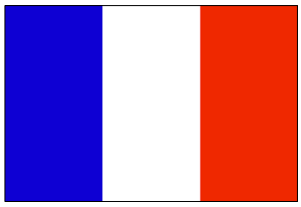
AGENDA ITEM 11.1

CIVA RULES & JUDGING SUB-COMMITTEES REPORT

Michael R. Heuer, Chairman, Rules
John Gaillard, Chairman, Judging

Recommendations for Rules Changes for the Year 2010

PROPOSALS OF FRANCE



CIVA President's Note: French Proposals #1 through 5 were referred to the CIVA Catalogue Sub-Committee. The Catalogue Sub-Committee has made its own report and recommendations to CIVA in a separate document.

French Proposal #6

Scoring system

Proposal

Task a CIVA working group to assess potential revisions to the scoring system with the objective that, for a given competitor, the overall scoring obtained in a programme does not depend on the scoring of other competitors: a prerequisite to widespread real-time display, which itself is a necessary step towards increased public visibility and media coverage.

Rationale

As shown by plenty of other sports popularized by the media, a paramount requirement to enthral the audience is a real-time scoring system: After each competitor's performance, a time or distance or number of points etc, is displayed and the audience immediately gets relative rankings.

If we want to make our sport more appealing to the public and media, it is therefore crucial to display real-time scoring e.g. on giant screens at the contest site. But here we face a fundamental credibility issue in our sport: In which other sport can we have a situation where competitor A is said to have performed better than competitor B but then after competitor C performed, finally no…wait…B did better than A ? This is not understandable for any public or media and we believe goes against the increased visibility we are looking for.[1]

Therefore, we believe a prerequisite to real-time display is the development of a scoring system whereby the number of points obtained by a given competitor is not subject to modifications after his/her performance (while still keeping fairness as a key requirement). We believe there are several ways to achieve that, and would like to promote the idea that a working group be tasked by CIVA to come up with an agreed solution.

Note: See footnote at the bottom of this page.

The Sub-Committees agreed to the creation of a Working Group to study this proposal in detail. The Working Group is to be appointed by the President of CIVA and will report to plenary.

Unlimited

French Proposal #8

Pilots to fly Programme 4

Ref. current rules 1.2.4.1.a.i / iv / v / vi, 1.3.1.1.d and 4.3.1.1

Proposal

Amend 1.3.1.1.d as follows:

=>
1.3.1.1.d) The decision on the number of competitors who will fly the Final Freestyle Programme will be made by the International Jury in consultation with the organisers, but will be:

1. not less than 8 more than the number of additional pilots entered by NACs for this programme only.

[1] The current scoring system has been designed to maximize fairness, and we certainly do not challenge the current system in this respect. However we believe another requirement -- credibility of our sport – must now come into play in addition to fairness. What we suggest is a rebalance between fairness and credibility.

2. not more than 20 or the minimum number determined in 1 above, whichever is the largest.
   Priority in selection will be given to those additional pilots entered by NACs for this programme only. For the remaining pilots, selection will be made according to the following method: Two lists will be created based on rankings after the programmes completed before Programme 4. The lists will be cut at two thirds of the overall rankings.
   1. List A: Pilots from other NACs than those entered for this programme only, in order of ranking
   2. List B: Pilots from the same NACs as those entered for this programme only, in order of ranking

   Only pilots in those lists are eligible to fly Programme 4. Priority in selection for those pilots will then be: Pilot 1 of list A – Pilot 1 of list B – Pilot 2 of list A – Pilot 2 of list B – and so on until the predetermined total number of pilots for this programme is reached.

Rationale

- Consistency: Making sure the method to determine pilots to fly Programme 4 could not lead to situations where e.g. the newly nominated World Champion could not fly Programme 4 – a substantial flaw in current rules.
- Safety: Introducing an eligibility cut for pilots competing in Programmes Q to 3 (parallel to review of qualification for pilots entered for Programme 4 only).

