



# FAI Sporting Code Section 6

*Fédération  
Aéronautique  
Internationale*

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## Regulations for the Conduct of International Aerobatic Events

### Part 3 Powered and Glider Aerobatics World Air Games and World Games

*Maison du Sport International  
Avenue de Rhodanie 54  
CH-1007 - Lausanne  
Switzerland*

*Telephone : +41 21 345 1070  
Fax : +41 21 345 1077  
Email: [sec@fai.org](mailto:sec@fai.org)  
Web: [www.fai.org](http://www.fai.org)*

**Version 2017**

**Draft, pending CIVA Approval**



# FÉDÉRATION AÉRONAUTIQUE INTERNATIONALE

Maison du Sport International, Av de Rhodanie 54 – CH-1007 LAUSANNE Switzerland

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1. FAI Statutes, Chapter 1, para. 1.6
  2. FAI Sporting Code, General Section, Chapter 3, para 3.1.3.
  3. FAI Statutes, Chapter 1, para 1.8.1
  4. FAI Statutes, Chapter 2, para 2.1.1
  5. FAI Bylaws, Chapter 1, para 1.2.1
  6. FAI Sporting Code, General Section, Chapter 3, para 3.4
  7. FAI Bylaws, Chapter 1, para 1.2.3
  8. FAI Statutes, Chapter 5, para 5.2
  9. FAI Sporting Code, General Section, Chapter 3, para 3.1.7
  10. FAI Sporting Code, General Section, Chapter 1, paras 1.2. and 1.4
  11. FAI Statutes, Chapter 5, para 5.2.3.3.7
  12. FAI Bylaws, Chapter 1, para 1.2.2



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Maison du Sport International, Av de Rhodanie 54 – CH-1007 LAUSANNE Switzerland

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## **1. GENERAL RULES FOR WORLD AIR GAMES AEROBATIC CHAMPIONSHIPS**

### **1.1. Aims Of World Air Games Aerobatic Championships (WAGAC)**

- 1.1.1.1. To establish the Overall World Air Games Champions in Powered and Glider divisions.
- 1.1.1.2. To promote and popularise aerobatics and to develop and foster friendly relations between aerobatic pilots of different countries.
- 1.1.1.3. In pursuance of these aims and in case of dispute over the interpretation and application of these rules, and any other regulations for the conduct of aerobatic championships and competitions, a competitor shall be entitled to the benefit of reasonable doubt.

### **1.2. General Regulations**

#### **1.2.1. Contest Categories**

##### **1.2.1.1. World Air Games**

- a) World Air Games will be held at intervals as specified by the FAI. The location will be decided by the FAI following a competitive bidding process from potential host cities.

#### **1.2.2. Aircraft Categories**

##### **1.2.2.1. WAGAC will be open to:**

- a) Single piston-engine aircraft - Division "P"
- b) Glider aircraft - Division "G"

#### **1.2.3. Number of Competitors**

- 1.2.3.1. The number of competitors in each Division will be ten. Allocation of places to National Aero Clubs (NACs) will be determined by CIVA, based on the results of preceding World Championships, and published in CIVA official documents. Representation will include male and female pilots. The scoring and determining of champions will be gender blind.

#### **1.2.4. Support Personnel**

- 1.2.4.1. In addition to their pilot competitors, each participating NAC may send the following support personnel at their own expense:
  - a) A trainer for each Division (Power/Glider).
  - b) A mechanic for each Division (Power/Glider).
  - c) A pilots' helper (Glider only)
  - d) An interpreter.

#### **1.2.5. Entries**

- 1.2.5.1. The CIVA Bureau will determine which competitors are eligible to participate and how many pilots will participate in accordance with CIVA. The CIVA Bureau will approve all pilot entries to be sure they meet the standards of the World Air Games. After the selection procedure is complete, the FAI, CIVA and the organizers will liaise directly with competitors.

#### **1.2.6. Aircraft Documentation**

- 1.2.6.1. All competing aircraft must meet the performance characteristics required for the kind of flight they will be undertaking. A valid aerobatic certificate of airworthiness or equivalent



document issued by the competent aviation authority of the aircraft's country of registration must be produced to the organisers for every aircraft participating.

1.2.6.2. Aircraft will not be admitted to the contest unless the appropriate documentation has been submitted to the organisers.

### **1.2.7. Air Safety**

1.2.7.1. All competitors must observe and adhere to the regulations currently in force in the host country for air safety as well as the special regulations in force at the contest aerodrome. To facilitate this, the organiser must ensure that an English translation of applicable rules, issued by the Aviation or Customs Authorities of the host country, is available in advance in a bulletin or on the competition website.

1.2.7.2. Any violation of the safety regulations in force may at any time render the offender liable to exclusion from the contest. No responsibility will be undertaken by the organisers for any such violation by competitors or others.

1.2.7.3. To enable the pilot to watch over his or her own safety, an accelerometer must be installed in each competing aircraft.

1.2.7.4. The Chief Judge may, with the agreement of two-thirds of the Board of Judges, exclude a pilot who is not flying safely or could cause an unsafe situation. This would apply from take-off to touchdown.

1.2.7.5. Any competitor required to interrupt a competition flight due to danger of collision with conflicting air traffic or a bird should orbit in a safe place (power aircraft) or if necessary land immediately (power and/or glider aircraft) until the conflict is resolved. In this event, the Chief Judge will communicate with the competitor and allow additional time if appropriate.

### **1.2.8. Insurance**

1.2.8.1. The organisers will provide a promoter's liability insurance of an adequate sum against third party risks for the duration of the contest covering functional test flights, training and competition flights, in accordance with the legal requirements of the country in which the championships or competition is held.

