

# COMPETITION RULES 2010

## ONE MODEL AULD COMPETITION

### Description.

The competition is a duration event for electric powered models only. The object of the competition, as the title implies, is to be the last down, i.e.; have the longest flight, without re-charging the batteries.

### Model Specification.

- a. The model is a West Wings Orion E 1510mm span electric powered 2 function glider to be supplied via the Club. **No other model may be used.**
- b. The model will have a minimum weight of **470gms** in its ready to fly state complete with battery, **irrespective of penalty ballast.**
- c. The top three finishers in each competition will have to carry 50gms penalty ballast **in addition to the normal (min 470gm) flying weight of their model.**
- d. Any model weighing less than 470gms without penalty ballast will be disqualified unless ballasted to meet the limit.
- e. The competitors who finished in the top three places in the last competition of 2009 will start the first competition of 2010 with a 50gm weight penalty.
- f. The motor is a Black Mantis B2846 1100Kv brushless motor to be supplied by the Club. **No other motor may be used.**
- g. The propeller blades are Aeronaut 9" x 5" CAM-Carb, Pt No 7234/19 and the spinner is a 28mm diameter alloy type, 3.17mm shaft bore, part No HY002-01501 to be supplied by the Club. **No other propeller or spinner may be used.**
- h. The battery is a Loong Max two cell 7.4V 500mAH lithium polymer. **No other battery may be used.**
- i. You are recommended to use a BEC type speed controller so that you don't carry the weight penalty of an additional battery and you are free to choose any make or size of brushless speed controller. Non-BEC models may not use the receiver battery as a secondary power source to the motor.
- j. Gearboxes are **not** permitted, you must use the motor and prop as direct drive
- k. No part of the model may be discharged during flight, i.e. ballast or cells.
- l. Cells may not be carried externally - they must be contained within the structure of the model.
- m. You must build the kit as standard; however you are allowed to use your own preferences for rudder and elevator linkages if you wish. You may also convert the wing mounting to a bolted fixing if you wish.
- n. You may cover the model in any medium you like, but obviously the use of heavier coverings will put you at a disadvantage.
- o. You may **not** alter the motor, propeller or batteries in any way. You may use any type of connectors between them however.
- p. You may use any type and size of receiver and servos that will fit inside the model.
- q. You may use 35MHz, 27 MHz, or 2.4 GHz radio, but you must agree your frequency or colour with the Competition Director in the case of the former two, as these will be allocated on a personal basis.

### The Competition.

- a. The models will be weight checked at every competition, although we will allow a positive and negative margin for error.
- b. No entries will be accepted after 7pm.
- c. If you have not registered an allotted frequency, entry will only be permitted on the day, if there are no frequency clashes.
- d. For this competition, all frequencies may be used.
- e. There will be one round only and all models will be launched simultaneously.
- f. The contest director will assemble all competitors ready for launch. The launch will take place on his whistle. He will blow his whistle again five seconds later and any model not in the air will be disqualified. The stopwatch will be started on his first whistle and will be stopped as the last model touches the ground. Interim times will be recorded as the models land.
- g. The last pilot to land will be declared the winner, second last, second and third last, third, et al.
- h. In the unlikely event of a tie (a tie is considered to be within five seconds of each other), the

- relevant competitors will be awarded joint places.
- i. The contest director's decision is final.
  - j. The winner of the League will be the person with the best three out of four aggregate flight times. In the unlikely event of a tie, there will be a special fly-off arranged.

## **FREESTYLE AEROBATIC COMPETITION**

### **Description.**

Simply put, you just have to fly the best demonstration of aerobatics that you can manage in four minutes. This does not have to be 3D, conventional aerobatics are equally acceptable.

#### **1. Model Characteristics.**

- a) The competition is open to models of any type of fixed wing aircraft (including gliders if you think you can mount a four minute display!).
- b) A competitor may only have one entry, but a different model may be used in each round if desired.
- c) The model will comply with the DoE 82dB (A) noise limit.

#### **2. Ownership of models.**

- a) There are no rules governing the ownership of models, however points and places will only be awarded to the pilots of the models.

#### **3. Degree of difficulty.**

- a) There is no set pattern; you may fly any manoeuvres within your ability.

#### **4. Competition Rounds.**

- a) There will be two flying rounds; each of 4 minutes duration, after which time the competitor will be asked to land. Failure to do so in reasonable time may result in a penalty at the discretion of the Contest Director.
- b) There are no set manoeuvres other than take off and landing. It is up to the competitor to demonstrate the model in the most favourable manner.