The Sub-Committees did not take a decision on this proposal and referred it to plenary. Since the rules regarding pilot eligibility for Programme 4 are new this year, it was agreed CIVA should have the experience of a WAC using these new rules before taking a decision. The International Jury will draft "urgent proposals" for 2010 if necessary.

PROPOSALS OF GERMANY

CIVA President's Note: Proposals were submitted by Germany to change Part 2 of Section 6 (Glider Aerobatics). However, since the issues raised in these proposals concern judging, they were referred to the CIVA Judging Sub-Committee. Changes such as those proposed by Germany would have impact in both Power and Glider Aerobatics.

Germany proposes to amend the following paragraphs of Sporting Code 6, Part 2:

German Proposal #4

7.1.1.9 New wording:

In case of a vote among the Judges on the question of penalization, all judges shall vote irrespective of nationality.

Rationale

Rules are different between power and glider for no obvious reason.

This proposal is recommended by Sub-Committees.

PROPOSALS OF HUNGARY

CIVA President's Note: Proposals were submitted by Hungary to change Part 2 of Section 6 (Glider Aerobatics) and were "urgent proposals" after EGAC 2008. However, since these issues concern the International Jury, they were referred to the CIVA Rules Sub-Committee. Proposals that strictly concern Gliders will be referred to the CIVA Glider Aerobatics Sub-Committee. Changes to Jury rules and procedures such as those proposed by Hungary would have impact in both Power and Glider Aerobatics.

Hungarian Proposal #1

1.4.1. The International Jury (Sporting Code 6 Part Two)

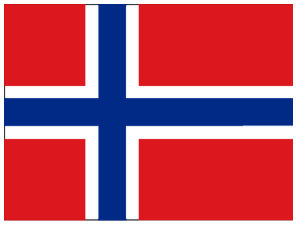
1.4.1.5. When the International Jury is taking a decision which concerns the team or a competitor of the same aero club as a member of the International Jury that member of the Jury shall *NOT* abstain from voting.

Rationale

According to the Sporting Code Section 6 Part Two 1.4.1.3. At least three members of the International Jury must be available to hear appeals or protests submitted by competitors. It means the minimum required Jury members are the maximum available Jury members as well.

The proposal is recommended by Sub-Committees. However, the wording should be changed slightly to indicate that while a Jury member can always abstain from voting at his or her discretion, it is not required if a decision concerns a competitor or team from his home country. The General Section of Sporting Code does not require Jury members to abstain as all Jury members are considered international officials.

PROPOSALS FROM NORWAY



LIST OF FIGURES FOR PROGRAMMES 2 AND 3

These proposals are made to counteract the worrisome development of Advanced Unknown sequences. Proposed added text is shown in italic. The submission contains five individual proposals.

Norwegian Proposal #2

9.10.1.5 Advanced and Yak-52: Maximum 360 degrees roll rotation on 7.5.1. ~~*Maximum 180 degrees roll rotation on 7.6.1. and 7.6.2.*~~ *(Note: 7.6.1 and 7.6.2 not allowed in Yak-52)*

Rationale

Maintaining figure geometry with 1 ½ or 2 rolls puts lower performance and lower roll rate aircraft at a disadvantage.

The proposal is recommended by Sub-Committees with the deletion of text as indicated above by the strike-through.

Norwegian Proposal #4

9.15 Family 8.31 to 8.40

*9.15.1.6 Advanced: Maximum of 9.1.4.**4** on descending line on 8.37.4.*

Rationale

Aircraft with low roll rate are at a disadvantage due to possible excessive speed build-up.

The proposal is recommended by Sub-Committees, however, the Catalogue number was changed to 9.1.4.4 above as the number in the proposal was incorrect.

Note: Norwegian Proposal #5 was not recommended as it was incorrect. See 9.15.1.2.

