 2m above ground level and measured for a period of 1 minute.

5.Competition Flights

A contest shall comprise of a number of rounds determined by the contest director. The number of rounds for a contest to be declared official shall be a minimum of 4.

Complete a flight of up to 5 minutes from the moment of launch (300 seconds). An official attempt is recorded, and timing starts, when the model leaves the hand of the competitor or helper and will cease when the model first touches the ground . The score shall be one point per second up to 5 minutes. Any seconds over 5 minutes will be one point per second deduction from the score. If still flying after 5 minutes of flight, the pilot has 30 seconds to land and score landing points. No re-launches are permitted.

A minimum of 4 pilots shall fly in each slot. The contest director is responsible for organising pilots into allocated slots.

Flights scores are recorded in whole seconds only. The results of each slot shall be normalised to a 1000 points and the normalised score used to calculate the competitors final position.

If more than four (4) rounds are flown, then each pilot's lowest score will be discarded before determining his aggregate score.

6.Launching

The model shall be launched with the motor running, after the sounding of a horn (or similar indication) signaling the start of the group flight time. The motor should not be started until the start signal is given.

Each pilot will launch within 30 seconds of the start signal (launching more than 30 seconds after the start is a zero score). Contest Directors should indicate when the 30 seconds launch window has expired. The 5 minute flight time starts when the model leaves the launcher's hand.

The model shall be launched in to wind if possible (the Contest Director will designate the

direction of launching), with the pilot standing adjacent to his landing circle if that is practicable. The landing circles will be spaced at least 10m apart. The motor may run for up to 30 seconds. An electronic device must be fitted that will stop the motor either when the aircraft reaches 100m, or the motor has been running for 30 seconds, whichever comes first.

7.Landing

All landings will be either in to wind, or in the direction indicated by the CD. It is recommended that the pilot stand on the edge of the landing circle opposite to the landing approach. A bonus of 20 landing points will be awarded for landing inside a 20m (diameter) circle (F5J 10m tapes will be used and landing points awarded if the tape can touch the nose of the aircraft). Timing stops at first touch, but the model can then slide in to the landing circle for landing points to count.

Landing bonus points shall be zero if the model lands 30 seconds or more after each individual's 5 minute flight time, or if the pilot or helper touches the model during the landing. A model that lands outside the designated contest field shall score 0 for the flight. Please note that Contest Directors will indicate the launch and landing directions, which should be in to wind if possible. Pilots who land early, their helpers and timers, shall exit the field well upwind of the landing area so as not to impede those landing later.

8.Re-flights

A Competitor is entitled to retake his flight if:

The aircraft collides with another aircraft either during the launch or the flight or

The pilot is prevented from launching or landing his aircraft due to the actions of a 3rd party or

The pilot is forced to abort his flight for reason outside his control with the exception of personal equipment malfunction.

To claim a retake of his flight, the competitor must convince either his timekeeper or the contest director that his claim is valid. Claiming a re-flight should occur at the time of the incident, with the immediate cessation of the flight in progress. The pilot can choose to accept the flight in progress, but waives the right to a re-flight by continuing the flight in progress.

9. Appendix:

Alternative format for small fields.

This format may be used where there is limited space at a field to set up individual lanes.

aa) Competition Flights

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launches are permitted.

Scores are not normalised for this format.

b) Launching.

The Contest Director will determine the order of flight
Launching shall take place on a spot designated by the Contest Director.
The launch direction will be designated by the Contest Director.

Pilots will launch their planes in the order determined by the Contest Director and as soon as practicable after the previous pilot has launched.

The Contest Director has the discretion to alter the order of flight.

The Contest Director has the discretion to alter the launch direction at any time.

Pilots launch their planes sequentially.

The motor may run for up to 30 seconds. An electronic device must be fitted that will stop the motor either when the aircraft reaches 100m, or the motor has been running for 30 seconds, whichever comes first.

Pilots will move away from the launching spot to allow the next pilot to launch.

c) Landing.

The Contest Director may designate from one to a number of landing spots.

Prior to landing, the pilot will indicate to the timekeeper which landing spot he intends to attempt to land on.

Scoring of landings is as stated in section 7.