#### **5. Disqualifications.**

- a) A flight may be cancelled and scored zero and/or the pilot disqualified if the contest director decides that the rules are not being adhered to or the model is being flown in a dangerous manner.

#### **6. Transmitter Control.**

- a) The Contest Director will not start the competition until all transmitter frequencies have been logged and noted against the competitor's names.

#### **7. Judges.**

- a) There are no official judges as such, the performance will be judged by your fellow competitors.
- b) Each competitor will remain on the patch at the end of their flight until all votes have been cast, at which time the CD will indicate that you can return to the pits.
- c) Your fellow competitors will either give their scores verbally to the CD or write them down on his score sheet. The exact method will be at the discretion of the CD on the day.
- d) You are voting for the aerobatic performance, not your favourite model.

#### **8. Scoring.**

- a) Scoring will be very simple, each fellow competitor will award a score out of 10 for the accuracy of the manoeuvres and a score out of 10 for entertainment value. Competitors are not allowed to award half points.
- b) The maximum possible score will depend on the number of competitors.
- c) The winner of the competition will be the competitor with the highest aggregate score, but in the event of a tie, the winner will be decided by a ballot of the competitors on slips of paper. If there is a tie again, the CD will decide the winner (providing he is not one of the competitors involved in the tie).

### **9. Competition Management.**

- a) The contest director will appoint helpers to assist in the running of the competition at his discretion.
- b) No entries will be accepted after 10:15am, with competition flying commencing as near as possible to 10:30am.

### **POWER DURATION AND SPOT LANDING COMPETITION RULES.**

- a) This year, we are definitely taking this competition back to its grass roots, there will be no exceptions, this will no longer be a 'stealth Electroslot' competition – anyone can enter with their normal everyday model.
- b) The competition is open only to conventional fixed-wing powered aircraft (IC or electric), which will be required to rise off the ground on wheeled undercarriage. **Powered gliders are not permitted** – any model which the CD considers is not in the spirit of the competition, will be disqualified.
- c) The object is to obtain the longest flight from a 30-second motor run, and to land and stop as near as possible to a marked spot. Measurement will be taken from the spinner nose or tip of the crankshaft where the model comes to a stop, to the marked spot.
- d) Timing will start when the model leaves the ground and a countdown will be given to assist the pilot to shut off the motor at 30 seconds.
- e) A 10-second penalty will be deducted for each second the motor runs over 30 seconds. If the motor is still running after 35 seconds the flight is void.
- f) Two rounds will be flown, the sum of both deciding the result.
- g) There will be a 10-minute maximum for each flight. Scoring for duration will cease after 10 minutes. Scoring is to be one point for each second with a maximum score per flight of 600 points. Pilots must land as soon as this time is up, to release the frequency.
- h) The flight finishes when any part of the model touches the ground.
- i) 200 points will be awarded for landing on the marked spot, reduced by 20 points for each complete metre from where the model stops to the target spot up to a maximum of 10 metres.
- j) No entries will be accepted after 10.15am.
- k) The model will comply with the DoE 82dB (A) noise limit.

### **DARYL HOOPER MEMORIAL OPEN GLIDER COMPETITION RULES.** **LES EDWARDS '100"' GLIDER COMPETITION RULES.** **ADMFC LEAGUE 100" & OPEN COMPETITION RULES.**

#### **1. Model characteristics.**

- a) Despite the title, there is **no** maximum projected wingspan of 100" for the Les Edwards glider competition. All glider competitions will be Open.
- b) A competitor may use a maximum of two models, but they must both be on the same frequency. They may be flown alternately in the competition if desired and in the event of model number one being damaged in an attempt at a flight (within 60secs), model number two may be substituted, but this must take place within the 10 minute slot.
- c) Component parts of the two models may be interchanged, but not with those of other competitors.
- d) All ballast must be carried internally and fastened securely within the airframe.
- e) Any number of channels may be used.
- f) Braking devices (other than airbrakes or crow braking) fitted to the model to slow its progress on the ground and variometers are not permitted.

#### **2. Ownership of models.**

- a) Any one model may only be flown by one entrant in any competition, i.e.
  - i) A model that has been flown in the competition may not be lent to another competitor. However, a spare model may be lent to another competitor, providing it has not been flown previously in the competition.
  - ii) Although the use of two models is permitted, a competitor may only have a single entry in the competition.

#### **3. Competition management.**

- a) All competitors will be required to help set up the winches and lines prior to the start of the competition and dismantle them at the end of the competition. There will be no prize-giving until this is complete.