1.2.8.2. All competitors must produce evidence of an aircraft insurance policy with adequate third party insurance valid for the duration of the contest and valid in the organiser's country. The organisers should specify in local regulations the amount of insurance cover regarded as adequate.

### **1.2.9. Competitors and Aircraft**

1.2.9.1. All training and competition flights carried out by competitors at the World Air Games Aerobatics must be made solo. In view of the short time slots in the contest programmes and the number of pilots, no aircraft shall be shared by more than three persons.

1.2.9.2. Replacements of competitors at WAGAC will be left to the discretion of the International Jury, but no such replacement will in any case be permitted less than 12 hours before the commencement of the first competition flight in the relevant division.

1.2.9.3. A contest aircraft may on the recommendation of the technical commission, and with the permission of the International Jury, be replaced at any time by another contest aircraft.



### **1.3. Classification Of Aerobatic Contests**

At WAGAC the following competition flights will be scheduled:

#### **1.3.1. Programmes "P"**

- 1.3.1.1. Programme P1. The Known Compulsory Programme
- 1.3.1.2. Programme P2. The Free Programme
- 1.3.1.3. Programme P3. The Free Unknown Programme
- 1.3.1.4. Programme P4. The Final Freestyle Programme

#### **1.3.2. Programmes "G"**

- 1.3.2.1. Programme G1. The Free Programme
- 1.3.2.2. Programme G2. The first Unknown Programme
- 1.3.2.3. Programme G3. The second Unknown Programme
- 1.3.2.4. Programme G4. The Freestyle Programme

#### **1.3.3. Champions "P"**

- 1.3.3.1. World Air Games Champion in the powered aircraft division will be the competitor who gains the highest total of points from the aggregation of Programmes P1, P2, P3 and P4.
- 1.3.3.2. The winner, second and third placed pilots will receive FAI Gold, Silver and Bronze medals, respectively, and Diplomas of the FAI.

#### **1.3.4. Champions "G"**

- 1.3.4.1. World Air Games Champion in the glider aircraft division will be the competitor who gains the highest total of points from the aggregation of Programmes G1, G2, G3 and G4.
- 1.3.4.2. The winner, second and third placed pilots will receive FAI Gold, Silver and Bronze medals, respectively, and Diplomas of the FAI.

### **1.4. Contest Bodies**

#### **1.4.1. The International Jury**

- 1.4.1.1. The International Jury is the supreme arbitration body of international aerobatic events and shall be responsible for:
  - a) Interpreting the general rules, the judging rules and the general regulations of the contests;
  - b) Supervising the activities of the Chief Judge and the Board of Judges; during judging, a member of the International Jury must not remain in the vicinity of the International Judges;
  - c) Supervising the technical commission;
  - d) Dealing with protests from competitors;
  - e) Overseeing the administration of the contest.



1.4.1.2. Appointment

- a) The International Jury at the WAGAC will be appointed by the FAI Aerobatics Commission (CIVA) and will consist of a chairman and at least 2 members with adequate reserves, who must be members of different national aero clubs.
- b) The Chief Judge shall be an advisory member of the International Jury and the Contest Director shall be adviser to it.
- c) The Jury chairman will be a Delegate to CIVA and will supervise its activities. Detailed duties of the International Jury are contained in Section 3.

1.4.1.3. All three members of the International Jury must be available to hear appeals or protests submitted by competitors.

1.4.1.4. Any decision taken by the International Jury by majority vote is final.

1.4.1.5. The International Jury may temporarily vary any rules approved by the International Aerobatics Commission (CIVA) during a contest under the following circumstances:

- a) There is simple majority within the International Jury, with no abstentions, when conducting a vote to introduce a temporary variation to the regulations, and
- b) There is at least a two thirds majority in agreement amongst the participating pilots, with no abstentions, when conducting a vote to introduce a temporary variation to the regulations.

1.4.1.6. In the event that the rules of the Sporting Code are not adhered to at a WAGAC, or if the International Jury is not provided with sufficient information to perform their duties in accordance with the rules, the International Jury may stop the contest until matters are remedied. If remedial action is not taken, the International Jury has the power to declare that the requirements of a WAGAC have not been fulfilled in accordance with the. If this latter action is taken, the International Jury shall prepare a full report for submission to the next meeting of CIVA at which their decision shall either be endorsed or reversed.

**1.4.2. Board of Judges**

1.4.2.1. Details concerning the employment of the Chief Judge and the composition of the Board of Judges and the appointment and disqualification of its members are laid down in the FAI Sporting Code, Section 6, Part 1 for powered aircraft and Part 2 for Glider aircraft. These regulations shall apply, respectively, to the powered and glider elements of WAGAC.

1.4.2.2. The number of Judges will be in accordance with the agreement between World Air Games organizers and the FAI, but the number judging each programme shall not be less than four, with each Judge having a qualified assistant.

1.4.2.3. The Organiser will cover the travelling expenses and on-site expenses of the Board of Judges.

**1.4.3. Contest Management**

1.4.3.1. The Contest Director will be responsible for the regular and orderly performance of the contest. The Contest Director is responsible to the International Jury for the efficient administration of the contest.

1.4.3.2. The contest management will be composed of:

- a) The Contest Director,



- b) The Flight Director,
- c) The Chief Judge,
- d) The Chairman of the Technical Commission.

