



International Aerobatic Club Rules Committee

Recommendations
To The
IAC Board of Directors
For Approved Rule Changes
2018

*Submitted by:
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INTRODUCTION

Seven (7) rule proposals were received by the IAC Rules Committee prior to the published deadline of 1 July 2017. The Committee's evaluation of those proposals resulted in five (5) proposals approved by majority vote and two (2) proposals disapproved by majority vote.



The following pages contain the full text of the approved proposals including the rationale for the proposal as provided by the original submitter. The proposed changed or added rule book text is shown in red. Ancillary comments have been added to some of the recommended proposals where the Committee believes it would help the Board to understand the rationale for approving and encouraging the codification of that particular proposal.

For the sake of transparency, the two (2) proposals not approved by the RC are listed in an abbreviated form as an appendix to this report along with a capsule summary of the reasons for rejection.

The Rules Committee is confident that adoption of the approved proposals will improve the quality, safety, and efficiency of IAC competition and urges to Board to approve all rule change proposals as delineated in the following pages.

The new version of the IAC Official Contest Rules incorporating changes approved by the Board takes effect on 1 January 2018.

PROPOSAL 2018-01

Affected Rule(s): 5.6.8

Subject: Giving Chief Judge Authority to Penalize Low Altitude Infringements
During The Four Minute Freestyle



Background

There is a long-running history of pilots going below the lower altitude limits when flying the Four Minute Freestyle event and not being penalized for those errors by a majority of the grading judges. In 2016, rule 5.6.6 was modified to emphasize the need for compliance with the published altitude limits. Unfortunately, the new rule has not stopped unpenalized low-altitude flying during the Four Minute Freestyle.

The reason or reasons for judges not making LOW calls during the Four Minute Freestyle is unknown, but simply being caught up in the “wow factor” of the performance and not maintaining overall situational awareness is the most likely culprit. The Chief Judge, however, is charged with maintaining awareness of the entire performance zone and generally is not strictly focused on the competing aircraft. This gives the Chief Judge a much better perspective of the aircraft’s position relative to the altitude limits. As Four Minute Chief Judges are chosen from the very most experienced judges present, these individuals certainly have the experience to make LOW and LOW-LOW calls. Chief Judges are already given unilateral authority to call many other penalties and adding the ability to make LOW calls during the Four Minute is not an unreasonable extension of those duties. Additionally, rule 5.6.8(c) already requires the Chief to call an immediate cessation of flying along with a DQ if a LOW LOW is observed. Clearly, to ensure safety, the Chief Judge must immediately make that decision without waiting to see if the grading judges are in concurrence.

With the risk of low altitude flying at its greatest during the Four Minute Freestyle, giving the Chief Judge unilateral power to make low altitude calls, while maintaining the grading judges ability to do the same, provides two levels of oversight and will greatly enhance the safety of this event.

Proposed Change

5.6.8 Penalties

(c) Altitude Infringements

The Upper and Lower altitude limits given in 4.11.3 for the Unlimited category (power/glider) will be **strictly** enforced. Pilots **observed by either a majority of the grading judges, or by the Chief Judge**, to be between 1 and 50 meters (power) or between 1 and 100 meters (gliders) below the lower altitude limit (**LOW**) will be penalized 250 points for each excursion below the prescribed limit. If at any time a pilot descends more than 50 meters (power) or 100 meters (glider) below their Lower altitude limit (LOW-LOW), the Chief Judge will immediately call a break, tell the pilot to land, and check the “Disqualification” box on the *Four Minute Freestyle Penalty Worksheet*. Pilots **noted by a majority of the grading judges** to be above the Upper Limit specified in 4.11.3 (power or glider) will be penalized 50 points for each violation.

Committee’s Comments

This is first and foremost a safety proposal as some Four Minute Freestyle pilots are attempting to increase the “wow” factor of their flight by flying at and below the bottom of the performance zone because they see no penalty when doing so. By adding a second layer of oversight (i.e., the Chief Judge), this new rule will bring that behavior to a stop.

PROPOSAL 2018-02

Affected Rule(s): 5.8.1 and 5.8.2

Subject: Presentation K-Factors



Background

It has long been recognized that the art of aerobatic competition is much more than executing each figure with technical precision. To be the best aerobatic pilot, one has to present those technically perfect figures within a three-dimensional space such that the figures are well distributed within that space and can be observed by the judges in an advantageous manner (Rule 8.6). The winning pilot should be the one who can both fly the figures with the precision demanded by the judging criteria and best present those technically excellent figures to the judges.

Unfortunately, the current K-factors for the Presentation mark are such a small part of the overall score that many pilots, and many judges, treat Presentation as an afterthought, if at all. It is not unusual to observe a competitor fly an entire sequence almost directly over the judges, or so high and far in the box that the airplane is difficult to see, or with every figure crammed into the downwind end of the box. Yet, those very same pilots will receive marks of 7 to 9 for their Presentation. Why should a pilot even bother with good presentation when the marks are high and the K is low?

