5.7 Limited Electric Glider Rules (ver 29 Jan 2009)

5.7.1 Definition of Electric Powered Model Aircraft

Model aircraft in which lift is generated by aerodynamic forces acting on surfaces remaining fixed in flight except control surfaces and which performs manoeuvres controlled by the pilot on the ground, using radio control. The power pack for the electric motor may not have any fixed connection to the ground or another model aircraft in the air.

5.7.2 Builder of the Model Aircraft

Builder of the Model aircraft rule is not applicable to Limited electric glider.

5.7.3 General Characteristics of RC Electric Powered Model aircraft

Maximum total area 150 dm2
Maximum weight ..... 5 kg
Loading ..... 12 to 75 g/dm2

5.7.4 **Flight Pack**

5.7.4.1 The Flight Pack must consist of one of four chemistries with the following maxima:

5.7.4.1.1 Up to seven (7) Nicad or NiMH cells
5.7.4.1.2 LiPo cells up to 6600 cell-mAH max
5.7.4.1.3 LiIon cells up to 10,000 cell-mAH max

5.7.4.2 Mechanical or chemical modification of the individual cells, e.g. to reduce their weight, is not allowed except that insulation sleeves of individual cells may be changed.

5.7.5 Any device for the transmission of information from the model aircraft to the pilot is prohibited.

5.7.6 Competitor and Helper

Each competitor must operate his radio equipment personally. Each competitor is permitted two helpers

5.7.7 Event definition:

The contest is for R/C Electric powered Motor Gliders.
It includes the following tasks:

a. Duration, and
b. Landing.

A minimum of two flights must be flown to constitute a contest.

5.7.8 Organization

5.7.8.1 The organisers shall provide five concentric circles of 3, 6, 9, 12 and 15 metre radius for the landing for each competitor in a heat. (the use of a "spot" and a measuring line to determine the distance that the nose of the model is from the landing spot is normal)

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

5.7.8.3 When a competition is in progress, only the pilots, their helpers and any officials should be on the flight line.

5.7.8.4 **Scoring:**

5.7.8.5 Where possible the organizers will use "man on man" or normalized scoring. The winner of each heat will receive 1000 points and each of the other competitors in that heat will receive a score calculated as shown:

$$\text{Normalized Score} = \frac{\text{Competitor's Flight score}}{\text{Winner's flight score}} \times 1000$$

where the Winner's flight score is the highest flight score achieved in the heat in which the competitor flew and the competitor's flight score is defined in 5.7.11

5.7.8.6 If normalized scoring is used then the organizers shall endeavour to organise the flight order (draw) so that over the event each competitor will fly against as many of the other competitors as is possible within the constraints of the frequencies used and the number of rounds being flown. (Organisers should note that the larger the number of competitors in each heat, the better this objective will be achieved.)

5.7.8.7 If more than two flights are flown, the lowest normalized score (*or flight score if normalized scoring is not used) of each competitor shall be discarded and the remaining normalized scores (*) added to obtain the final score, which will determine the competitor's position in the final classification.

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

5.7.9 Launching:

5.7.9.1 Before launching, the competitor shall show his timekeeper how the transmitter operates the motor control [on, off].

5.7.9.2 The model, **with motor running**, is released or thrown into flight directly from the hand(s) of the pilot or his helper without assistance.

5.7.9.3 The model shall **not** be launched from a height greater than the flier's or his helper's normal reach above the ground.

5.7.10 Duration and Landing Task:

5.7.10.1 The objective of the duration task is to achieve a flight with a duration time of exactly 300 seconds.

5.7.10.2 The pilot has complete discretion over the motor's use subject to 5.7.9.2. The pilot must announce the switching on and switching off of his motor to the time keeper with the words "motor on" and "motor off"

5.7.10.3 The timekeeper recording the duration time shall:

a. Start the duration watch when the model is launched (released from the hand)
b. Stop the watch when the model comes to **rest**.

5.7.10.4 The duration time is recorded as the minutes and **completed** seconds on the duration watch. (5.7.10.3)

5.7.10.5 The duration points are calculated by awarding one point for each full second the model is flying, up to 300 seconds and deducting one point for each full second flown in excess of 300 seconds. eg. A flight time of 5min 05sec or 305 seconds will receive 295 duration points.

5.7.10.6 The timekeeper recording the motor run (which may be the same person as in 5.7.10.3 above) will start their motor watch when the model is launched. They will stop their motor watch when the motor is switched off. The watch is started again each time the motor is started and stopped when the motor is turned off again.

5.7.10.7 Motor run time is cumulative. One point will be added for each full second that the motor is running.

5.7.10.8 Additional points will be awarded for the landing. The distance from the landing spot to the nose of the model is measured and points are awarded as follows:

Distance from the spot marker	Additional points awarded
Up to 3 metres	25 points
Over 3 and up to 6 metres	20 points
Over 6 and up to 9 metres	15 points
Over 9 and up to 12 metres	10 points
Over 12 and up to 15 metres	5 points

5.7.10.9 No landing points are awarded if the:

5.7.10.9.1 landing occurs more than 330 seconds after starting the task.

5.7.10.9.2 model aircraft touches either the competitor or his helper.

5.7.11 The **Flight Score** is calculated by subtracting the motor run points (5.7.10.7) from the duration points. (5.7.10.5) and then adding the landing points (5.7.10.8)

5.7.12 The flight is given zero points if:

5.7.12.1 the pilot uses a model aircraft not conforming with the rules. In the case of intentional or flagrant violation of the rules, in the judgment of the Contest Director, the competitor may be **disqualified**.

5.7.12.2 the model aircraft loses any part during the duration time. However, the losing of a part during landing (i.e. after contact with the ground or an other obstacle) or during the flight due to a collision with another model is not taken into account

5.7.12.3 the model aircraft was previously used by another competitor at the same contest.

5.7.12.4 the pilot uses more than two helpers

5.7.12.5 any part of the model aircraft does not come to rest and remain at rest within 100 metres from the landing spot.

5.7.12.6 the model aircraft used a power source that was not compliant with 5.7.4.1.

5.7.12.7 the model aircraft is controlled by anyone other than the competitor.

Appendix 1:

Examples of permitted Flight Packs:

- 2S 3300, 2S 3200 mAH Lipo
- 3S 2200, 3S 2170 mAH Lipo
- 4S 1600, 4S 1500 mAH Lipo
- 5S 1200 mAH LiPo

- 4S 2300 mAH Li Ion (A123 cells)

- 7 * GP 3700, GP 2200, IB 4200 (or any other) NiMh
- 6 * any NiMH cells etc.