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**503.1. General**

IAC, through its Letter of Agreement with the National Aeronautic Association, is responsible for the U.S. National Aerobatic Championships.

**503.2. Policy**

**503.2.1 Supplemental Policies**

503.2.1.1 As stated in IAC Policy and Procedures Manual, Section 501, the IAC Board of Directors shall approve the Contest Director and the budget for the U.S. National Aerobatic Championships.

503.2.1.2 The IAC Contest Sanctioning Committee shall approve any supplementary rules or waivers to the *IAC Official Contest Rules* for all IAC Championship events, including the U.S. National Aerobatic Championships. However, boundary judges are required in all applicable Power categories and may not be waived by the Contest Sanctioning Committee.

**503.2.3 Citizens and International Guests**

503.2.3.1 Entry is open to all IAC members or members of other National Airsports Controls (NAC's).

503.2.3.2 U.S. National titles, trophies, and special awards will only be awarded to pilots of U.S. citizenship.

503.2.3.3 Individual Flight Medals are not restricted by citizenship.

503.2.3.4 The above does not preclude the creation and awarding of special trophies specifically for non-U.S. citizen competitors at the U.S. Nationals.

**503.3 National Titles and Awards**

503.3.1 The following championship titles will be awarded:

- (a) U.S. Primary Aerobatic Champion
- (b) U.S. Sportsman Aerobatic Champion
- (c) U.S. Intermediate Aerobatic Champion



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- (d) U.S. Advanced Aerobatic Champion
  - (e) U.S. National Aerobatic Champion (Unlimited category)
  - (f) U.S. Primary Glider Aerobatic Champion
  - (g) U.S. Sportsman Glider Aerobatic Champion
  - (h) U.S. Intermediate Glider Aerobatic Champion
  - (i) U.S. Advanced Glider Aerobatic Champion
  - (j) U.S. National Glider Aerobatic Champion (Unlimited category)

503.3.2 In the event the U.S. National Glider Aerobatic Championships is flown at a location other than the U.S. National Aerobatic Championships (whether in whole or in part by category), the “U.S. National Glider Aerobatic Champion” titles will be awarded at the Glider competition.

503.3.3 For a National Champion to be named in any category, at least two flight programs must be completed for that category.

503.3.4 The Four Minute Freestyle is a separate trophy event and not counted toward National Champion titles.

#### **503.4 Contest Site**

##### **503.4.1 Box Markers**

The aerobatic box will be indicated on the ground with at least 9 white markers (An “L” for each of the four corners, a “T” for each of the four sides, and a “+” for the center), each of which will be at least 6 feet in width in their narrowest dimension.

The Contest Director will make an effort to add 2 evenly spaced rectangular markers between the center marker and each box side.

##### **503.4.2 Facilities**

503.4.2.1 Private space should be provided to the Contest Jury and Scoring Director.

503.4.2.2 Every effort will be made to secure hangar space sufficient to house all competitor aircraft.



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503.4.2.3 A space should be designated for all briefings, with seating available to all required attendees.

**503.4.3 Dead Prop Areas**

503.4.3.1 Any areas where engine operation is prohibited will be clearly marked.

**503.5 Contest Administration**

**503.5.1 Practice**

503.5.1.1 Pilots must pre-register before being assigned a practice slot. Refunds will be given if the competitor is unable to attend.

503.5.1.2 The Contest Director will make every effort to allow one official practice flight for each competitor.

**503.5.2 General Briefing and Program Briefings**

503.5.2.1 The Contest Director will schedule a general briefing for all pilots and judges at the beginning of the Championship. This briefing will include:

(b) General contest information and schedule

(b) All information required in the “Program Briefing” section of the IAC Official Contest Rules, except for information specific to individual flight programs.

(c) Drawing for order of flight for the Known for each category, if applicable.

503. 5.2.2 The Chief Judge of each category, or their designee, will conduct a Program Briefing prior to each program.

**503.5.3 Order of Flight**

503.5.3.1 The Contest Director may choose to order flights randomly using the official IAC scoring program or may choose a drawing of lots.



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503.5.3.2 No category will draw for lots unless all categories of higher complexity also draw for lots.