The goal of this proposal to raise the K-factor for Presentation to the point where indeed it does pay to devote time and attention to good presentation and for judges to treat the Presentation mark with the same attention to detail as they do to the individual figures.

So, how high should the Presentation K-factor be raised? Like the Aresti figures whose K-factors are derived by a rigorous process, Presentation K's should not be arbitrary, but rather have a definable process behind their derivation as well. There are no doubt many sensible approaches to this question, but the one taken by this proposal is that the Presentation mark should provide roughly the same point potential (K-Factor x 10) as would one additional figure in the sequence. What pilot or judge would choose to ignore or treat with nonchalance one entire figure in the sequence? To arrive at a reasonable estimate of what this "phantom" figure would count for in each category, data from past IAC Knowns was analyzed for both power and glider. Because of "category creep," a separate 'Average K per Figure' was also calculated for just the last 5 years to ascertain whether there have been recent and significant changes to the average K per figure being flown in the Knowns.

Power	Years of Data	Avg K per Figure	Avg K/Figure Last 5 yrs
Primary	3 Sequences	10	10
Sportsman	35	12	13
Intermediate	35	15	18
Advanced	21	26	30
Unlimited	21	36	44

The second part of the process involves the realization that when flying Knowns and Unknowns, the pilot has far less control over some aspects of Presentations than when flying a Free Program. If a Known or Unknown is designed to put nearly every figure in the upwind end of the box, there isn't much the pilot can do to distribute the figures as required by the criteria in 8.6. A Free Program on the other hand, can and should be designed to match the pilot's abilities and their airplane's

characteristics: fast or slow, large or small, etc. A Free Program designed to maximize Presentation would then receive “bonus” points, providing further incentive to the pilots to design and fly well-thought out Frees. The fact that Free Programs are more amenable to good presentation has been recognized in the IAC for a long time as shown by the two sets of K-factors currently listed for power Unlimited and glider Advanced and Unlimited.

The results from the process described above is shown in the “Proposed Change” below. The average Primary figure K of 10K was deemed too close to the Sportsman 12K and was accordingly reduced to 8K. For glider categories, it turns out that the ‘Average K per Figure” was already in line with the current Presentation K-factors, so the only change for gliders was to provide the same percentage of “bonus” points for the Intermediate glider Free Program as was applied to power.

Proposed Change

5.8.1 Power Programs

Category Presentation coefficients for Power programs are as follows:

Primary	8 K
Sportsman	12 K
Intermediate	15 K (Known and Unknown) 20 K (Free)
Advanced	30 K (Known and Unknown) 40 K (Free)
Unlimited	40 K (Known and Unknown) 50 K (Free)

5.8.2 Glider Programs

Category Presentation coefficients for Glider programs are as follows:

Sportsman	15 K
Intermediate	15 K (Known and Unknown) 20 K (Free)
Advanced	25 K (Known and Unknown) 35 K (Free)
Unlimited	25 K (Known and Unknown) 35 K (Free)

Committee’s Comments

We are seeing a loss of a crucial component of aerobatic competition, Presentation, as both judges and pilots continue to ignore Presentation criteria and the appropriate marks to accompany the observed presentation. Some judges are known to give 8.5 marks to all pilots regardless. Others even give 10’s to every pilot simply because they don’t “believe” in Presentation. The ability to precisely fly Aresti figures continues to become better and better with the differences between individual pilot’s ability to meet criteria often exceedingly small. By increasing the Presentation K to the level of an “average” figure, both pilots and judges will be forced into treating Presentation as a serious component of their competition flight.

PROPOSAL 2018-03

Affected Rule(s): 1.5

Subject: Chief Judge Authority to Terminate Flight



Background

There here have been instances where a Chief Judge should have called off a competitor for being in a situation they perceived as dangerous, typically low and slow and out of energy, but the Chief Judge felt they had no specified authority, only the implied responsibility for “safety” given in 1.5. This change would grant specific authority to give that order and make unambiguous to all Chief Judges that terminating a flight for safety is within their purview.

Proposed Change

1.5 CHIEF JUDGE

Safety will be the primary consideration of the Chief Judge at all times. **The Chief Judge shall immediately terminate aerobatic flight at any time he/she determines a safety condition exists or may develop. (See 4.14)** There will be a Chief Judge for each category. A Chief Judge may serve in that capacity in more than one category. The Chief Judge will be responsible for the following:

PROPOSAL 2018-04

Affected Rule(s): 4.19.3

Subject: Wind Limits



Background

The “wind rule” has been revised a couple of times now, but is still misunderstood and misapplied by some contest officials. The goal of a wind limit is to provide a safe environment for pilots of all experience levels, but also not to force a contest to come to a halt because an occasional gust exceeds a certain velocity. Further, there continues to be debate over how the wind speed and direction is to be measured. The proposed wording requires the use of data from an official aviation weather source (METARs, AWOS, ATIS, etc.), but allows Jury oversight of wind conditions if for any reason none of those sources are available.