Norwegian Proposal #6

9.16 Family 8.41 to 8.52

9.16.1.4 Advanced: Maximum 360 degrees roll rotation at top of ¾ loop in column 1 and 2.

Rationale

Maintaining figure geometry with 2 rolls puts lower performance and lower roll rate aircraft at a disadvantage.

This proposal is recommended by Sub-Committee.

PROPOSALS OF SOUTH AFRICA

South African Proposal #1

2.1.2.1. Representation on the Board of Judges

At World and Continental Championships, Judges will be invited to apply for **selection** irrespective of their Nationality, based on their previous RI performance data as recorded in the CIVA Judges Performance Database (JPD).

New Judge applications for those without International RI performance data can be made by NACs or individuals, but must be accompanied by current RI data produced by the FPS scoring system at a National Competition (not necessarily in their own country).

These nominations and applications must be made by the deadline published by the President of CIVA in the year in which the Championships are to be held. Judges are subsequently selected in accordance with procedures established by CIVA. The selection process includes a ranking of Judges by the RI's in the CIVA Judges Performance Database (JPD) from past championships.

Up to seven Judges selected by the CIVA Judging Sub-Committee are considered to be CIVA Judges where no entry fees may be levelled by the Organisers of a competition, an additional three Judges may also be allowed to participate and could be subject to an entry fee by Contest Organisers in exceptional circumstances.

A maximum of two Judges per Aero Club (Nationality) may be utilised at a contest.

Final selection will be ratified by the Bureau of CIVA.

Rationale

This proposal reflects the changes agreed in principle at the last CIVA meeting and what was put into effect, some of the detail is now refined and clarified, but the principle of creating a pool of Judges independent from Aero Clubs remains.

The proposal is recommended by Sub-Committee with the change of the word "nomination" in the first sentence to "selection" as indicated above.

South African Proposal #3

2.1.3.1. An additional paragraph to be added as follows: -

A Judge may not be deleted from the International Judges list, who has valid & acceptable JPD data listed in the previous five years. A Judge applying directly to CIVA for inclusion on the International Judges List and who is considered by the CIVA Judging Sub-Committee to meet the requirements based on the criteria set out in 2.1.2.1. shall be added to the list.

Should a Judge who has existing acceptable JPD or who is new applicant and is not supported by their home Aero Club, such Judges will be listed in the International Judges List, in an International Section, their Nationality will be shown in brackets after the name.

Rationale

To retain Judges who are performing well, regardless of any other factors, thus achieving the aim of creating a pool of independent Judges.

The proposal is recommended by Sub-Committees.

South African Proposal #4

1.3.1.2. Programmes "Y52"

Delete this entire section

Rationale

There is no reason why Y52 should be different to any other category, CIVA over the years has attempted to standardise its regulations, and this is an exception. If the reason to include the compulsory is valid, then it should apply to all categories.

1.3.1.1.

Add Y52

Rationale already set out in 1.3.1.2. above.

The proposal is recommended by Sub-Committees.

South African Proposal #5

Add paragraph under Section 6.4.

Grading, 6.4.1.3.

Should a competitor fly a figure so far away from the Judges, that the exact detail is not apparent to downgrade, other than there being no case for either a "Hard Zero" (all basic elements present) or a "Soft Zero" due to heading variations (over 45 degrees variance), then the maximum grade in these circumstances should be 5.0.

Should the Judge consider that the detail of the figure couldn't be determined at all, a Soft Zero should be applied to the figure.

Rationale:

The entire CIVA Criteria for Judging Aerobatic Figures is based on downgrades with deductions for imperfections. Other than the criteria for marking either Hard of Soft Zero, no direction is given to the Judge other than for deductions based on the extent of imperfections. As a consequence Judges apply their own criteria in these circumstances and no consistency is achieved. Rarely would a Judge reason that as no imperfections could be seen, no deductions can be made, thus resulting in a very high grading for a figure. Each Judge in reality makes a judgement call without any consistency with other Judges. This change attempts to bring some consistency to these situations, which is essential with the emphasis being placed on RI performance.

