

2009 ETOC Flight Rules/Judging Criteria

Flight Preparation

- 1. On the Air Boss's signal, the competitor will have 30 to get into the air.*
- 2. This includes time on the ground to for his crew to set up the flight line or do any preparation that might be necessary for the flight. The crews will not be allowed in the flight area at any time during the flight.*
- 3. The pilot will be allowed to have 2 additional people for ground crew, to set up accessories (limbo poles, streamers, etc.), but they will not be allowed to assist in the flight of the aircraft.*

The Flight will be timed at 2 minutes

- 1. The starting point of the timed flight must be pre-determined by the pilot, and judging will commence from that point.*
- 2. It may be a point from which the wheels leave the ground, or it may also be an "air-start". This must be made clear to the air boss prior to flight.*
- 3. The judging will cease at the Air boss' indication that the 2 minutes has expired.*

The aircraft can come into contact with the ground or ceiling during the flight. This will not effect the time.

Retrieval

- 1. The Pilot will have 30 seconds to get back on the ground and clear the flight area, to allow for the set-up of the next flight.*

Judging Criteria

- 1. The judging criteria that will be used is described on the enclosed judging criteria sheets.*

Disqualification

- 1. If the aircraft passes the pre-established dead line (no-fly zone) the*

flight will be disqualified.

2. ***If the crew/assistants touch the transmitter at any time during the flight.***
3. ***If the airplane does not meet the pre-established guidelines of the event.***

Freestyle

1. ***The freestyle will be composed entirely by the competitor, meaning the whole flight will be to his discretion. (no mandatory maneuvers)***
2. ***All pilots will fly two rounds. Top eight will advance to Saturday finals. Top eight will fly two rounds. Then cut to four. Top four will fly one round.***
3. ***Once Air boss puts you in the on deck box you will have 30 seconds to get airborne.***

Flight Order

The flight order will be determined at the pilots meeting on the evening of the competition.

Aircraft

1. ***The pilot may use multiple planes, and can switch back and forth during the competition.***
2. ***Airplanes must be operated by battery-powered electric motors.***
3. ***Fixed wing aircraft only.***
4. ***A 20 ounce maximum weigh limit (ready to fly).***
5. ***Must use a rubber spinner to cover prop shaft. The use of a "prop saver" is an acceptable alternative. (This is Mandatory)***
6. ***Wing, stab and elevators of any construction.***
7. ***Fuselage may be built up, of any construction.***
8. ***Any additional control surfaces are allowed.***
9. ***No Scale outline required.***
10. ***In the event an airplane is damaged by contacting the floor or ceiling, the pilot will be asked to land***

Music

1. *The music will be provided by the competitor.*
2. *The same music doesn't have to be use for all the flights.*
3. *The music determines the tone of the flight, and the flight characteristics.*
4. *Make sure you bring an extra CD if it is burned. (Some CD players won't play all)*
5. *The music can be started by either a pilot assistant, or one of the ETOC staff.*

Special Effects

1. *All special effects (limbo, steamers) must be approved by the ETOC Committee. This is for safety reasons as well as Insurance liability purposes.*

ETOC JUDGING CRITERIA **2 – Minute Free Program**

TECHNICAL MERIT (80 K)

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Complete use of the Flight Envelope Utilizing the Exploitation of Aerodynamic and Gyroscopic Forces and Demonstrating a Wide Variety of Figures. (30K)

The pilot is expected to make full use of the flight envelope of the aircraft. This means flying the full range of airspeeds and accelerations permitted. Program time should be divided between high and low speeds, high and low G maneuvers and both positively and negatively G loaded flight segments. The judge will deduct points if any of these areas are noticeably under-utilized. The pilot is expected to show movement of the aircraft about all axes. Higher grades will be given to pilots able to make use of all these effects through a wide range of aircraft attitudes and flight paths. Repeated use of any such forces in the same or similar attitudes should result in lower scores.

Many different figures should be completed in the time available. These should include maneuver elements of many different kinds and should use many different flight paths and axes. Lower marks should be given to a pilot who used only one or two principle axes of flight. However the use of additional axes within the performance zone must be clear and precise, not giving the appearance of being used by chance. Marks should be deducted if any particular maneuver element is over used or continues for an excessive period of time.

Execution of Individual Maneuvers (50K)

It should be clear that the maneuvers flown were in fact, intended and fully under the pilot's control. Higher marks will be given for this objective when individual maneuver elements are started and finished on obviously precise headings and in well-defined attitudes. When, for example, maneuvers are allowed to decay into imprecise poorly defined movements, marks should be deducted for poor execution. Marks should also be deducted if it appears that the pilot has relinquished control of the aircraft at any time.

ARTISTIC IMPRESSION (140K)

Originality (30K)

The program should demonstrate the pilot's ability to adapt known figures into new and different combinations. It should also show creation of new figures when possible. Unique and novel utilization of the aircraft should be given consideration. It should show the presentation of figures in a different and unusual way. The element of surprise can be used to enhance originality. Higher marks should be given for innovative and original maneuvers, combinations and presentations. Marks should be deducted if the program showed no attempt at unique and different forms of creativity.

Pleasant and Continuous Flow of Figures with Contrasting Periods of Dynamic and Graceful Maneuvers (30K)

In a precisely flown sequence the completion of a figure will be well described when movement about an axis ceases and a particular attitude is briefly held. The start of the next figure or maneuver should then begin without any prolonged period of inactivity caused by

the need to reposition the aircraft or reorient the pilot. Marks will be deducted for any obvious period of level flight or inactivity between figures. In a musical symphony the listener's mood may be changed by contrasting fast and slow movements. Similarly in a Timed Free Program, the judge should be treated to a flight that causes different reactions. While some maneuvers involve very high speeds, sudden attitude changes and rapid rotations, others involve slower speeds or more gentle transitions. Higher marks should be given to a pilot who finds time in their program to show such differences of mood and pace. Marks should be deducted in this category for a flight that shows no such distinctions.

Choreography (50K)

The entire flight should be accurately and precisely choreographed to music and/or other suitable sound effects. It should include different types of audible rhythms, beats, tempos and sounds that reflect the maneuvers, speeds and attitudes of the aircraft. Higher marks should be given to the flight where the aircraft and the music are flowing with each other to display a harmonious presentation. Marks should be deducted in this category if only portions of the flight follow the music or if portions have no reasonable relationship to the music. Marks should also be deducted if it is obvious that the intent of the maneuver is not in concert with the music or audio.

Showmanship (30K)

The Timed Free Program should be entertaining and exciting to watch. The use of props (within the realm of safety) may be used to enhance the performance. Body language, costumes and crowd participation can also be utilized. Higher marks should be given to the pilot that has an enjoyable and daring program with obvious crowd appeal.

OVERALL POSITIONING (20K)

Presentation of Individual and Combinations of Figures in the Best Orientation and Optimal Position and Balance of the Overall Flight (20K)

Figures can give different impressions when seen from different viewpoints so marks should therefore be deducted if the judge is not shown a figure in its best orientation. Each figure has an optimum position from which it is best viewed. Higher marks will therefore be given when individual figures are optimally placed while judges should deduct marks when it

appears that a figure is not well placed or positioned. Highest marks will be given when the sequence as a whole is balanced evenly to the left and right of the judges' direct line of vision. The greater the degree of unbalanced positioning the greater the deduction. The entire program should be positioned so as to maximize both the audience and judges' perception and reception of the flight as a whole.