#### **1.4.4. Technical Commission**

- 1.4.4.1. The Technical Commission will be composed of 3 engineers or mechanics, provided by NACs or the Organisers. There will be one Chairman and one specialist each for powered aircraft and gliders (total of 3). The International Jury shall approve the members of the Technical Commission for WAGAC.
- 1.4.4.2. The CIVA International Jury will appoint a Chairman of of the Technical Commission.
- 1.4.4.3. The Technical Commission is responsible to the International Jury for the inspection of competing aircraft and of aircraft documentation; for certifying compliance with the airworthiness regulations of aircraft after inspection; for a qualified and objective inspection in case of defects of the technical equipment; and for finding the causes of defects which have occurred during the competition flights. The Technical Commission will advise and inform the International Jury on any points of technical importance.
- 1.4.4.4. The Technical Commission is also responsible for ensuring that the radio sets fitted to competing aircraft are able to use the official 'Safety Frequency'.

#### **1.5. Protests**

- 1.5.1.1. Protests will be accepted from individual competitors only. They will be dealt with in compliance with the FAI General Section of the Sporting Code, Chapter 5. All protests must be submitted to the President of the International Jury in writing, either directly or through a member of the jury, with a deposit, not later than two hours after the occurrence, decision or publication of results which causes the protest to be made. "Non-working" hours, as defined in local regulations for the World Air Games will not be counted. Every protest must refer to the rule or rules to which it relates. The amount of the deposit shall be stated in the local regulations. It should not exceed €100.
- 1.5.1.2. The deposit will be returned if the protest is upheld. The International Jury may request the attendance of the protesting competitor if it considers this desirable. The decision of the International Jury is final.

#### **1.6. Final Regulations**

##### **1.6.1. Interpretation**

- 1.6.1.1. International aerobatic events will be carried out in compliance with Sporting Code and local regulations of the organisers.
- 1.6.1.2. Any differences arising during an event will be dealt with by reference to the above rules. For the interpretation of the text at championships, a standard version written in English shall be taken as the authority.

##### **1.6.2. Competitors' Pledge**

- 1.6.2.1. All competitors undertake, by signing the entry form, to comply with the General Section of the Sporting Code of the FAI, the Regulations of CIVA.



**1.6.3. Supplementary Rules**

- 1.6.3.1. The organisers will, within the scope of the Sporting Code and the approval by the CIVA bureau, prepare such local regulations or specialized details as are relevant and necessary for clarification of organisational problems and duly distribute them to all FAI NAC's.
- 1.6.3.2. The technical and organisational preparations of WAGAC will be checked by CIVA regarding their compliance with the general rules before the beginning of the event. The organisers shall publish details in the agreed FAI language(s) and send to the participating NACs, not less than 6 months prior to the WAGAC:
- a) the local regulations containing only local operating procedures and administrative details including details of the aerodrome at which the Championships will be held.
  - b) An English translation of applicable rules, issued by the Aviation or Customs Authorities of the host country.



## **2. JUDGING RULES FOR WORLD AIR GAMES AEROBATIC CHAMPIONSHIPS**

### **2.1. Board of Judges**

2.1.1.1. The numbers and selection of the Chief Judge and the Board of Judges for powered and glider events will be as described in the relevant paragraphs of Sporting Code, Section 6, Parts 1 and 2 respectively, with the following exceptions.

#### **2.1.2. Composition of the Board of Judges**

2.1.2.1. At WAGAC the Board of Judges will be composed of:

- a) The Chief Judge (scoring);
- b) A minimum of 4 International Judges and 4 assistants for marking the quality of aerobatic manoeuvres, positioning and harmony.

### **2.2. Monitoring of Aircraft Position**

#### **2.2.1. Electronic Tracking Instrument**

2.2.1.1. An electronic tracking instrument may be used for monitoring aircraft position. However, regardless of this, positioning will be graded solely by the Board of Judges. Boundary Judges will not be used.



**3. DUTIES OF THE INTERNATIONAL JURY**

- 3.1.1.1. The duties of the International Jury at WAGAC will be as described in Sporting Code, Section 6, Parts 1 and 2 respectively.
- 3.1.1.2. Deliberations of the International Jury will be carried out in English.



## **4. THE ORGANISATION OF WORLD AIR GAMES AEROBATIC CHAMPIONSHIPS**

### **4.1. Administrative Arrangements**

#### **4.1.1. Entry Fees**

4.1.1.1. There are no entry fees for World Air Games.

#### **4.1.2. Accommodation, Food, Medical Services**

4.1.2.1. At World Air Games, the organisers will provide adequate accommodation and food for the duration of the event to all competitors and FAI/CIVA officials.

4.1.2.2. The organisers will be responsible for adequate medical services being available to all official participants.

#### **4.1.3. Fuel and Oil**

4.1.3.1. At WAGAC, aircraft fuel and oil will be provided by the organisers for functional test flights and contest flights without imposing extra charge.

#### **4.1.4. Technical Services**

4.1.4.1. The organisers will provide technical assistance and hangarage for competing aircraft, if required.

#### **4.1.5. Briefings**

4.1.5.1. Prior to the start of a contest there will be a briefing by the organisers for participants, members of the International Jury and Judges, on flight conditions, the contest programmes, and any other problems which might arise over the interpretation of the rules.

4.1.5.2. Before the championship is held, all judges and assistants must also have completed a Judge Questionnaire covering judging criteria and the current rules and regulations for both power and glider competition. The Judge Questionnaire will be composed and administered by CIVA. Judges and assistants can either complete the questionnaire in advance of the championship or on the contest site. The questionnaire will be available online no later than 30 days prior to the beginning of the championship.

4.1.5.3. Before the beginning of competition flying, on each competition day, a briefing will be held for competitors, officials, judges and the International Jury on organisational matters concerning the competition day and on meteorological conditions. The briefing should last no longer than 30 minutes.