Proposed Change

4.19.3 Wind

Contest flight will not be conducted if the cross wind component for the active runway exceeds 20 knots or the **steady** wind velocity at the surface, **as reported by an official aviation weather outlet**, exceeds 25 knots from any direction. **In the event that no 'official' wind data are available (e.g., AWOS is inoperative), the Jury shall use the best data available to determine if contest flights can be safely conducted or not.**

PROPOSAL 2018-07

Affected Rule(s): 7.3.5

Subject: Conduct of Judge Conferences



Background

The genesis of this proposal is twofold: First, to align the rule with common sense. For example, there really is no need for the Chief Judge to hold the scoresheets during a discussion. In fact, knowing how they marked the figure in question and being able to read any comments they made on that figure will actually help the judge arrive at an informed decision. The second, and most important, reason is to address multiple reported instances where Chief Judges have taken it upon themselves to sway, or even dictate, the outcome of conferences. The change makes it abundantly clear that Chief Judges are there as facilitators and must not in any way influence the final decision of any judge.

Proposed Change

7.3.5 Conduct of Judge Conferences

The Chief Judge may call a conference of judges whenever there is doubt concerning a matter-of-fact, as indicated by a mix of numeric and HZ marks. Conferences may not be called when the opinion of the judge panel is unanimous, when only matters-of-perception are involved, or there is a mix of zeros and Averages only. Conferences are not mandatory in every case of conflict. If possible, any conferences should be held at the next possible break such that the issue may be discussed without any pilot holding in the air or with the engine running on the ground.

The conduct of judge conferences will be as follows:

- (a) The Chief Judge shall begin the conference by assembling the panel of judges. To reduce possible extraneous influence, only the grading judges should attend, not Assistants or Recorders.
- (b) The Chief Judge shall inform the judges panel of the matter-of-fact(s) to be discussed. Under no circumstances will there be any discussion of matters-of-perception. The four possible matters-of-perception are:
 - (1) Whether or not a snap roll autorotated
 - (2) Whether or not a spin autorotated
 - (3) Whether a tail slide slid the required distance (power and glider)
 - (4) Whether or not a rolling turn contained a snap roll
- (c) The Chief Judge shall return the scoresheets (Form A) to their respective judge.
- (d) The judges shall confer with each other to their individual satisfaction. The Chief Judge may assist the grading Judges to ascertain the facts, but shall remain a neutral arbiter and will not indicate an opinion regarding the proper mark or any other aspect of a competitor's flight during a flight program and in no way attempt to influence the judges with his or her own opinion.
- (e) Following discussion, each judge shall take one of the following actions:
 - (1) They may leave their scoresheet as originally marked.

- (2) They may revise their mark to an HZ. For this option, the judge must cross out the original mark, leaving it legible, and write "HZ" with their initials next to the new mark.
- (3) They may change an HZ mark to a "C" (Conference Average), to signify the grade resulted from a conference discussion of the facts. For this option, the judge must cross out the HZ, leaving it legible, and write "C" with their initials next to the new mark.

No other type of change is allowed.

- (f) The Conference ends when the judges have made their decisions or the Chief Judge determines that the discussion has run its course.
- (g) The Chief Judge will collect and review each scoresheet for compliance with the rules stated above prior to turning the forms over to the Scoring Director.

Committee's Comments

Although large parts of this proposal are functionally unchanged from the current rule, the entire proposed rule is "red" because all of the wording and organization has been refined. As stated in the background, there have been multiple instances reported where Chief Judges with the experience to know better have actually coerced judges and even dictated the outcome of conferences. This change puts the prohibition to interfere with the judges' decision in black and white to make it abundantly clear those actions are not to be tolerated. From an administrative viewpoint, the current rule has been around for some time with minor changes made over the years and simply needed a rewrite.

Appendix

The following Rule Proposals did not achieve a consensus approval of the IAC Rules Committee. The proposal number, subject, and an abbreviated summary of why the proposal was rejected are provided. The summaries are a compilation of pertinent comments taken from the proposal analyses of one or more RC members and are by no means inclusive of the full evaluations. This appendix is provided for information only and is not subject to Board action.

PROPOSAL 2018-05

Subject: Deductions for Looping Lines

NOT APPROVED:

This proposal addressed some confusion over the deductions to be made on looping lines which resulted from two, somewhat redundant rules addressing the same criteria. It was determined that by simply deleting one of the redundant rules, there was no loss to the criteria and the confusion factor was eliminated. Therefore, this proposal became moot.

PROPOSAL 2018-06

Subject: Judge's Currency Requirements

NOT APPROVED:

This proposal addressed the real issue of declining number of judges at IAC contests. However, the approach it thought would increase the number of judges eliminated the need to obtain any form of currency beyond taking the annual R&C Exam. For judging, like flying, currency is the highest priority for quality performance. The Committee felt that reducing the currency requirements is a path towards lower quality without necessarily even increasing the numbers.

Although this proposal is not the solution, the Committee did recommend that the issue of increasing the number of judges, while maintaining a high level of competence, be put on the Board's Fall agenda.