- b) Each competitor is permitted one helper and a timekeeper.
- c) Only the pilots, respective timekeepers and CD are allowed on the patch when the landings are being made. **For safety reasons, there should be no-one else in attendance.**

#### **4. Competition flights.**

- a) The competitor will be allowed at least two, but normally three, official flights.
- b) The competitor will be allowed a maximum of two attempts at each official flight.
- c) There is an official attempt at a flight when the model has left the hands of the competitor or their helper under the pull of the launching apparatus.
- d) If for any reason the official flight is timed at less than 60 seconds in duration, the competitor will be allowed one second attempt, which must be made, within the allocated time slot.
- e) No entries will be accepted after 10.15 am.

#### **5. Disqualifications.**

- a) A flight may be cancelled and scored zero and/or the pilot disqualified if the Contest Director decides that the rules are not being adhered to or the model is being flown in a dangerous manner.

#### **6. Flying Slots.**

- a) The flying order shall be arranged at the Contest Directors discretion in slots of 3 pilots, taking into account the radio frequencies in use, and the number of competitors present.
- b) The flying order will be varied between rounds to ensure that no identical combination of pilots in a slot is repeated.
- c) The slot time shall be of 10 minutes duration, within which a maximum flight of 6 minutes duration may be completed.
- d) Flight scoring ceases at the completion of the time slot and the timekeeper of any model still airborne must stop the watch immediately on hearing the announcement of the end of the slot.
- e) Any model airborne at the completion of the time slot must land immediately.

#### **7. Transmitter Control.**

- a) The Contest Director will not start the competition until all frequencies have been logged and checked. The CD may choose to impound the transmitters at his discretion.

#### **8. Launching.**

- a) The launch of models will be by electric winch.
- b) The effective line length for launching will be 200 metres from the model to the pulley prior to the launching run, when tested under a tension of 2Kg (4.41 lbs).
- c) The maximum breaking strain of the line will be 100 lbs.

#### **9. Landing.**

- a) A landing target will be marked as a 15m-diameter circle.

#### **10. Scoring.**

- a) The flight will be timed from the moment of release from the towline to the moment the model first touches the ground, or if the model is still airborne at the end of the slot, at completion of the time slot.
- b) The flight score will consist of one point per second of flight time.
- c) 50 Points will be awarded if the model stops wholly within the landing circle. 25 points will be awarded if any part is within the landing circle when it stops. (Any part does not include a lost part of the model with the remainder outside the circle!)
- d) The competitor who achieves the highest flight score will be awarded a corrected score of 1000 points for that slot. The remaining competitors in that slot will be awarded a percentage of the slot winners flight score (uncorrected) calculated from their own total score, as follows;

$$\text{Points} = \frac{\text{Competitors score} \times 1000}{\text{Highest score}}$$

- e) Landing bonuses will be added to the score after correction.

#### **11. Final Placings.**

- a) The three competitors with the highest aggregate scores after three rounds will be awarded 1st, 2nd and 3rd places in order of highest scores, respectively. In the event of a tie for any place, there will

be no fly-off, joint placings will be awarded.

## **12. Frequencies.**

To aid management, only frequencies allotted for the AULD competition or 2.4 GHz will be used. Any would-be competitor who has not been allotted a frequency should contact the CD in advance.

## **PETER HALES MEMORIAL SCALE COMPETITION RULES.**

### **1. Model Characteristics.**

- a) The competition is open to scale models of any type of aircraft, including helicopters and gliders.
- b) ARTF's will not be penalised compared to scratch built models.
- c) The model must be a recognisable representation of a full size aircraft.
- d) A competitor may enter a maximum of two models but only the highest placed one will secure points for Top Gun.
- d) Any ballast must be carried internally and fastened securely within the airframe.
- e) The model will comply with the DoE 82dB (A) noise limit.

### **2. Ownership of models.**

- a) There are no rules governing the ownership of models or whether they were scratch-built or they are ARTF's; however points and places **will only be awarded to the pilots of the models.**

### **3. Documentation.**

- a) Documentation is not required and will not be considered.

### **4. Competition Rounds.**

- a) There will be two flying rounds; each of 5 minutes duration, after which time the competitor will be asked to land. Failure to do so in reasonable time may result in a penalty at the discretion of the Contest Director.
- b) There are no set manoeuvres other than take off and landing. It is up to the competitor to demonstrate the model in the most favourable manner.

### **5. Disqualifications.**

- a) A flight may be cancelled and scored zero and/or the pilot disqualified if the contest director decides that the rules are not being adhered to or the model is being flown in a dangerous manner.

### **6. Transmitter Control.**

- a) The Contest Director will not start the competition until all transmitter frequencies have been logged and noted against the competitor's names. He may impound the transmitters at his discretion.