#### **4.1.6. Sequence of Flights (Drawing of Lots)**

4.1.6.1. The sequence of flights for all Programmes will be determined by drawing of lots to be arranged by the Contest Director or his Assistant, in the presence of a representative of the International Jury. Each competitor will draw his or her own lot. In the event a competitor is not present to draw his or her own lot, a member of the International Jury will draw on the competitor's behalf.

4.1.6.2. The sequence of flights may be altered by the International Jury if special circumstances require, e.g. when two closely-drawn pilots are to fly the same aircraft.

4.1.6.3. The Final Freestyle P4 or G4 will be flown in reverse order to the combined overall rankings from Programmes P1 to P3 or G1 to G3.



## **4.2. Operating Regulations**

### **4.2.1. Video/Audio Devices**

- 4.2.1.1. Video cameras may be mounted in/on competition aircraft.
- 4.2.1.2. The use of technical devices to convey audible information to the pilot is not permitted during WAGAC except for a radio set that must be tuned to the "Safety Frequency". Any other devices which are not permitted will either be removed from the competing aircraft or rendered inoperative and sealed by the Technical Commission. Receiving any kind of audible information from any unauthorised technical device will make the competitor liable to disqualification from the contest.
- 4.2.1.3. Radios, set to the "Safety Frequency", are only for communication between the Chief Judge and the competing pilot for box control purposes and to serve urgent flight safety matters.
- 4.2.1.4. The "Safety Frequency" will be selected by the organisers and given to the competitor together with the competition papers. The "Safety Frequency" will be monitored during all competition flights, and possibly recorded using a suitable recording device.
- 4.2.1.5. Once airborne, and before entering the Performance Zone, the competitor must hold in the designated holding area until instructed to proceed to the Performance Zone by the Chief Judge. The Chief Judge will establish radio contact with the competitor in the holding area. Should no contact be established the competitor must land and will on no account enter the performance zone.
- 4.2.1.6. The standard phraseology in the event that the time limit is exceeded will be the Chief Judge saying "Time, time, time". The standard phraseology in the event that a break is required for safety reasons will be the Chief Judge saying "Break, break, break". The Chief Judge or his representative may address the competitor in matters concerned with safety and conduct of the competition flight as circumstances may require.

### **4.2.2. Meteorological Conditions**

- 4.2.2.1. Flights will be carried out at the times, between sunrise and sunset + 30 minutes, directed by the World Air Games organisers.
- 4.2.2.2. Minima
  - a) The minimum height of the significant cloud base must be 800 metres (600 metres for Programme P4) for powered aircraft or 1,000 metres for Gliders. In this context, small amounts of cloud which do not obscure the performing aircraft are not considered significant. Organisers may re-order Programme P4 to take advantage of its lower cloud limit.
  - b) The minimum prevailing flight visibility, determined with reference to ground features from the midpoint of the contest area at the maximum height for the competition flight, must be 3 kilometres.
  - c) The maximum permissible steady wind speed at the surface, or at 500 metres, is 16 metres/sec (power) or 12 metres/sec (glider).
  - d) Competition flight will not take place in precipitation.



#### 4.2.2.3. Weather Information

- a) The Contest Director must provide the competitors, the Chief Judge, the Board of Judges and the International Jury with information based on weather observations made no more than 30 minutes before aerobatic flying is due to commence. Further observations during the flight period are not required unless there is a drastic deterioration in the weather conditions.
- b) Visibility and cloud base should be determined by local airborne observation.
- c) The weather bulletin with information on wind speed and direction will be published on a board at the flight line.

#### 4.2.2.4. Adverse Weather

- a) If the meteorological conditions do not meet the requirements of 4.2.2.2, the Chief Judge after consultation with the International Jury will discontinue competition flights.
- b) If the cloud is at least 800 metres above aerodrome level, and if a majority of participating pilots agree, the International Jury may relax the visibility and wind limitations stated above in the interests of completing the competition programmes before the end of the contest period.
- c) If in his or her opinion the weather conditions do not allow safe completion of his or her sequence, a competitor may discontinue his or her flight before starting the sequence. However, as time slots for the WAGAC are limited, repeat flights are unlikely to be permitted.

#### 4.2.2.5. Permitted Breaks

All flights must be made continuously. Un-penalized breaks will not be permitted, unless the pilot is required to interrupt a competition flight due to danger of collision as described in 1.2.7.5.

#### 4.2.2.6. Demonstration Flights

In the event that the cloud base is below competition minima, pilots may be asked to undertake demonstration flights and may choose to do so at their discretion.

### **4.2.3. Conduct of Competition Flights**

- 4.2.3.1. Competition flights at Championships and International Competitions will be made separately in the sequence determined by the drawing of lots or by rank order, as appropriate. No competitor may commence a competition programme before completing the previous one.
- 4.2.3.2. The direction of flight for the start of the Compulsory Programmes shall be determined by the International Jury. The International Jury shall also determine the alignment of the main axis for the other Programmes.
- 4.2.3.3. The decision with regard to the into-wind direction of flight shall take into account the direction of the actual wind. Flying at the start of each flight programme, shall commence along the main axis component of the prevailing wind.
- 4.2.3.4. The organiser of WAGAC must establish an efficient radio communication between the contest officials (Contest Director, Chief Judge, Flight Director, Chairman of the Technical Commission, and International Jury) and supervise the running of the contest and the contest rules.

