



## **AGENDA ITEM 14.5b**

### **SPECIAL EVENTS**

#### **Proposal #2 - The JK Aerobatics Formula Competition – Al Ain, UAE**

**Jurgis Kairys &  
Yousif Hassan Al Hammadi  
President, Emirates Aviation Association (FAI Member)**

#### **JK AEROBATICS FORMULA**

#### **RULES AND REGULATIONS FOR THE CONDUCT OF COMPETITION FLIGHTS**

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## **A. GENERAL SECTION**

### **1. Introduction**

- 1.1 The JK AEROBATICS FORMULA is an aerobatic competition format designed for presentation as an air display.
- 1.2 The format aims to offer pilots an extension to freestyle aerobatics beyond the boundaries of classic CIVA aerobatic championships.

### **2. Aims of the JK AEROBATICS FORMULA Aerobatic Competition**

- 2.1 It aims to maximize the creative potential of the world's most experienced aerobatic pilots, using easily understood regulations and procedures.
- 2.2 It offers the manufacturers of aerobatic aircraft a platform to demonstrate their aircraft.

### **3. Applicability of relevant FAI Sporting Code Sections**

- 3.1 The intention is for the FAI Sporting Code to be applied in all cases, however the nature of the competition format dictates that certain aspects of the Code may not be relevant.

### **4. Competition Programs**

- 4.1 The competition will consist of one program, made up of two parts:
  - a. Part one: Aerobatics Against Time (AAT)
  - b. Part two: Aerobatics Freestyle (AF)



## **B. ORGANISATION OF EVENTS**

### **1. Application and Promoter**

1.1 The JK AEROBATICS FORMUA is operated by Jurgis Kairis, domiciled at :

Kalvariju Street 239,  
Vilnius 08311,  
Lithuania  
Mob: + 370 69925325  
Fax: = 370 5 2737341

1.2 The competitions may be operated in conjunction with an airshow promoter.

### **2. Insurance**

2.1 By accepting the invitation to participate in the competition, all participants accept that they participate in this event solely at their own risk and indemnify the competition organizer and staff of all claims for death, damage, injury or loss that might be suffered while participating in the competition.

2.2 All pilots will be required to sign a waiver to this effect prior to any flights.

2.3 All pilots, mechanics and persons associated with the competition shall provide their own health, medical and repatriation insurance, at their own cost.

2.4 All participating aircraft must provide sufficient aircraft accident third party insurance as required by the operator, promoter or airshow organizer.

### **3. Claims**

3.1 All participants agree to waive all claims and indemnify the organizer, promoter or airshow organizer, and their appointed agents, against liability for death, injury or damage of whatsoever nature.

### **4. General Conditions**

4.1 Participants shall, in addition to the regulations and published procedures, adhere to all ad hoc instructions for conduct as advised at briefings.

4.2 Ensuring the safety of all shall be the primary intention of all procedures and instructions.

### **5. Competitors and Pilots Entry**

5.1 The competitors shall consist of solo pilots, male or female, be in possession of an FAI licence and will have participated in the Unlimited category in a CIVA world or continental championship.

5.2 Pilots may compete as solo competitors or as part of a team.

- 5.3 Pilots will be permitted to perform low level aerobatics and must be competent in this regard.
- 5.4 Pilots must have competed at Unlimited category without having being disqualified for any reason whatsoever.
- 5.5 A minimum of five and maximum of ten solo pilots will be selected.
- 5.6 A maximum of three pilots may be selected by the promoter at their discretion, on condition that such pilots meet the remaining selection criteria.
- 5.7 No more than one pilot shall be selected from each country.
- 5.8 Pilots who have placed in the top ranking order of the most recent World Aerobatic Championships (WAC) will receive preference of selection.

