



## **229.1. General**

**229.1.1.** The purpose of the Sequence Program is to:

- (a) Create Known compulsory sequences for use by all classes and categories during each IAC calendar year.
- (b) Provide Unknown sequences for use by all classes and categories at IAC-sanctioned regional contests.
- (c) Provide Unknown sequences for use by the Intermediate power category and all glider categories at the U.S. National Aerobatic Championships.
- (d) Maintain the IAC's sequence database.

## **229.2. Program Administration**

**229.2.1.** The Sequence Program is administered by the IAC Sequence Committee. Members will be selected by the Chair who represent varied viewpoints, backgrounds, and experience in order for the decisions of the Committee to represent the views of the membership at large. The following persons shall be automatic members of the Committee:

- (a) IAC Rules Chair
- (b) Glider Aerobatics Chair
- (c) Up to five (5) members-at-large appointed by the Chair

## **229.3. Program Policy**

### **229.3.1. Known Sequences**

#### **229.3.1.1. Known Sequence Design Criteria**

##### **Primary and Sportsman Power**

- (a) Proposed Primary and power Sportsman Known sequences shall be flyable by aircraft without inverted fuel or oil systems, in the class of 115 hp Citabrias.
- (b) Proposed Power Primary Known Sequences may include lines, competition turns, loops, line-loop combinations (select figures from Family 7 and 8), rolls



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and spins. All maneuvers will consist of positive entry and exit lines with no vertical up-lines and no snaps. Total maneuver K range of 50-70 for the sequence.

- Family 1: 1.1.1.1, 1.1.2.1, 1.1.6.3
- Family 2: 2.1.1.1, 2.2.1.1, 2.3.1.1, 2.4.1.1
- Family 3: not allowed
- Family 5: not allowed
- Family 6: not allowed
- Family 7: 7.2.2.1, 7.2.3.3, 7.3.2.1, 7.3.3.3, 7.4.1.1, 7.8.4.1, 7.8.8.1
- Family 8: 8.4.1.1, 8.5.2.1, 8.5.3.3, 8.5.6.1, 8.6.5.1, 8.7.5.1
- Family 9: 9.1.2.2, 9.1.3.2, 9.1.3.4, 9.1.4.2, 9.11.1.4, 9.11.1.6

- (c) Proposed Power Sportsman Known Sequences may include momentary inverted attitudes and vertical lines. There will be no figures with inverted (dashed) entry or exit lines. All figures allowed in Primary are allowed in Sportsman.

In addition, Sportsman Knowns may include:

- Family 1: 1.1.2.3, 1.1.6.1, 1.2.3.1, 1.2.6.3, 1.2.7.1, 1.3.2.1, 1.3.3.3
- Family 2: no additions
- Family 3: not allowed
- Family 5: 5.2.1.1
- Family 6: not allowed
- Family 7: no additions
- Family 8: 8.4.1.1, 8.4.3.1
- Family 9: 9.1.5.1, 9.2.3.4, 9.4.2.2, 9.4.3.2, 9.4.3.4, 9.4.4.2

**Intermediate Power**

- (a) Proposed power Intermediate Known sequences shall be flyable by aircraft in the class of the 150 hp Decathlon.
- (b) Proposed Power Intermediate Known Sequences may include sustained inverted flight, negative pushes to and from 45 degree attitudes, and limited snap rolls



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from slow speed entries. All Figures allowed in lower categories and those listed as Allowable Figures for Unknown Sequences for the Intermediate Category may be utilized.

Additionally, the following figures may be used:

- Family 2: 2.1.3.2
- Family 9: 9.9.2.2, 9.9.3.2

**Advanced Power**

- (a) Proposed power Advanced Known sequences shall be flyable by aircraft in the class of the Pitts S-2B.
- (b) Proposed Power Advanced Known Sequences may include 3/4 snaps on the vertical down-line, up to full snaps on positively loaded 45 degree lines, and level snaps up to 1 ½ rotations. Aircraft also must be capable of significant negative maneuver capability to push to and from verticals and around outside looping figure segments as well as rolling turns. All Figures allowed in lower categories and those listed as Allowable Figures for Unknown Sequences for the Advanced Category may be utilized.

**Unlimited Power**

- (a) There are no aircraft restrictions for proposed power Unlimited Known sequences, but consideration will be given for IAC legacy aircraft (e.g., Pitts S-1) known to compete in this category.
- (b) Proposed Power Unlimited Known Sequences shall be limited by safe sequence design practices considering altitude and physiological limitations. With consideration given for IAC legacy aircraft known to compete in this category, there are no specific figure restrictions.

**Sportsman and Intermediate Glider**

- (e) Proposed glider Sportsman and Intermediate Known sequences shall be flyable by aircraft in the class of the DG-1000.



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For the purposes of this section, the term “flyable” shall mean with good piloting, sequences will be flown through all maneuvers safely with no more than one break required.

**229.3.1.2. Known Sequence Proposal Process**

229.3.1.2.1. The Sequence Committee shall be primarily responsible with producing known sequences, but shall accept submissions from members.

229.3.1.2.2. All proposed sequences will be posted on the IAC website for member comment for a minimum of 30 days.

229.3.1.2.3 The Sequence Committee will be responsible for testing proposals. When possible, proposed designs will be test flown in an aircraft appropriate to the category and data such as altitude loss, max positive/negative G necessary to fly the sequence, and ability of the sequence design to deal with maximum allowed competition winds will be noted and provided to all Sequence Committee members. Additional criteria used in sequence evaluation are: adherence to the Aresti System and *IAC Official Contest Rules*; appropriate level of difficulty for the category; safety limits for both the pilot and aircraft; and flyability by the baseline aircraft.

229.3.1.2.4 The Sequence Committee will evaluate proposals and member comments, and publish its recommendation, including any test results, for each category with sufficient time for review by the Board of Directors prior to the Fall Board Meeting.

229.3.1.2.5 The IAC Board of Directors will review the published recommendations at the Fall Board Meeting, and return decisions to the sequence committee for implementation.

229.3.1.2.6. Approved Known sequences shall become effective on January 1<sup>st</sup> of the calendar year following Board approval.

**229.3.2. Unknown Sequences**

229.3.2.1. The Sequence Chair is responsible for providing IAC headquarters with Unknown



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sequences for use at IAC-sanctioned competitions. These Unknowns must meet the same aircraft flyability standards as outlined in 229.3.1.1. above.

- 229.3.2.2. The Sequence Chair shall employ as many knowledgeable and experienced IAC members as necessary to assist with these duties.
- 229.3.2.3. This section does not apply to the power Advanced and Unlimited Free Unknowns for IAC Championship events, which will be designed as outlined in *IAC Policy and Procedures Manual*, Section 500.