#### 4.2.4. Height Limitations

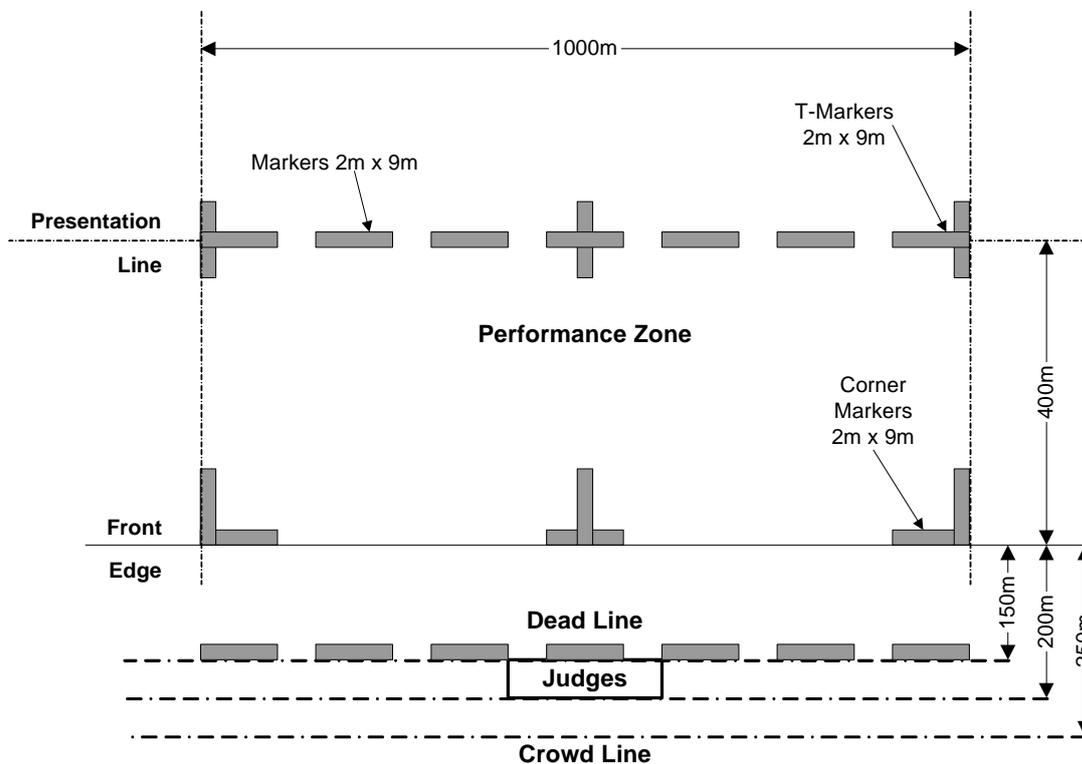
4.2.4.1. The following height limitations have been determined for all contest flights:

Category	Upper	Lower	Disqualification
Power	1000 metres	100 metres	50 metres
Glider	1100 metres (1200 m G4 only)	100 metres	50 metres

#### 4.2.4.2. Penalties

- Disqualification (for the current programme) for infringements of the disqualification height limit (4.2.4.1), by which air safety is endangered, shall be decided by a two-thirds majority vote of the Board of Judges.
- When a precision height measuring device is not available, a competitor will be penalized for an infringement of the lower height limit or the upper height limit in accordance with paragraph 5.2.2.1 if observed by a simple majority of the judges.

#### 4.2.5. Performance Zone



4.2.5.1. The programmes will be flown with reference to a main axis (or also called a “Presentation Line”) marked on the ground, which will be 400 metres from the front edge of the Performance Zone. The Performance Zone will be 1000 metres long and 800 metres deep. The zone must be located adjacent to a suitable emergency landing area.

4.2.5.2. A deadline shall be established parallel to the main axis and 150 metres outside the front boundary of the Performance Zone. The judging position shall be 150 metres to 200 metres from the front boundary. The crowd line should be 250 metres from the front boundary, or further if required by local regulations.



- 4.2.5.3. The Presentation Line and the dead line shall both be marked by 7 contrasting marking strips. The size of these markers must be at least 2 x 9 metres, with the longer side aligned with the direction of the axes. The ends and centre of the axes must be clearly marked by additional strips at least 2 x 9 metres in size. These markings are shown schematically in the diagram above.
- 4.2.5.4. The colour of the marking strips must be in distinct contrast to the ground and other airfield markings, which latter should be removed if possible. If necessary, changes from this pattern may be made to suit local conditions. Any such changes must be approved by the International Jury.
- 4.2.5.5. Marking must be complete prior to the first competition briefing. Aerial pictures of the box must be distributed to the International Jury and competing pilots to determine the correctness of the box geometry and to facilitate familiarization with the physical references.
- 4.2.5.6. Marking of positioning will be carried out by the Board of Judges. The recording of infringements of the deadline may be carried out with an electronic positioning instrument or by a suitably qualified Deadline Judge. If an electronic instrument is in use and becomes inoperable, a Deadline Judge must be used for each flight.

#### **4.2.6. Duration of Flight and Signalling Start and Finish**

- a) Limits for timed programmes are given in the paragraphs describing those programmes. For non-timed Programmes, the WAGAC organiser will allocate time slots to individual competitors, which must be adhered to. Failure to meet this slot by more than 2 minutes will result in disqualification from the Programme.

##### **4.2.6.2. Signalling**

- a) A competitor must signal the start and finish of each programme, and any interruption, by distinctly dipping the wing three (3) times immediately one after the other by more than 45 degrees. For timing purposes the programme is deemed to start on the return of the wings to level after the third wing dip; and is deemed to finish on their return to level after the third of the final wing dips.
- b) The aircraft may start and/or finish the wing dips either inside or outside the aerobatic zone. They may be in normal or inverted flight or a horizontal, climbing or descending path. If the first figure in a programme begins in inverted flight, all wing dips must be performed in inverted flight. The competitor may change his flight attitude from normal to inverted only by a half roll prior to the first wing dip. The return of wings to 'level' therefore does not necessarily refer to the aircraft being 'in level flight'.
- c) A horizontal flight path is required at the start of the first figure of Programmes P1, P2, P3, G1, G2 and G3. This horizontal may be started inside the aerobatic zone or, provided that it is clearly seen to continue inside, it may be started outside the zone.