## **6. Contest Director**

- 6.1 The contest director shall be the coordinator of proceedings before, during and after the competition, and his tasks shall include but not restricted to;
  - a. Conduct of daily briefings.
  - b. Ensuring that all safety measures are complied with.
  - c. Ensuring compliance with local operating regulations by all participants.
  - d. Liaison with the promoter or airshow officers.
  - e. Ensuring compliance by all competitors with regard to validity of pilots licences, aircraft documentation, insurances and display requirements.
  - f. Demarcating the performance zone.
  - g. Provision of medical rescue and fire services.
  - h. Emergency procedures.
  - i. Crowd control.
  - j. Scoring systems and scorers facilities.
  - k. Local transportation for participants.
  - l. Communications equipment.
  - m. Participate in protest discussions with the Jury panel.

## **7. Aircraft**

- 7.1 All aircraft shall be provided by the participants, either as solo entrants or as part of team aircraft, with unlimited aerobatic capability.
- 7.2 Participating aircraft must have ICAO recognized aircraft registrations with a valid airworthiness certificate or Permit to Fly.
- 7.3 Participating aircraft will be fixed wing propeller driven.

## **8. Safety procedures and committee**

- 8.1 All pilots shall demonstrate sufficient competence during the qualification flight.
- 8.2 All pilots shall observe the demarcated display line (deadline) during the flight programs. Any violation of the deadline shall result in disqualification (DSQ) of the day's flight.
- 8.3 Pilots shall not fly over any assembled crowds.

- 8.4 All maneuvering procedures as outlined by the Contest Director and Airshow Director at briefings shall be adhered to.
- 8.5 Minimum heights shall be observed. These minimum heights will be advised at the initial briefing.
- 8.6 Observe maneuver restrictions during the AAT part as follows;
- There shall be a maximum of four continuous rotations of one type of roll on;
    - horizontal lines
    - 45 degree downward lines
    - 45 degree upward lines
    - Vertical upward lines
    - Vertical downward lines
    - In any 45 degree, 90 degree or 180 degree turns
    - In any rolling turns
  - The AAT sequence will consist of no more than 7 manoeuvres
- 8.7 The safety committee shall consist of the Contest Director, the Chief Scorer and a representative from the promoter or airshow organizer.

## **9. Meteorological conditions**

- 9.1 A minimum visibility of 4km
- 9.2 Observation of clouds at a maximum of 30% cover (3/8)
- 9.3 A minimum cloud base of 700m (2100ft) AGL
- 9.4 Wind speeds for landing is dependant on pilot's discretion.

## **C. COMPETITION REGULATIONS**

### **1. Format**

- 1.1 The competition flight format consists of two parts;
- Aerobatics against time (AAT) as the first part,
  - Aerobatics Freestyle (AF) as the second part.

The parts can be flown either in one flight, separate flights (separated by a landing), or on separate days.

### ***1.2 Aerobatics Against Time (AAT)***

- The manoeuvres and sequences for the AAT part will be prepared by the Contest Director and Chief Scorer.
- The sequences will be presented to the pilots, scorers, media, etc. at a briefing upon conclusion of the training day.
- The sequence will consist of no more than 7 manoeuvres.
- The sequences must include a minimum of;
  - Two different figures with opposite rolls
  - One figure with four continuous rolls of any type.

- e. There shall be a maximum of four continuous rotations of one type of roll on;
  - horizontal lines
  - 45 degree downward lines
  - 45 degree upward lines
  - Vertical upward lines
  - Vertical downward lines
  - In any 45 degree, 90 degree or 180 degree turns
  - In any rolling turns
- f. The direction of flight will be advised at the daily pilots briefing.

### **1.3 Aerobatics Freestyle (AF)**

- a. The sequence shall consist of a freestyle sequence with duration of between 2 and 3 minutes, plus or minus 1 second.
- b. There is no limitation to the manoeuvres flown and it is entirely at the discretion of the pilot.
- c. The use of smoke is required for the purpose of good presentation.

