

New Millennium Cup Electric Competition

Hi all,

Due to increased interest in electric launch gliders, and to encourage new participants, we are going to use electric assisted launch gliders at the Millennium Cup contests, instead of winch launch models, from the beginning of 2018.

Please find attached a set of rules for electric assisted models to be used at future Millennium Cup contests.

The electric assisted glider rules have been developed to keep the same simple, cheap and fun theme that the Millennium Cup has always tried to achieve.

The electric model is essentially the same as the winch launch model but is allowed to have an extra radio channel to control the electric motor. The model will also require a height limiter to switch the motor off at 150m. To keep an even playing field, the power of the model will be roughly equal to the output of a standard Parkzone/E-Flight radian, 180watts (measured with the models fully charged normal flight pack after 10sec of continuous motor run). There will be a wattmeter made available in the Millennium Cup equipment box with various battery connectors for people to "self police" their models. Random tests may be conducted if the CD of the day or the Committee notices an obvious breach.

The contest director will choose a launching spot which has no equipment or people upwind for safety. As planes are launched, the pilot and timer will reposition onto their landing spot. The contest director will have to "meter" launches depending on available landing spots.

The electric assisted models will require their time keeper to start a watch when the model leaves the launcher's hand. At 30 seconds the time keeper will announce that the motor should be turned off, if the pilot or limiter has not already done so. The pilot will need to fly for a total of 6min 30sec from when the model is released. Once the model has been released, no relaunches are allowed. If the motor is started again then the flight time will stop, there will be a 50 point penalty and no landing points. This is to try to mimic an out landing for a winch launch model and to deter flying for maximum time points when there is no chance the model will get back to the spot.

A score will be submitted which includes total flying time up to 7minutes (6 minute 30seconds for maximum score), landing distance and motor re-run penalty if required.

At no stage will an electric model be launched or motor started pointing towards people or the pits.

Landing will be the same format as the winch launch gliders.

We welcome any comments as the competition is run to further improve the format. This set of rules will be made available on the Heathcote Soaring League Website, hsl.org.au

Regards,

Colin Woodward

Millennium Cup Competition Rules for Electric Assisted Launch Gliders

1 Model Specifications Electric Assisted Launch Glider

- i) Maximum Wing Span: 2000 mm
- ii) Maximum surface area: 150 sq DM
- iii) The model shall have only three channels used in its radio receiver.
- iv) The underside of the model must not have any protuberance other than surface control linkages and a propeller.
- v) A radio-controlled glider is a model in which lift is generated by aerodynamic forces acting on surfaces remaining fixed except for control surfaces. No other propulsion devices may be used except for an electric motor driven propeller with total power not exceeding **180 watts** (measured with the model's fully charged normal flight pack after 10sec of continuous motor run).
- vi) An electronic height limiter will be used to switch the electric motor driven propeller off **at 150m** above launch ground level or 30sec after launch, whichever occurs first, unless turned off sooner by the pilot.
- vii) Only the pilot standing on the ground shall control the model. Control shall be by radio transmission to the model only.
- viii) The radio control equipment used must comply with current MAAA regulations.
- ix) Any device for transmission of information from the model to the pilot is prohibited during the competition. Receiver battery voltage and signal strength are allowed.
- x) Any other device or design not considered to be in the spirit of the competition may be prevented from use, at the Committee's discretion.

2 Task and Fight Scoring Electric Assisted Launch Glider

- i) The objective of the contest is to complete a flight of 6 minutes pure thermal duration and land within 1 metre of a designated spot.
- ii) There will be a 30 second allowance to run the electric motor driven propeller once at the start of the flight.
- iii) One point will be awarded for each full second of the 6min 30sec flight from when the model leaves the launcher's hand to the time the model comes to rest, up to a maximum of 390 points, i.e. 6 minutes 30 seconds maximum. No extra points will be given if the pilot does not use the full 30 seconds of launch allowance.
- iv) One point will be deducted for each full second flown in excess of 390 seconds after the launch i.e. 6 minutes 30 seconds. After 7 minutes, the flight and landing shall be zero points.
- v) Additional points will be awarded for landing, depending upon distance from the spot, marked by the Contest Director, according to the following tabulations:

Distance from Spot (m)	Points	Distance from Spot (m)	Points
1	50	6	25
2	45	7	20
3	40	8	15
4	35	9	10
5	30	10	5

- vi) The distance is measured from the nose of the model to the spot. The measured distance is rounded up to the nearest highest metre.
- vii) No landing points shall be awarded if the model touches any person during landing manoeuvres.
- viii) The tape shall not be piled on the spot marker.

3 Launching Electric Assisted Launch Glider

- i) All launching shall take place on a spot designated by the organiser. The spot shall have no persons or equipment upwind for safety.
- ii) Launching direction will be set by the Contest Director. At no time is the model to be launched towards people or the pit area.
- iii) One continuous motor run will be allowed for a maximum of 30 seconds or up to a height of 150 meters, whichever occurs first.
- iv) If a second motor run is required within a flight then the flight time will stop when the motor starts again and zero landing points will be available. A penalty of 50 points will also be applied.

4 Contest Scoring

- i) If four or five heats are flown, the competitor's classification is determined by the sum of all scores for each heat. If six to eleven heats are flown, the lowest score shall be deleted. If twelve heats are flown, then the two lowest scores shall be deleted.
- ii) To decide the winner should there be an equal score after the appropriate low scores are dropped: a count back on flying time including landings of all heats shall decide the winner.
- iii) A minimum of four heats shall be flown for a Millennium Cup Point Score event.

5 Millennium Cup Annual Scoring

- i) A competitor's best four rounds shall be counted towards the Millennium Cup.
- ii) The scores for each individual round shall be normalised using the "1000" system for the Millennium Cup.

6 Competitors and Helpers

- i) The competitor (pilot) must operate his/her transmitter and fly the model personally. The pilot is solely responsible for the operation of their model.

7 Definition of an Official Flight and Pop Off

- i) If a timing malfunction occurs it will not be grounds for a re-launch unless it is brought to the attention of the Contest Director within 30 seconds of it being known. The flight shall immediately be abandoned.
- ii) No re-launch is allowed once the model leaves the launcher's hand, unless an unexpected event occurs not caused by the pilot/launcher or their model. This shall be announced within ten (10) seconds of the unexpected event occurring.

8 Cancellation of an Official Flight or Disqualification

- i) Conduct that is not in the spirit of the rules may result in the competitor being disqualified at the discretion of the Contest Director or Committee.
- ii) The flight in progress is annulled if the model loses any part during the launch or during the flight time. The loss of a part during landing (i.e. in contact with the ground) is excluded.

9 Organisation of Contests

- i) The host club may appoint a Contest Director for their contest.
- ii) A pilots' briefing will be conducted prior to the commencement of the contest, during which the objective of the competition, flying rules and any local safety advice will be explained. The Contest Director must clearly define the boundary between the landing area and the area assigned for other business (safety area).
- iii) All relevant MAAA and CASA safety directives must be observed.
- iv) Once the contest has started there shall be no test flying.
- v) Competitors are to launch as soon as the launch area is clear and safe to do so on the Contest Director's signal.
- vi) At the Contest Director's discretion, models may be flown out of normal sequence.
- vii) Should the pilots believe flying conditions are not in the spirit of the Millennium Cup competition, a pilots' briefing will be called at the end of that round. The majority vote will decide if the competition is to be paused or concluded at that point.

10 Junior Definition

- i) A person who enters the Millennium Cup competition before their 18th birthday shall be deemed to be a junior for the remainder of the Millennium Cup rounds for that calendar year.