The proposal is recommended by Sub-Committees.

South African Proposal #6

The introduction of an Intermediate Class World Championship

Rationale

There are many times more pilots Worldwide flying aerobatics at the Intermediate level or equivalent, than at Advanced or Unlimited, most of these pilots will not ever be able to move up the higher classes for a number of reasons, including the cost of obtaining and running an aircraft suitable for high performance aerobatics and the time and expense needed to train to such a high level, these pilots are often referred to as the "grass roots" of aerobatics.

However there is no reason why such pilots should not be given the opportunity to represent their countries and compete with similar pilots internationally. The intention with this class is to limit in the Regulations the possibilities of designing sequences requiring high performance aerobatic aircraft with all the associated cost & time. There is no intention to limit aircraft, other than being piston engined, by making the possible sequences possible to fly well with lower performance aircraft, the winners will be determined by the skill of the pilot. With there being no advantage in having a high performance aircraft, there is no need to make any restrictions, thus simplifying the running of contests and eliminating controversy and opening up the proposed championship to an extremely wide range of aerobatic aircraft.

This class would open up the possibilities of competing in aircraft that have been considered obsolete in the Advanced and Unlimited classes, virtually all types of Pitts Specials, Zlin 50s, Yak 55 etc..

The availability of aircraft would increase enormously, making it feasible for visiting aerobatic pilots to find types they are used to operating in their own countries and reducing the need to transfer aircraft to a contest site.

Pilot entry would be limited to those not currently competing at the Unlimited and Advanced level internationally, the intention is to create a new group of pilots and widen the appeal of International Aerobatics.

Gender would follow the Unlimited Class model, with separate rankings for Male & Female pilots and a single overall ranking as well. This should be viewed as an encouragement for female entrants to participate, it is noted that both in the Advanced and Yak52 categories female entrants are currently virtually nonexistent currently.

Similarly a new pool of Judges & Officials could be created, so not to overload those currently involved at the higher levels, again aerobatics could only gain from such a move, the possibilities of extending the Judging pool.

CIVA would also gain financially by the fact that a new stream of sanction fees would be made available.

CIVA – Intermediate Class - Regulation changes

The Intermediate Regulations are based on the FAI Sporting Code, Section 6, Powered Aircraft (All Categories) - Version 2009 - 1

Listed below are the required changes to introduce an Intermediate Class.

1. - Change 1.2.2.4. To read - Piston-engined aircraft – Intermediate Class “I”
2. - Renumber existing 1.2.2.4. To read 1.2.2.5.
3. - 1.2.3.2. Change first line to – “A”, Y52 and “I”
4. - 1.2.4.1. b) Change first line to – “A”, Y52 and “I”

5. - 1.2.4.2. b) Change first line to – "A", Y52 and "I"
6. - 1.2.4.3. Add new paragraph b)

> Pilots who have flown in an Unlimited World or Continental Championships for powered aircraft, during the year of an Intermediate contest or in the preceding two years, will not be eligible to fly in the Intermediate contest. In addition Pilots who have flown in an Advanced World or Continental Championships for powered aircraft, during the year of an Intermediate contest or in the preceding two years, will only be eligible to fly in the Intermediate contest if they gained less than 60% of the maximum possible marks across the sequences they flew in the last Advanced contest.

7. - 1.3.1.1. Change heading to read – Programmes "U", "A" and "I"
8. - 1.3.1.6. Change heading to read – Champions and Winners "U", "A" and "I"
9. - 1.3.2.2. Change to – "A" and "I"
10. - 4.2.2.2. e) Change to "A", "Y52" and "I"
11. - 4.2.2.5. b) Change Yak 52 to "Yak 52 & Intermediate"
12. - 4.2.2.6. a) Add "I" after "Y52"
13. - 4.2.4.1. Change Yak 52 to "Yak52 & Intermediate"
14. - 4.3.1.8. Add box for Intermediate, maximum figures 12, Maximum total K 200
15. - 4.3.1.13 Versatility – Make "I" the same as "Y52"
16. - 4.3.2.1 Add box for Intermediate –
    - Programme 2 Minimum K 12 Maximum K 20
    - Programme 3 Minimum K 12 Maximum K 25
17. – 4.5.4. Intermediate Contests

