

5.6.

~ GLIDER AEROBATICS ~

5.6.1. General Rules for this National Demonstration event to be held on December 28, 2009.

5.6.1.1. The contest is to be flown using non-powered models to perform the required tasks whenever possible. In the event of not enough lift to fly the models within the required time, electric powered models or electric assisted sailplanes can be used in order to complete the required tasks. It will be up to the contest director to determine when it is appropriate to use electric powered models or the like.

NOTE: A pilot should come prepared with appropriate models as described below.

a) A model which fits the criteria of a Radio Controlled Glider and a model which fits the criteria of a Radio Controlled Electric Powered Aircraft.

or

b) A hybrid model which fits both the criteria of a Radio Controlled Glider and a Radio Controlled Electric Powered Aircraft.

5.6.1.2. Models suitable for this Contest

a) Definition of a Radio Controlled Glider

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.

b) Definition of a Radio Controlled Electric Powered 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.

NOTE 1: Paragraph B. 3.1. of Section 4b (Builder of the Model) is not applicable to this class.

5.6.1.3. Characteristics

a) There are no restrictions on the model except that it must comply with the general FAI limits:

1. Maximum Surface Area (St) - 150 dm²
2. Maximum Flying Mass - 5 kg
3. Loading on St between 12 and 75 g/dm²

b) Arresting devices (i.e. bolt, sawtooth like protuberance, etc.) are allowed to slow down the model on the ground during landing. However, you will be required to perform the landing on the runway in the same manner as you would for a powered aircraft. i.e. not abruptly but stretched out somewhat with the nose pointing parallel to the runway. Those who have models with these devices already fitted may want to consider taping them over into a skid-like shape for a smoother landing.

c) The underside of the model can protuberances other than towhooks and surface control linkages. The same applies here as for rule 5.6.1.3.b)

5.6.1.4. A pilot may fly any number of models during a contest ~~but may not~~ and can exchange models during working time only if the aircraft is unflyable. In this situation, the pilot can re-join the other contestants in a suitable time-slot chosen by the Contest Director.

- 5.6.1.5. There must be at least five contestants for an event to be held and there must be at least five contestants with electric powered models at the start of the contest before these models can be used.
- 5.6.1.6. A minimum of three rounds must be flown.
- 5.6.1.7. A pilot is permitted two helpers.
- 5.6.1.8. The model may be relaunched during the aerobatics tasks.
- 5.6.1.9. The Contest Director shall determine whether or not the conditions are suitable for flying.

5.6.2. Manoeuvre Requirements

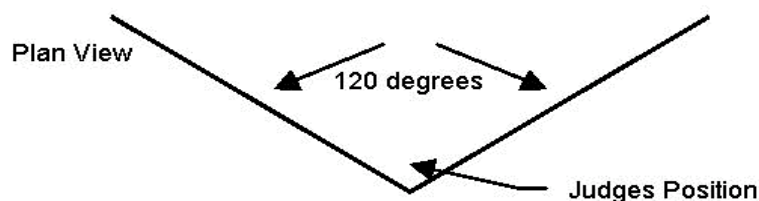
- a) Manoeuvres are to be flown in the order presented in these rules and only those completed within the nominated time (if one is set) will be scored. The pilot must announce the start and finish of each manoeuvre. The Contest Director may modify or delete manoeuvres in adverse conditions.
- b) A pilot shall nominate two optional manoeuvres per round, choosing one from each of the k-factor groups on offer in the following format:
- round one - 1.5 and 2
 - round two - 2 and 2.5
 - round three - 2.5 and 3
 - round four - 1.5 and 3
- Should more than four rounds be run, the format of round four will be used. Manoeuvres cannot be repeated during the event with the exception of rule 5.6.2. c).
- c) Should a pilot not wish to nominate a manoeuvre from either of the two groups on offer in a round, a manoeuvre from a lower group can be chosen. In this situation only, a manoeuvre can be repeated.
- d) All manoeuvres will be scored from 0 to 10 with multiplying k-factors as shown. The pilot with the highest score will be declared the winner with minor placings to follow in descending order.

5.6.2.1. Manoeuvres	kf
1. Two Consecutive Inside Loops	1.0
2. Slow Axial Roll for 2 seconds minimum	1.0
3. Straight and Level Inverted Flight for 5 seconds minimum	1.0
4. Three Turn Spin	1.0
5. Two Stall Turns in opposite directions	1.0
6. Optional Manoeuvre #1 to be nominated from the appropriate group below	
7. Optional Manoeuvre #2 to be nominated from the appropriate group below	
- Extended Loop	1.5
- Barrel Roll	1.5
- Circle	1.5
- Top Hat with no rolls	1.5
- Triangular Loop	1.5
- Square Loop	2.0
- Four Point Roll	2.0
- Figure Eight	2.0
- Inverted Circle	2.0
- Eight Point Roll	2.0
- Double Immelman - ½ inside loop, ½ roll, ½ outside loop, ½ roll	2.5
- Cuban Eight	2.5
- Three Consecutive Axial Rolls	2.5
- Reverse Cuban Eight - pull up 45°, ½ roll, ¾ loop 45°, ½ roll, ⅛ loop to hrz	2.5
- Knife Edge for 3 seconds minimum	2.5
- Reverse Double Immelman - ½ roll, ½ outside loop, ½ roll, ½ inside loop	3.0
- Three Turn Inverted Spin	3.0
- Inverted Figure Eight	3.0
- Two Outside Loops	3.0
- Top Hat - ½ roll up, inverted across top, ½ roll down	3.0
8. D Shaped Circuit and Fly-past over landing area	1.0
9. D Shaped Circuit and Landing - first 3 legs level, last leg descending ½ circle	1.0

NOTE: If the model's primary control surfaces are rudder and elevator only (not ailerons and elevator, the Barrel Roll can be substituted for the Slow Axial Roll and the Extended Loop can be substituted for the Straight and Level Inverted Flight.

5.6.2.2. There will be at least two judges. Multiples models can share the same time slot, alternating manoeuvres where practicable.

5.6.2.3. Judges Viewing Window: A manoeuvre must be performed within a specified area as depicted in the diagram below. If it is not, the judges will downgrade the manoeuvre according to the severity of the inaccuracy.



Note: It shall be left to the discretion of the Contest Director as to whether flying conditions are unsuitable for continuation of a flight. A flight aborted under these circumstances may be continued when conditions improve. The time allowed for completion shall be the unexpired working time when the pilot receives the Contest Director's decision plus a given time (if one is set) to gain height.

For procedures regarding Slope Aerobatics Contests see the APPENDIX.
It includes procedures for running a contest, manoeuvres and judging guidelines and templates for a scoresheet, scoreboard and manoeuvres card.