### **7. Judges.**

- a) There are no official judges as such, the performance will be judged by your fellow competitors.
- b) Each competitor will remain on the patch at the end of their flight until all votes have been cast, at which time the CD will indicate that you can return to the pits.
- c) Your fellow competitors will either give their scores verbally to the CD or write them down on his score sheet. The exact method will be at the discretion of the CD on the day.
- d) You are voting for the scale realism of the flight, not your favourite model.

### **8. Scoring.**

- a) Scoring will be based on the fellow competitor's estimate out of a maximum of points for each round as follows:- Take Off - 25. Flight Realism - 50. Landing - 25
- b) The maximum possible score will be 100 points per round.
- c) The winner of the previous year's competition will be subject to a 10% penalty on their final score, if the same model is entered.
- d) The winner of the competition will be the competitor with the highest aggregate score, but in the event of a tie, the CD will determine the winner.

### **9. Competition Management**

- a) The contest director will appoint helpers to assist in the running of the competition at his discretion.
- b) No entries will be accepted after 10:15am, with competition flying commencing as near as possible to 10:30am.
- c) Competitors will be asked to complete an entry form on their arrival, which is to be returned to the contest director as soon as possible.

## **ELECTROSLOT COMPETITION RULES**

### **Model Characteristics**

- a) This competition is for the West Wings Orion E 1510mm span electric powered 2 function glider only, used in the identical format as the AULD, but with the following exceptions in b) & c) only.
- b) There is no minimum weight.
- c) Any 2 or 3 cell lithium polymer battery may be used.
- d) Recharging or replacement of batteries is **not** permitted after each competitor has had his first flight.
- e) No part of the model may be discharged during flight, i.e. ballast or cells.
- f) Cells may not be carried externally - they must be contained within the structure of the model.

### **The Competition**

The object of the event is to gain the longest four flights, up to 7 minutes, from 1 battery pack with maximum **power duration of 25 seconds at the start of each slot.**

- a) The event will consist of competitors flying four rounds with 7-minute slots; this includes the 25 second climb time at the start.
- b) There will be a spot landing task at the end of the slot, but to qualify for this, the model must have landed within 9 minutes of the start of the slot. 50 Points will be awarded if the model stops wholly within the landing circle. 25 points will be awarded if any part is within the landing circle when it stops. (Any part does not include a lost part of the model with the remainder outside the circle!). These points will be added to the competitor's score after calculation of the percentage score, just as the glider competitions.
- c) This event will be run like a glider competition comprising three or four competitors per slot depending on the numbers attending, subject to the CD's discretion.
- d) There will be a two minute time limit to launch after the CD announces the next slot until the starting whistle is blown. If you are not ready to go on the whistle, you will forfeit flying in that slot.
- e) Timing will start at the starter's whistle. The whistle will be blown again 25 seconds later, at which time motors will be turned off. Any models not airborne will be disqualified from that round.
- f) The competitors may launch at any time within the 25 second climb time, they may stop their motors before the 25 seconds expire, they may stop and start their motors within the 25 seconds and they may use varying throttle settings within the 25 seconds climb time.
- g) Timing will cease the moment that the model touches the ground, or if the model is still airborne, at completion of the time slot.
- h) The score will consist of one point per second of flight time.
- i) The competitor who has the highest score in the slot will be awarded a corrected score of 1000pts for that slot. The remaining competitors will be awarded a percentage of the slot winners score (uncorrected) calculated as follows:- 
$$\text{Points} = \frac{\text{Competitors score} \times 1000}{\text{Highest score}}$$
- j) The winner will be the person with the highest score. If it happens that two or more competitors have equal scores, there will be a fifth climb on the same batteries to decide the winner.
- k) The Arthur Ambrose Trophy competition will be Electroslot 3.

### **Frequencies**

To aid management, only frequencies allotted for the AULD competition or 2.4 GHz will be used. Any would-be competitor who has not been allotted a frequency should contact the CD in advance.

## **AEROBATIC COMPETITION RULES**

### **THE COMPETITION**

No entries will be accepted after 10.15am.

This set of manoeuvres is designed to improve the flying skills of anyone who has a model which is capable of performing a set of fairly simple aerobatics but as yet has to try putting them together into a flowing schedule which will test their piloting skills to the extreme. The emphasis is on positioning the manoeuvres rather than the accuracy of them, which will allow fun fly models to compete on an equal level with a fully blown F3A 2 metre model.