> 4.5.4.1. World Championships
>
> a) The Men's and Women's World Champions respectively will be awarded the Gold Medal and Diploma of the FAI. The second and third placings will be awarded an FAI Silver and Bronze Medal respectively and Diplomas of the FAI.
> b) The overall World Intermediate Champions regardless of gender will be awarded the (to be established).
> c) The Women's World Champion will be awarded the (to be established)

Create new heading under Representation on the Board of Judges

2.2.2 (a) Intermediate Class Judges

Judges wishing to officiate at an Intermediate World Championships must be selected as per paragraph 2.1.2.1. of the Regulations or from a supplementary list of Judges specifically established for the "Intermediate Class" as follows: -

New Judge applications for those without RI performance data can be made by NACs or individuals, but must be accompanied by current RI data produced by the FPS scoring system

at a National Competition (not necessarily in their own country) for the Intermediate Class (or equivalent), once established RI data will be kept on a JPD specific to the Intermediate Class.

These nominations and applications must be made by the deadline published by the President of CIVA in the year in which the Championships are to be held. Judges are subsequently selected in accordance with procedures established by CIVA. The selection process includes a ranking of Judges by the RI's in the CIVA Judges Performance Database (JPD) from past championships.

Up to seven Judges with previous International RI data, selected by CIVA are considered to be CIVA Judges where no entry fees may be levelled by the Organisers of a competition, an additional three Judges may also be allowed to participate and could be subject to an entry fee by Contest Organisers in exceptional circumstances.

A maximum of two Judges per Aero Club (Nationality) may be utilised at a contest.

Final selection will be ratified by the Bureau of CIVA.

The proposal is recommended by Sub-Committees for further study by a Working Group to be appointed by the CIVA President. The Working Group will report to plenary.

PROPOSALS OF SPAIN

Powered Aerobatics – Unlimited

Spanish Proposal #2

New figures for Unknown programmes.

Proposal: Permit the following rotations in Unknown programmes:

Continuous rolls:	9.1.2.3, 9.1.4.3
Four point rolls:	9.4.2.3, 9.4.4.3
Eight point rolls:	9.8.2.1, 9.8.3.1, 9.8.4.1
Positive flick rolls:	9.9.2.3, 9.9.3.3, 9.9.4.3, 9.9.7.3, 9.9.8.3, 9.9.9.3
Negative flick rolls:	9.10.2.3, 9.10.3.3, 9.10.4.3, 9.10.7.3, 9.10.8.3, 9.10.9.3

Rationale

Safety is not affected, and would increase the versatility for unknown programmes.

Spanish Proposal #3

Delete the 9.2.2.1 rule: Unlinked and opposite rolls permitted only in straight horizontal lines in Unknown programmes.

The rule says: "9.2.2.1: Unlinked and opposite rolls permitted only in straight horizontal lines".

Proposal: Unlinked and opposite rolls permitted in the following lines, as long as neither of the total extent of rotation nor the number of stops exceed the limits shown in the table below:

Line direction	Total rotation	stops
Vertical up	450º	4
Vertical down	360º	3
45º Up	540º	3
45º Down	540º	3

Any combination of flick rolls and aileron rolls are permitted as long as the limitations of the previous table are not exceeded, and:

- In vertical lines upward, and 45º lines up, **an** aileron roll must be flown first, then **a** flick or other aileron roll.
- In vertical lines downward, and 45º lines down, **a** flick roll must be flown first, then **an** aileron roll.

Rationale

Safety is not affected, and would increase the versatility for unknown programmes.