## **2. Schedule of Flights**

- 2.1 A flight test and / or training day will be scheduled by the contest director.
- 2.2 These flights will be conducted once pilots are ready after assembly and preparation of their aircraft.
- 2.3 A maximum of 9 minutes (from take off to landing) will be permitted for training flights, subject to the approval of the promoter or airshow organizer.
- 2.4 The competition flights will be decided over three days;
  - a. Qualification Flight
  - b. Competition Flight
  - c. Final Competition Flight
- 2.5 The flight order will be decided by;
  - a. Qualification Flight – a drawing of lots at a special briefing.
  - b. Competition Flight – the reverse order of the results of the qualification flight.
  - c. Final Competition Flight – the reverse order of the results of the Competition Flight.

## **3. Briefings**

- 3.1 All flying days will be preceded by a mandatory briefing to be attended by all pilots, scorers, time keepers and officials. This is in addition to any briefings conducted by the promoter or airshow organizers.
- 3.2 The Contest Director shall conduct the briefing and cover at least the following topics;
  - a. Roll call
  - b. Introduction of officials
  - c. Meteorological conditions
  - d. Direction of flight

- e. Minimum heights
  - f. Flight order
  - g. Signaling of start and completion of sequence
  - h. Timing procedures, penalties and scoring
  - i. Flight procedures and adherence to airfield operational requirements
  - j. Recall and safety procedures
  - k. Publication of sequences
  - l. Operating frequencies
  - m. General matters affecting competition procedures
- 3.3 A de-brief will be held after completion of each days competition, to be attended by all pilots, scorers and other officials.

#### **4. Performance Zone**

- 4.1 The performance zone shall be aligned with that of the display area for the airshow, and allowing for presentation to be centred before the crowds.
- 4.2 The specified Timing Gates will be positioned within this zone.
- 4.3 Pilots must cross the top of the Timing Gates for both the start and finish of the program, at which point timing procedures will take effect.
- 4.4 By majority consensus of the Chief Scorer, Contest Director and airshow promoter at the briefings, competitors may commence the start of the AF part of the competition at an altitude not exceeding 1000m AGL

#### **5. Timing Gates**

- 5.1 The timing gates will consist of pylons or flag poles;
  - a. Two sets of pylons that are a minimum 8 metres high,
  - b. Each set of pylons must be separated by between 25m – 30m,
  - c. The gate must be located along the X axis of the display line, 160m – 250m from the spectator line,
  - d. Flags may be attached to these pylons, ideally those representing the national flags of the competitors.

#### **6. Signaling of start and finish of flights**

- 6.1 After receiving take off permission, pilots must climb to the designated holding point or to the display area according to tower instructions.
- 6.2 The tower will give a radio instruction “Number 00 clear to start”, at which point the pilot is to approach the gates and be ready to commence his sequence at approximately 500m AGL.
- 6.3 The pilot will notify the scorers of his intention to start by two distinct wing rocks or alternatively by way of a radio call, announcing “pilot start”.
- 6.4 The start will commence once the aircraft has passed over the gates. Smoke is not permitted.
- 6.5 The AAT sequence will cease once the aircraft has passed over the gates.

- 6.6 To signal the end of the AF part of the program, the pilot is required to indicate the completion by two distinct wing rocks or by way of a radio call, announcing “pilot finish”. The pilot must then pass over the gates, with smoke on, at which point the timing will cease.
- 6.7 After passing through the timing gate upon completion of the program the pilot must proceed directly to the landing runway and obtain landing instructions from the tower.

## **7. Scorers**

- 7.1 At least three official scorers will be appointed by the contest director, one of them being designated Chief Scorer. These may be sanctioned and approved by CIVA.
- 7.2 The flights will be timed from start to finish by the three scorers with the aid of chronometers.
- 7.3 It is preferable that scorers are not selected from the same country as any of the competitors.