## THE SCHEDULE

1. Take off and turn 90 deg. away from judges then turn 270 deg. back down flight line.
2. 3 superimposed inside loops.
3. 3 rolls in 5 sec.
4. Double Immelman (1/2 inside loop, 1/2 roll, 1 sec. level flight, 1/2 outside loop, 1/2 roll out).
5. 3 superimposed outside loops from the top.
6. Flat 8 as per "B" Schedule.
7. Cuban 8. 3/4 inside loop, 1/2 roll at 45 deg, inside loop to 45deg, 1/2 roll, 1/4 inside loop to exit.
8. Inverted flight for 5 sec.
9. Stall turn. Exit upright.
10. Two rolls in one direction, followed immediately by two in the opposite direction.
11. 3 spins.
12. Rectangular approach. Model to fly parallel to landing strip and perform a rectangular landing pattern losing height on each leg.
13. Landing. Model to perform flared landing and run to a stop in a straight line in the landing circle.

Usually a figure is awarded a score of 10 points with at least one point deducted for each error, but to be fair we shall start with 20 points. You will see from the following downgrade reasons why a very low score is easily attainable.

As a guide, a 20-30% score is expected from a newcomer. 40-50% is getting quite good. 60-70% and a podium is in sight. 70-80% should win you the Nationals!

Downgrade reasons.

- (a) Less than 50m of level flight on entry.
- (b) Less than 50m of level flight on exit.
- (c) Loops not round.
- (d) Manoeuvres not centred.
- (e) Entry and exit at different height.
- (f) Manoeuvre not level.
- (g) Crossover point not on centre line.
- (h) Veers from straight line. Entry and exit on different heading.
- (i) Loops not superimposed.
- (j) Rolls take less than 4 sec or more than 6 sec (3 rolls).
- (k) Model not vertical.
- (l) Any spins are spiral dive.
- (m) Model impacts ground due to lack of flare.
- (n) Model misses landing circle - minus 50% of landing score.
- (o) Model misses patch - zero score for landing.
- (p) Model outside + or - 45 deg horizontal or 60 deg vertical "flight box" during manoeuvre.
- (q) Any manoeuvre not completed shall score zero.

No fly-byes in front of judges except after takeoff stall turn and spins.

There shall be no time limit for the flight.

Some tips.

Take your time to set up manoeuvres.

Set aileron throw on low rate to give 3 rolls in 5 sec - quite slow. Get a helper to time you. Use this on 3 rolls and Cuban 8.

Set high rate elevator so that model will only just spin.

Set C of G so that when controls are neutralised, model continues to spin for exactly one half turn.

Keep the model about 50 to 100m away from you, depending on its size and speed, to make the manoeuvres easy to see and above all to judge.

Nominate the start and finish of all manoeuvres.

The downgrades which apply to each manoeuvre should be fairly self explanatory.

## **PARKFLYER COMPETITION**

- a) The competition is open to electric powered fixed wing models only, with a maximum wingspan of 1.2m and of any format, i.e. scale, aerobatic, electric glider etc.
- b) The object of the competition is to demonstrate the type of model to the best of your ability in the allotted 3 minute flight time. You may end your performance early at your discretion.
- c) There are no official judges as such, the performance will be judged by your fellow competitors.
- d) Each competitor will remain on the patch at the end of their flight until all votes have been cast, at which time the CD will indicate that you can return to the pits.
- e) Your fellow competitors will either give their scores verbally to the CD or write them down on his score sheet. The exact method will be at the discretion of the CD on the day.
- f) You are voting for the performance, not your favourite model.
- g) There will be a maximum of ten points available per flight – ½ marks are not accepted.
- h) There will be no entries accepted after 7pm.
- i) If there are six or more entries, the positions will count towards Top Gun.

## **ADMFC Top Gun**

Every competition that members enter in the year will give them an opportunity to collect points for the 'Top Gun' trophy. The points will be awarded as follows in each competition and the person with the most at the end of the year will win. 1st—10 points, 2nd—8 points, 3rd—6 points, 4th—5 points, 5th—4 points, 6th—3 points, 7th—2 points, 8th—1 point.

Please note that only your top two scores from each glider discipline (AULD, Electroslot & Glider), a maximum of six scores, will count towards Top Gun.

## **PRE-ENTRY TO ANY POINT-SCORING COMPETITION**

**If you wish to enter a competition please email or phone the Competition Director at least 14 days beforehand so that he knows that he will have at least the minimum entry requirement. This will save configuring and printing score sheets, people wasting their time bringing equipment, booze, whatever to the field and above all will give us time to let other members know that there will not be a competition and the field will be available all day. Obviously last minute hitches will be taken into account but please let the CD know.**