Spanish Proposals #2 and #3 were related and thus were considered as a package by the Sub-Sub-Committees and are recommended. Minor wording changes were made for clarity in the bulleted sentences above and is indicated in bold.

PROPOSALS OF THE UNITED KINGDOM

Powered Aerobatics – Unlimited

CIVA President's Note: British Proposals are not numbered as many are editorial in nature and concern the same subject.

Item	***Rationale***
1.2.6.1 A valid aerobatic certificate of airworthiness or equivalent document issued by the competent aviation authority of the aircraft's state of registration must be produced to the organisers for every contest aircraft.	Previously worded as "participant's country", which may not be the case.
The proposal is recommended by Sub-Committees.	
1.3.1.1.; 1.3.1.2. Programme 3: The Free Unknown Programme	Update name.
The proposal is recommended by Sub-Committees.	
1.4.1.7. a) If remedial action is not taken, the International Jury has the power to declare that the requirements of a World Championship have not been fulfilled in accordance with the rules ~~and that the event has only the status of a World Competition~~. If this latter action is taken, the International Jury shall prepare a full	Delete phrase shown. There is no reference elsewhere as to what a "World Competition" is.

report for submission to the next meeting of CIVA at which their decision shall either be endorsed or reversed.

The proposal is recommended by Sub-Committees.

1.4.4 Technical Commission

1.4.4.1. The organiser shall appoint a suitably-experienced Licenced Aircraft Engineer to be the Head of the Technical Commission. Up to two other members of the commission will be selected by the International Jury from suitably qualified technicians attending the event as official team members. 1.4.4.2. Delete 1.4.4.3. Renumber as 1.4.4.2. 1.4.4.4. Renumber as 1.4.4.3.	Amendments to reflect current practice.

The proposal is recommended by Sub-Committees.

3.1.3.3.

Control of the Unknown ~~Compulsory~~ Programmes…	Terminology to reflect introduction of Free Unknown.

The proposal is recommended by Sub-Committees.

4.2.2.1.

Flights will be carried out between the hours of sunrise and sunset at the place of competition. ~~These times may be extended by the International Jury, if required, to a maximum of 20 minutes after sunset. If the visibility deteriorates within the stated time limits the International Jury will decide upon the start and finish of the competition.~~	More practical than 30 minutes either side of sunrise and sunset.

The proposal is recommended by Sub-Committees with the last two sentences struck. Sub-Committees took the decision that flying should not take place before sunrise or after sunset.	

4.3.2.1.

For the Unknown ~~Compulsory~~ Programmes…

4.3.2.2.

… for each Unknown ~~Compulsory~~ Programme

Terminology to reflect introduction of Free Unknown.

The proposal is recommended by Sub-Committees.

Completion of Programmes/Order of Flight

1.3.1.1.b); 1.3.1.2.b)

Programme Q will be a qualification and training flight. The final results of this programme will not count toward the Championships unless, due to bad weather, Programme 2 has not been completed by all pilots.

The result of this change is that the First Unknown is not considered valid unless flown by all pilots. There should be no change of group flying orders for the first unknown.

The proposal is recommended by Sub-Committees.

4.1.7.1.

The sequence of flights for Programmes Q and 4 ("U" only) of Championships and International Competitions will be determined by lot 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 that competitor's team may do so. For Programmes 1, 2 and 3, the drawing of lots within

Put all details about drawing of lots/randomisation into the same paragraph.

each group may be made by a CIVA-approved randomising programme, ~~if one is available~~, under the supervision of the International Jury.

The proposal is recommended by Sub-Committees.

4.1.7.2.

In Programmes 1, 2, and 3, the competitors will be divided into three equal groups. If the number of competitors is not a complete multiple of three, the highest ranking group will be enlarged to include the excess pilots. The groups will be based on provisional accumulated overall results after the previous programmes. The results of Programme Q will only be used with respect to Programme 1. ~~The order of flight in each group will be determined by drawing of lots as described in paragraph 4.1.7.1.~~ The flight order of the groups will be the reverse of their rank. (The flights start with the group of the lowest scores). Notwithstanding this rule, if there is a shortage of time to complete Programme 3, flying can be started with the middle group, followed by the highest ranking group. The lowest ranking group and any H/C pilots would fly only if time permits. The results of the lowest ranking group would only be included in the overall results if all pilots in the group complete the programme.