#### **4.2.7. Measures in Case of Mechanical Defects**

##### **4.2.7.1. Defects on the Ground**

- a) In the event of a competing aircraft becoming unserviceable before the start of a flight, the International Jury may, on the recommendation of the Technical Commission, permit the competitor to use another aircraft.

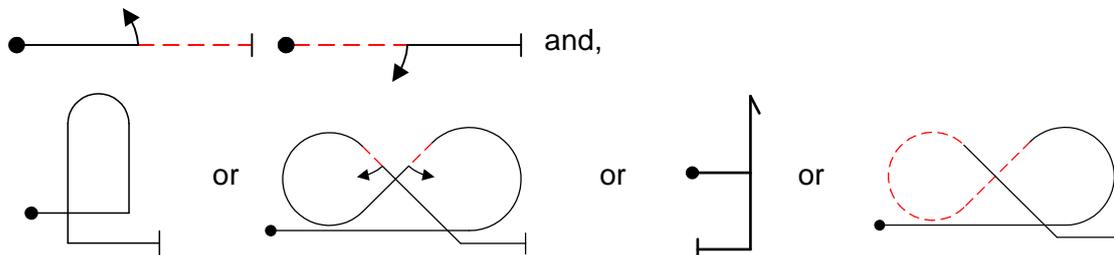
4.2.7.2. Defects in Flight

- a) In the event of a technical problem a competitor may break off his or her flight. However, as time slots for the WAGAC are limited, repeat flights are unlikely to be permitted.

**4.3. Programmes Of World Air Games Aerobatic Championships**

**4.3.1. Competition Flights**

- 4.3.1.1. Each competitor will make four competition flights. Smoke may be used on all flights at the option of each individual pilot.
- 4.3.1.2. The WAGAC organisers shall designate an airborne holding area for aircraft awaiting their turn to enter the Performance Zone. This will apply to powered aircraft and gliders on tow.
- 4.3.1.3. While in the holding area, it is recommended that all powered pilots perform safety manoeuvres as follows. These figures are optional but, if flown, must be flown inside the holding area:



**4.3.2. Programme P1 – The Known Compulsory Programme**

- 4.3.2.1. The Known Compulsory Programme will be as approved by CIVA for the WAC 2015, composed of nine (9) figures in normal and inverted flight performed consecutively and continuously, observing the prescribed sequence of the figures.
- 4.3.2.2. Programme P1 will be time limited to ten (10) minutes. Pilots will be expected to adhere to slot times allocated by the contest organiser.
- 4.3.2.3. Programme P1 will adhere in all other respects to the regulations published in Sporting Code, Section 6 Part 1 Powered Aircraft Version 2015-1.

**4.3.3. Programme P2 - The Free Programme**

- 4.3.3.1. The Free Programme will be composed as per Sporting Code Section 6 Part 1 Powered Aircraft Version 2015-1.
- 4.3.3.2. Programme P2 will be limited to ten minutes, pilots will be expected to adhere to slot times allocated by the contest organiser.
- 4.3.3.3. The programme will adhere in all other respects to those published in Sporting Code, Section 6 Part 1 Powered Aircraft Version 2015-1.

**4.3.4. Programme P3 - The Free Unknown Programme**

- 4.3.4.1. For the Free Unknown Programme, figures will be chosen from those listed in Section 6 Part 1 Powered Aircraft Version 2015-1. A maximum of 10 figures may be submitted. All ten competing pilots may submit one figure, the order being determined by the drawing of lots.



In the event of there being less than ten competing pilots, a further drawing of lots will determine who will submit the additional figures to make up the maximum of 10 figures.

- 4.3.4.2. Programme P3 will be limited to ten minutes. Pilots will be expected to adhere to slot times allocated by the contest organizer.
- 4.3.4.3. The programme will adhere in all other respects to those published in Sporting Code, Section 6 Part 1 Powered Aircraft Version 2015-1.
- 4.3.5. **Programme P4 – The Final Freestyle Programme**
- 4.3.5.1. The timing of this Programme will be 3:30 to 4:00 minutes.
- 4.3.5.2. No holding area will be utilised for Programme P4, competitors will enter the Performance Zone immediately after take-off
- 4.3.5.3. Flight order will be determined by the reverse order of the combined results from Programmes P1 to P3.
- 4.3.5.4. Warm up figures without limitation will be allowed in the Performance Zone to a maximum of one minute, time penalties to apply. Warm up figures will deem to have commenced when the aircraft deviates from straight and level after the initial climb.
- 4.3.5.5. Total time airborne from take-off to final landing approach will be no more than eight minutes.
- 4.3.5.6. Music may be required as per the Organisers request, but will not be monitored by the competitor whilst in flight.
- 4.3.5.7. The competitor will in addition to the standard wing dipping at the end of the sequence, also confirm to the Chief Judge by radio the termination of the sequence.
- 4.3.5.8. Final approach should be planned to allow the next competitor to take-off as appropriate.
- 4.3.5.9. Programme P4 will adhere in all other respects to those published in Sporting Code, Section 6 Part 1 Powered Aircraft Version 2015-1.
- 4.3.6. **Programme G1 – The Free Programme**
- 4.3.6.1. The Free Programme is composed by the competitors based on the Aresti-System (Condensed) Glider Version. The maximum figure-K of the Free is 300 with ten (10) figures maximum. Catalogue numbers may be used only once without exception. No more than two figures each from the same family (except family 9) may be used. The sequence may be started and finished in upright or inverted flight and in any direction.
- 4.3.6.2. Versatility
- Each sequence must contain at least:
- one rolling turn of 180° or more,
  - one stall turn,
  - one tailslide,
  - one hesitation roll
  - one full positive flick roll,
  - one half negative flick roll.