503.5.3.3 If a draw for lots is used for a category, it must be used for all programs in that category.

503.5.3.4 A drawing of lots will proceed as follows:

- 1) For the first flight program, the draw order will be alphabetical.
- 2) For any following flight programs, the draw order will be the order of flight of the previous program.
- 3) If a competitor is not present, a contest official shall draw for them.

503.5.3.5 No competitor will be required to fly consecutive flight programs in the first third of slots in the flight order.

#### **503.5.4 Winds Aloft and Sun Angle**

The Contest Director shall determine the means by which the official wind speed and direction shall be determined. The Chief Judges shall use this information as well as the sun angle to determine the Official Wind Direction and which Judging Line will be used.

#### **503.5.5 Sequence Forms**

The Contest Director shall determine whether electronic form submission will be used. If electronic form submission is used, the Contest Director must publish specifications on what format will be accepted, and how forms can be delivered to the registrar, at least 14 days before the contest. Printed forms must also be accepted by the registrar.

#### **503.5.6 Selection of Judges**

The process for judge selection shall be as set forth in IAC Policy and Procedures Manual, Section 501.4. Chief Judges may not perform the duties of a Grading Judge in the same category.



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**503.5.7 U.S. Team Selection**

IAC policy regarding the selection of pilot members of the U.S. Aerobatic Teams can be found in IAC Policy and Procedures Manual, Section 504, "Selection of U.S. Aerobatic Team".

**503.5.8 Contest Director's Handbook**

The *Contest Director's Handbook* will be updated by the Contest Director every year. All Contest Directors are expected to keep this book, which includes extensive checklists, updated and to return it to IAC Headquarters following the Championships and before the Fall IAC Board of Directors meeting.

**503.5.9 Post-Contest Reports**

The following officials are required to submit reports covering their areas of responsibility to the IAC Board of Directors at the board meeting that immediately follows the conclusion of the U.S. National Aerobatic Championships:

- (a) Contest Director
- (b) Jury Chair
- (c) Chief Judge of each Category

**503.6 Flight Program Scheduling**

503.6.1 The schedule for the Primary, Sportsman, and Intermediate categories will include:

- a Known program
- a Free program,
- an Unknown program

in that order.

503.6.2 The schedule for the Advanced and Unlimited categories will include:

- Either a Known or a Free Known program.
- A Free Unknown I program.
- A Free Unknown II program.

in that order.



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While Free Unknowns are preferred, the Contest Director may schedule a traditional IAC Unknown in place of Free Unknown I.

503.6.3 The Known program of the team selection category will be the first program scheduled.

503.6.4 The Four Minute Freestyle will be the last program scheduled.

503.6.5 The Contest Schedule will be published by the Contest Director at least 30 days prior to the contest.

503.6.6 Once the contest has begun, the Contest Director may change the schedule only in the case of a weather event or other emergency.

However, in a situation where it is not possible to treat all categories equally, any adjustments to the schedule must prioritize, in this order:

- 1) at least two programs are completed in the Unlimited category, so a National Champion can be selected,
- 2) at least two programs are completed in the team selection category,
- 3) at least two programs are completed in the other categories, and
- 4) the Four Minute Freestyle program is completed.

### **503.7 Free Known Programs**

Free Known Sequences must be composed according to the FAI Sporting Code.

### **503.8 Free Unknown Programs**

Free Unknown Programs allow pilots to collaborate to create challenging unknown sequences.

#### **503.8.1 Free Unknown Figure Submission**

503.8.1.1 Free Unknown Figure Submission meetings will be scheduled by the Contest Director. The Contest Director will determine whether figure submission will be accepted in the order of random draw or by competitor ranking. If by competitor ranking, the Contest Director will determine which flight program will be used to qualify competitors for the submission, and the Figure Submission meeting will occur after the conclusion of the



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qualifying flight program for that category with sufficient time for preliminary scores to be available.

503.8.1.2 Each figure submission meeting will be attended by a member of the Contest Jury.

503.8.1.3 If figure selection by rank is used, the top ten (10) competitors flying in the program, in rank order of the provisional accumulated results will each be invited to submit one Unknown figure.