Programme 3 will not be included in the results unless flown by the two top groups. Thus Group 2 (middle) can fly before Group 1 (highest). If time permits, Group 3 (lowest) and H/C pilots may fly after Group 1, and if the group is completed the results will be used to improve the reliability of the Fair Play System by virtue of the larger data set.

The proposal is recommended by Sub-Committees.

Permitted Breaks

4.2.2.6. d) [new]

In the event that a pilot interrupts the sequence after a figure is flown incorrectly, with completion on the wrong heading or in the wrong attitude, the break will always be penalised. Following this, a subsequent interruption may be considered a

Clarifies whether a break is free or should be penalised when errors are made in the sequence.

permitted break if it is taken after a correctly-flown figure.

The proposal is recommended by Sub-Committees.

PROPOSALS OF THE UNITED STATES

USA Proposal #1

Eliminate Mandatory Roll Direction Following A Negative Spin

The USA proposes to amend the *FAI Sporting Code*, Section 6, Part 1, to add an exception for the mandatory direction of rotation, same or opposite, for a roll, aileron or flick, when following a negative (inverted) spin.

Rationale

Section 6.8.21.4 of the *FAI Sporting Code* specifies the drawing conventions for depicting when two rotational elements (two rolls or a spin-roll combination) must be flown in the same or opposite direction. The rule is very clear and easy to both judge and understand, until we combine inverted (negative) spins with either an aileron or flick roll element.

When an inverted spin is in progress, it, like all spins, is composed of both a yawing and rolling element. The direction of the spin is always in the direction of the yaw element. This is an aerodynamic fact. In an upright (positive) spin, the pilot sees both the yaw and roll in the same direction, and so do aerobatic judges. However, in an inverted spin the pilot sees the yaw in one direction and the roll in the opposite direction. So in the case of an inverted spin entered using the right rudder, the pilot will see the nose moving to the right and the aircraft rolling left. This illusion is created because the pilot is sitting on the 'bottom' of his/her aircraft. It is this very illusion that has contributed to fatalities related to negative spins. In the right-rudder, inverted spin described above, the judges, however, do not see a right-hand spin, they see only the rolling part of the spin, and that is to the left -- a spin that looks very similar to the upright spin where yaw and roll are in the same direction. It is this direction of roll that all judges use to determine the direction of rotation of the spin, which is in turn used to determine whether the following roll element is flown in the proper direction, same or opposite.

Example: A sequence is drawn showing a one-turn inverted spin followed by a one-turn, opposite direction roll. The pilot enters the inverted spin with right rudder. The judges will perceive a left-hand rotation (roll) in the spin. As the following roll element is drawn 'opposite', the judges will expect to see a right-hand roll element. But that is not technically correct as the pilot is really in a right-hand (direction of yaw) inverted spin. If the pilot correctly rolled to the left, the figure would receive a zero from the judging line.

In addition to judge/pilot confusion, there are safety implications as well. When inverted spins are combined with a roll element, there is an element of confusion for the judges and

pilots alike. Pilots are educated that the spin is always in the direction of yaw, and that this yaw requires opposite rudder for recovery. If a pilot is made to feel, as illustrated in the previous example, that he was in a left-hand spin (direction of roll versus direction of yaw) control inputs could be applied that would prevent the spin from recovering.

From a competition standpoint, there is no compelling reason to have the "same-opposite" rotation rule encompass the inverted spin element. The pilot, of course, will have to set the relative rotations of any spin-roll combination such that the exit direction is as required, but otherwise the rule only leads to convoluted judging issues. Indeed, the direction of yaw, and thus the directional rotation, of negative spins is very difficult to ascertain by those not directly involved with continued exposure to and experience with this illusion.