**4.3.6.3. Checking**

At least one week prior to the opening of the contest, competitors must submit their Free sequences to the chairman of the International Jury. The sequences will then be checked for compliance with the rules by the Jury or by officials appointed for this task.

**4.3.7. Programmes G2 and G3 – The Unknown Programmes**

4.3.7.1. For Programmes G2 and G3 each competitor submits in advance (date TBD) three figures from the current Aresti Catalogue (Condensed) Glider Version.

4.3.7.2. From these figures the International Jury, assisted by the Chief Judge, composes two sequences for Programmes G2 and G3 with a figure K of 200 minimum and 230 maximum. If necessary, the Jury may add no more than two figures of their own, but only to aid in sequence construction.

4.3.7.3. The sequences will be given to the competitors not later than 12 hours before the planned start of Programmes G2 or G3.

4.3.7.4. Training for the Unknown Programmes is prohibited. Competitors violating this regulation will be disqualified.

**4.3.8. Programme G4 – The Freestyle Programme**

4.3.8.1. Release height for Programme G4 is 1200 m AGL. Competitors may perform a low pass at a minimum height of 50 metres AGL on request.

4.3.8.2. The Freestyle Programme should be accompanied by music. The organiser must ensure availability of a satisfactory and reliable sound system. The competitor will signal the start of his/her music to the sound operator.

4.3.8.3. There will be no submission of forms containing the sequence of figures for these Programmes.

4.3.8.4. Marking criteria for Glider Freestyle Programmes - see section 6.2.



## **5. REGULATIONS FOR THE EVALUATION OF COMPETITION FLIGHTS**

### **5.1. Evaluation Of The Performance**

#### **5.1.1. Judges**

- 5.1.1.1. Each programme of WAGAC will be marked by the Judges using a standardised system.
- 5.1.1.2. Where the majority decision of the Panel of Judges is required, in a case of disagreement about the penalisation of the flight of a competitor, the Chief Judge shall have a casting vote in the event of a tie.

#### **5.1.2. Marks for Aresti-Based Figures**

- 5.1.2.1. The Judges will independently assess the quality of each figure and its components as performed in the sequences for Programmes P1, P2, P3, G1 and G2, marking with numbers from 0 to 10, in intervals of 0.5. A Hard Zero (HZ) mark will be awarded if the figure is incorrect or missing.
- 5.1.2.2. Judging and scoring of these figures shall be in accordance with the relevant paragraphs of Sporting Code Section 6, Parts 1 and 2 for powered and glider aircraft respectively.

#### **5.1.3. Marking of Positioning**

- 5.1.3.1. If an electronic, radar or radio-controlled tracking instrument is operated, the position of the aircraft must be recorded from the signalling of the start of the sequence to the finish. This recording will only be reviewed to confirm Deadline infringements.
- 5.1.3.2. The positioning mark will be given by the Board of Judges, using the relevant techniques in accordance with those specified in Sporting Code Section 6 parts 1 and 2.
- 5.1.3.3. Because the rear boundary of the Performance Zone is not marked, infringements of the performance zone will not be recorded. The K factor accorded to positioning marks will be as shown in the following table.

<b>Programmes</b>	<b>K Factor for Positioning</b>
P1, P2, P3	K = 40
G1, G2, G3	K = 15

#### **5.1.4. Marking of Final Freestyle Programmes**

- 5.1.4.1. Marking for power programme P4 will be as set out in Sporting Code Section 6, Part 1. Glider freestyle programme G4 will be marked as set out in paragraph 6.2 below.

#### **5.1.5. Official Video Recording**

- 5.1.5.1. An official video recording from the Judges' position must be made of every individual competition flight in a WAGAC. The official recording must be available to the International Jury to assist their decision on any protests regarding the evaluation of a competition flight. The recording shall not be available to competitors except in conjunction with the International Jury's decisions on protests and with their agreement. After the completion of the championships, the recording may be released by the organisers for use in training.
- 5.1.5.2. The official recording shall also be available to the Chief Judge and the Board of Judges to assist their discussions on matters of fact.



- 5.1.5.3. Organisers must provide suitable quality equipment with qualified operators to ensure that useful information is provided to the judges and International Jury for their decisions.

## **5.2. Penalty Points Deductible From Total (Averaged) Scores**

### **5.2.1. Time Limits for the Programmes**

- 5.2.1.1. Any deviation, shorter or longer, from the time allowed for Programme P4 will incur 10 penalty points for each second or fractional part of a second of deviation.
- 5.2.1.2. Failure of a competitor to observe precisely wing dipping for all Programmes (signalling start and finish) will result in a penalty of 150 points. To check and decide on this is the responsibility of a simple majority of the Judges.

### **5.2.2. Infringement of Height Limits**

- 5.2.2.1. For every obvious and visually recognised infringement of the lower height limit during the performance of any Programme, the competitor will be given 250 penalty points; an additional 250 penalty points will be given for each figure flown completely below the lower height limit; for an infringement of the upper height limit 50 penalty points are given. A competitor flying lower than 50 metres will be disqualified from the current programme for causing a dangerous situation.