503.8.1.4 Only competitors in attendance at the program's figure submission meeting are eligible to submit a figure.

503.8.1.5 For the Free Unknown I Program:

- 1) Figures must be chosen from the appropriate section(s) of the IAC rule book, using all IAC rules for allowable figures.
- 2) Minimum and Maximum K for each figure will be drawn from the least challenging CIVA program.

Currently, this is "Programme 2", which, for Power categories, has the following limits:

**Advanced:** 15K minimum, 30K maximum

**Unlimited:** 22K minimum, No maximum

503.8.1.6 For the Free Unknown II Program:

- 1) Figures must be chosen from the appropriate section(s) of the CIVA rule book (FAI Sporting Code), using all CIVA rules for allowable figures.
- 2) Minimum and Maximum K for each figure will be drawn from the most challenging CIVA program.

Currently, this is "Programme 4", which, for Power categories, has the following limits:

**Advanced:** 15K minimum, 40K maximum

**Unlimited:** 22K minimum, No maximum



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503.8.1.7 If fewer than ten legal figures are submitted, for any reason, additional figures will be selected by the Jury until a total of 10 figures have been submitted or selected.

503.8.1.8 The Contest Jury shall publish an official list of figures selected by the pilots as soon as possible after the Figure Submission meeting.

### **503.8.2 Free Unknown Sequence Creation**

503.8.2.1 Each pilot flying a Free Unknown may submit to the Contest Jury a Free Unknown sequence.

503.8.2.2 All 10 figures chosen for the category, as explained above, must be included in the sequence. No other figures may be included except for Linking Figures, as described below.

503.8.2.3 All 10 figures must be used as drawn, with the entry and exit unchanged relative to each other and all rotations as provided, except figures may be placed in the sequence beginning on either axis.

503.8.2.4 Linking Figures

- 1) At least one linking figure, up to a maximum of four, must be included in the sequence.
- 2) Linking figures may be repeated and may contain repetitions without restrictions.
- 3) Linking figures may appear anywhere in the sequence, including the beginning or end, be placed back-to-back, etc.
- 4) Any legally constructed Aresti figure may be used as a Linking Figure.
- 5) The K factors of linking figure(s) shall be modified so that they share equally an aggregate of 24K.

503.8.2.5 For the sake of clarity: 1) the sequence will therefore consist of between 11 and 14 figures, and 2) there is no other limit placed on Free Unknown sequences.





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### **503.8.3 Free Unknown Sequence Presentation Values**

503.8.3.1 Free Unknowns will use the Presentation or Positioning K listed in the CIVA Rule Book. At the time of this edit, the IAC and CIVA values are the same.

### **503.8.4 Free Unknown Sequence Submission**

503.8.4.1 The Contest Director shall determine and communicate the means and the deadline for submitting sequences.

503.8.4.2 Sequences must be submitted as PDF or OpenAero computer file. If using OpenAero, the use of the Free Unknown Designer (FUD) is required.

503.8.4.3 At minimum, a Form B or Form R must be submitted with a list of figures, their Catalog numbers and K-factors, and with each linking figure identified.

503.8.4.4 All proposed sequences must be checked by the Contest Jury for legality and, if necessary, corrected by the submitter and re-checked by the Jury with sufficient time remaining for publication.

### **503.8.5 Free Unknown Sequence Publication**

503.8.5.1 After sequence submission, the Contest Jury shall identify each legal sequence with a unique letter (e.g., A, B, C, etc.) and publish the Form B or Form R with a list of figures.

503.8.5.2 Any proposed sequence that the Jury determines is illegal after the submitter has been afforded an opportunity to correct it will be discarded and go unpublished.

503.8.5.3 Sequences will be published at least 14 hours prior to the start of the Free Unknown flight program.

### **503.8.6 Free Unknown Sequence Selection**

503.8.6.1 At least 12 hours before the start of the flight program, each competitor will notify the Contest Director as to which of the sequences he/she will fly.



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503.8.6.2 To clarify, competitors may choose any sequence they prefer and are not restricted to sequences they had a hand in making.

503.8.6.3 At least one (1) hour before the start of the Flight Program, the Contest Director shall post a list of the Free Unknown Programs chosen by each competing pilot.