## **8. Evaluation of the competition flights**

- 8.1 The pilot’s score will be based on a time result derived from the combined program, and determined as follows;

### ***A. Aerobic Against Time Program***

- i. The total time recorded between start and finish
- ii. Penalties in the form of time will be added:-
  - 5.0 seconds for every “manoeuvres error” exceeding 20 degrees but not more than 45 degrees deviation from the stated figure.
  - 25.0 seconds for every “no manoeuvre” error, no figure flown or a deviation exceeding 45 degrees from the stated figure.
  - 5.0 seconds for “gate height” error, where the start or finish pass exceeds 7m above the gate height.
  - 25.0 seconds for “low manoeuvre” error in the event that a pilot flies below the minimum altitude as prescribed at the daily briefings.

### ***B. Aerobic Freestyle Program***

- i. The total time recorded between start and finish. For the higher altitude start, from after the second wing rock at start to passing through the gate upon completion.
- ii. The scorers will individually give a score of between 0.0 and 10.0 as a “time bonus” for impression (originality, quality and difficulty).
- iii. The scorers will individually give a score of between 0.0 and 10.0 as a “time bonus” for technical (accuracy, competence).
- iv. The two scores will be added together to form the “time bonus”, which will be deducted from the total AF time. The



- “time bonus” will be the combined scores converted into seconds.
- v. A penalty for “elapsed time penalty” for either less than two minutes or more than three minutes, minus the one second allowance. Each second will be added to the total time.
  - vi. 5.0 second penalty for no smoke used at start gate.
  - vii. 5.0 second penalty for no smoke used during the sequence.
  - viii. 5.0 second penalty for no smoke used at finish gate.
  - ix. 5.0 seconds for “gate height” error, where the start or finish pass exceeds 7m above the gate height.
- C. The total time will be the combined total of the AAT program and that of the AF program, less any further penalties.
- i. 5.0 second added for “procedure and safety penalty” as adjudicated by the panel of scorers.
  - ii. 25.0 second added for each infringement of his lower waived height limit for freestyle aerobatics, except for the purposes of passing through the timing gate.

## 9. Results

- 9.1 The best placed pilot will be determined by the shortest aggregate time achieved after taking into account any penalties.
- 9.2 The lower of the times achieved in the Competition Flight and the Final Competition Flight, by each pilot, will be taken into account to determine the winner of the overall competition.
- 9.3 In the event that not all the prescribed days’ competition having being flown due to inclement weather, the results achieved from one competition flight will be taken into account to determine the final placings.
- 9.4 Score sheets and time results will be distributed to pilots after each days flying.
- 9.5 Ratings will be awarded to pilots for the purposes of competing in a series of contests, as follows

1 <sup>st</sup> place	10 points
2 <sup>nd</sup> place	8 points
3 <sup>rd</sup> place	6 points
4 <sup>th</sup> place	4 points
5 <sup>th</sup> place	2 points
6 <sup>th</sup> place	1 point
7 <sup>th</sup> place	0 points
8 <sup>th</sup> place	0 points

## 10. Disqualification

- 10.1 A pilot will be disqualified (DSQ) for a particular days flight, in the event of;
- a. A pilot deemed to have crossed the prescribed ‘deadline’ by the Chief Scorer or Contest Director during either the AAT or AF programs,

- b. A pilot touches the timing gate structure during the flight,
  - c. A pilot failing to adhere to the procedures raised at briefings but not dealt with specifically in these regulations.
- 10.2 Pilots can be disqualified from the contest at any time by recommendation by the Chief Scorer or Contest Director should they be considered to be flying in a manner that poses a danger to the public or himself.

## **11. Protests**

- 11.1 Pilots are entitled to lodge a protest with the Jury panel, in writing, and making reference to the regulations as the basis of the protest.
- 11.2 Protests must be lodged within 30 minutes of the publication of each day's results.
- 11.3 Protests will be heard and considered by a panel consisting of the Contest Director, Chief Scorer and CIVA jury member.

The decision of the Jury panel is final.

## **12. Awards and ceremonies**

- 12.1 An official ceremony will be convened at which time the winner, second and third placed pilots will be awarded their prizes.
- 12.2 Each pilot is to provide a national flag and a copy of the national anthem to the contest director.

Rules compiled by Jurgis Kairys  
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