### **5.2.3. Infringements of the Performance Zone and Deadline**

- 5.2.3.1. Infringements of the Performance Zone will not be measured or penalised in any of the programmes. Infringements of the Deadline shall result in disqualification of the pilot from the programme. In programmes when figures are graded individually, a Judge may deduct 0.5 to 1.0 from the mark for each figure badly visible due to its unreasonably long distance away from the judging position.

### **5.2.4. Flight Regulations and Dangerous Flying**

- 5.2.4.1. Competitors found guilty of violating flight regulations and/or causing a dangerous situation will, on the recommendation of the International Jury, be disqualified by the Contest Director. The Chief Judge may, with the agreement of two-thirds of the Board of Judges, exclude a pilot who is not flying safely or could cause an unsafe situation.

### **5.2.5. Interruption of a Programme or Addition of Figures**

- 5.2.5.1. These shall be as described in the relevant paragraphs of Sporting Code Section 6, Parts 1 and 2 for powered and glider aircraft respectively.

## **5.3. Penalties And Devaluations Applicable To Aresti Figures In Programmes**

These shall be as described in the relevant paragraphs of Sporting Code Section 6, Parts 1 and 2 for powered and glider aircraft respectively.



## **6. CRITERIA FOR JUDGING AEROBATIC FIGURES**

### **6.1. Power programmes P1 to P3, Glider programmes G1, G2 and G3.**

6.1.1.1. These shall be as described in the relevant paragraphs of Sporting Code Section 6, Part 1 for powered aircraft and part 2 for glider aircraft.

### **6.2. Glider Freestyle Programme G4**

6.2.1.1. Glider Freestyle Programmes will be judged under three main headings. A mark of up to 10 points, in increments of 0.5 will be given under each of the ten sub-headings.

#### **6.2.2. Technical merit (160 K)**

6.2.2.1. Utilisation of the flight envelope – 40 K

The pilot should, within reasonable limits, demonstrates the flight envelope of his/her glider in terms of airspeed as well as accelerations, both positive and negative. The dynamic character of glider aerobatics must be considered and excessively hard manoeuvring avoided. High-alpha, beyond-stall-manoevres and autorotations should also be demonstrated. Points are to be deducted accordingly, if any of these areas is missing.

6.2.2.2. Exploitation of Attitudes and planes of flight – 40 K

The pilot should show manoeuvres around all axes of the glider in a variety of different attitudes and in all planes of flight. Repetition of particular attitudes or flight paths should be downgraded as well as under-utilization of certain planes of flight.

6.2.2.3. Clarity of execution of manoeuvres – 40 K

It should be clear to the judges that all manoeuvres flown were intended and fully controlled by the pilot. Start and finish of individual manoeuvre elements should be clearly recognisable. Poorly executed manoeuvres and apparently uncontrolled phases of flight must be downgraded.

6.2.2.4. Number and variety of manoeuvres – 40 K

The pilot should show as many different manoeuvres as possible in the available height. Repetition of specific manoeuvres and inefficient utilization of energy must be downgraded.

#### **6.2.3. Artistic Impression (160 K)**

6.2.3.1. Harmony – 40 K

The ideal of harmony in a glider freestyle programme is fulfilled when it gives the impression of a "dance in the air". The succession of figures and manoeuvre elements should be an elegant flow, where each figure naturally emerges from the previous one. To present this impression, the pilot must expertly manage the available energy without having to speed up or slow down visibly between figures or manoeuvres.

6.2.3.2. Rhythm – 40 K

It is expected that the pilot alternates gracefully between high-speed elements or rapid rotations and more gently flowing manoeuvres in order to present a pleasing variation of pace, again similar to a dance.

6.2.3.3. Orientation and Position – 40 K

The ideal programme is presented so that all elements of the performance are optimally oriented and positioned for the judges and spectators to watch and assess. Any elements which are flown in an unfavourable position or orientation must be downgraded.



**6.2.3.4. Matching with music – 40 K**

A glider freestyle programme without accompanying music is lacking an important emotional element. The competitor should carefully choose the music which fits the character of his programme. Ideally, the pace of the programme should match the rhythm and pace of the music as much as possible. If there is no accompanying music, the mark under this heading is 0.0.

**6.2.4. Positioning (80 K)**

**6.2.4.1. Symmetry – 40 K**

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 towards the centre of the performance zone. Marks should be deducted if, by design or by the influence of the wind, a pilot's programme is noticeably biased to left or right.

**6.2.4.2. Utilisation of Performance Zone – 40 K**

The flight should be positioned so that the available lateral space is efficiently used without spreading the programme too far out. Figures flown unnecessarily far away from the judges and spectators show poor position management and must also be downgraded.



**7. CODE OF PRACTICE FOR THE CHIEF JUDGE AND BOARD OF JUDGES AT  
WORLD AIR GAMES AEROBATIC CHAMPIONSHIPS**

- 7.1.1.1. These shall be as described in the relevant paragraphs of Sporting Code Section 6, Parts 1 and 2 for powered and glider aircraft respectively.



## **8. METHOD FOR PROCESSING SCORES**

### **8.1.1. All Programmes**

8.1.1.1. The CIVA Fair Play System will not be used at World (Air) Games.

8.1.1.2. Raw grades will be displayed to the public via judge assistants entering the grades in real time on the tablets provided (Instant Scoring). Rank order as assessed from scores derived from the raw grades will be displayed for the programme being flown (no overall ranking).



**9. LIST OF FIGURES FOR PROGRAMME P2**

9.1.1.1. These shall be as described in the relevant paragraphs of Sporting Code Section 6, Part 1.



**10. KNOWN COMPULSORY PROGRAMMES**

**10.1. Programme P1**