**503.8.7 Free Unknown Sequence Confirmation by Chief Judge**

503.8.7.1 Sequence choices will be confirmed during the pilot roll call in the briefing before the flight.

503.8.7.2 The Chief Judge will also verify the sequence to be flown when clearing the competitor into the box.

For example:

**Chief Judge:** (Pilot Name), you are cleared into the box. Confirm sequence Bravo.

**Competitor:** Chief Judge, (Pilot Name) cleared into the box and flying Bravo.

**503.9 The Four Minute Freestyle Event**

503.9.1 The Four Minute Freestyle will be conducted as a separate trophy event, as outlined in the *IAC Official Contest Rules*.

503.9.2 Competitors eligible to participate in the Four Minute Freestyle Event are, in order of preference:

(a) Unlimited Power and Glider Category competitors, in rank percentile order of standing after all compulsory competition flights; then

(b) Advanced Power and Glider Category competitors who meet the Eligibility requirements found in the rule book section on The Four Minute Freestyle

(c) Pilots who wish to enter the Four Minute Freestyle Event only, who have not competed in the Championships: Permission to enter this Event will be granted by agreement between the Contest Director and Contest Jury after review of the competitor's qualifications.



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503.9.3 If figure selection by rank is used, the top 10 eligible competitors will be invited to participate in the Four Minute Freestyle flight. Should any of those competitors decline to participate, the next highest ranked eligible pilots will be invited, until there are 10 competitors or all eligible pilots have been invited.

503.9.4 If sufficient time allows, and with the concurrence of the Contest Director, the Contest Jury may allow up to five additional competitors to fly the Four Minute Freestyle Event.

503.9.5 The order of flight for the Four Minute Freestyle Event will be a random order generated by computer.

#### **503.10 Warm-up Flights**

503.10.1 Warm-up flights are encouraged and may be scheduled for all programs in each category, if time and pilot resources allow.

503.10.2 Warm-up pilots may not be a competitor in the category being flown.

503.10.3 Warm-up pilots will fly first in the flight order.

#### **503.11 Official Contest Video**

503.11.1. The Contest Director will make every effort secure videography services for use by the Judging Lines and the Contest Jury.

503.11.2 The highest priority is to provide videography services for all flight programs in team selection flights.

503.11.3 All videos will be sent to IAC Headquarters after the competition results are official.

503.11.4 A shaded viewing area will be available for each judging line location with a monitor or monitors of adequate size to allow clear viewing by the number of judges expected.



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503.11.5 Official Contest Video can be used by the panel of Judges when there is disagreement over HZ marks and by the Contest Jury to assist in the resolution of protests.

503.11.6 Judge Conferences

Any judge may request to review Official Contest Video, including the Chief Judge. The Chief Judge will supervise the use of video for review. The Chief Judge will allow video review to help determine *matters of fact*, but not *matters of perception*.

The Chief Judge shall call a Judge Conference according to the IAC rulebook using the video evidence presented by the Chief Judge assisted by the videographer. The video should be shown to the judges after the matter of fact in question is shared with the judges but before any debate or discussion is initiated.

503.11.7 Protests

Official Contest Video may be viewed by a competitor, under the supervision of the Contest Jury, only after filing a protest. Only the figure(s) under protest may be viewed.

The Jury Chair shall:

- (a) Take reasonable steps to shield the identity of the pilot being viewed on video from the members of the jury.
- (b) Additionally, in the case of a protest involving an HZ, the Jury members shall not be given the original zero/nonzero marks from the judging line.

The purpose of both steps is to minimize any perception of bias by members of the Jury.

503.11.8 Livestreaming

Official Contest Video can be broadcast via web streaming services so that fans can watch the contest. Commentary is subject to the following guidelines:

- 1) Any commentary provided on the livestream should be unbiased, professional, and geared toward non-pilot viewers.



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- 2) Between flights, commentators can update the audience on weather conditions, rankings, scores, the contest schedule, contest rules, and other helpful information.
  - 3) During flights, commentators should call sequences if available or stay silent if they are not.
  - 4) Commentators will take care not to speak in a way that could influence the results of the contest or call the results into question.