Proposed Change

With consideration to the foregoing, it is proposed to modify Section 6.8.21.4(e) of the *FAI Sporting Code* as follows:

Either aileron or flick rolls may follow spin elements (Family 9.11 or 9.12). When a spin and a roll are combined on the same vertical down line, they will always be unlinked; a roll following a positive spin (Family 9.11) must be flown in either the same or opposite direction as shown by the position of the tips of the symbols on the Form B or C; a roll following a negative spin (Family 9.12) may, at the option of the pilot, be flown in either the same or opposite direction as the spin regardless of the position of the tips of the symbols on the Form B or C. This optional rotation does not relieve the pilot of the requirement to exit the figure on the axis and in the direction prescribed by the Form B or C. Finally, any spin-roll combination may not exceed two rotational elements. (For example, it would be illegal to combine two opposite direction aileron rolls with a spin element.)

The proposal is not recommended by Sub-Committees, however, the following addition is proposed to 6.8.26.7.:

f) Direction of spin will be determined by roll component.

USA Proposal #2

Determining the Proper Catalogue Number and K-Factor for Flick Rolls Initiated from Knife Edge Flight

The USA proposes to amend the *Aresti Aerobatic Catalogue (Condensed)* to define a consistent methodology for choosing the proper catalogue number (and therefore K-factor) for flick rolls initiated from knife edge flight.

Rationale

Paragraphs 23 and 24 of Part 1 in the *Aresti Aerobatic Catalogue (Condensed)* define the procedure for choosing between the two possible K-factors for each flick roll. For flick rolls initiated from wings-level flight, choosing the proper catalogue number and K-factor equates to determining the angle-of-attack (positive or negative) at the point in the figure where the flick roll is initiated. For flick rolls initiated on vertical lines, paragraph 24 defines four distinct scenarios where the angle-of-attack is zero, and the flick roll is accorded the lower of the two possible K-factors. It has been noted, however, that the *Catalogue* provides no guidance for choosing the proper K-factor for flicks initiated from a 90-degree, or knife edge, bank angle.

Unlike aileron rolls, the *Catalogue* provides two possible K-factors for each flick roll because the goal is to reward a pilot with more points for flying a more difficult maneuver and to ensure the pilot is not given undeserved points for flying a less difficult maneuver. Without a defined methodology in place for knife edge flicks, it is possible for a pilot to claim the higher K-factor flick for a given figure, when in fact the flick being performed is the easier of the two choices. Should that pilot's choice of flick roll catalogue number be protested, or even questioned, neither judge nor Jury has a basis within the current Regulations or *Catalogue* to make an informed ruling on the correctness of that choice.

While knife edge flicks are admittedly not a common maneuver, they are permitted by the *Catalogue* and therefore pilots, judges, and the Jury must have a clearly defined methodology for determining which of the two possible flick rolls provides the correct K-factor for the difficulty level of the flick flown.

Background

In knife edge flight, one rudder (the "top" rudder) must be held to maintain the prescribed plane of flight, regardless of how short the knife edge flight segment is. A flick roll initiated by the same rudder used to maintain the knife edge flight is "easier" than a flick roll initiated using the opposite, or "bottom" rudder. To be completely fair then, a "top rudder" flick from knife edge flight should be accorded the lower of the two possible K-factors and the more difficult "bottom rudder" flick should be rewarded by using the higher of the two possible K-factors.

To determine whether a knife edge flick is a top or bottom rudder flick, three factors must be considered: (1) the degree of rotation of the roll which precedes the flick (to determine which rudder, left or right, will be the top rudder); (2) the relative direction of the two rolls (same or opposite); and (3), the type of flick (positive or negative), keeping in mind that positive flicks rotate in the same direction as the rudder used to initiate the flick and negative flicks rotate in a direction opposite to the rudder used to initiate the flick. The direction of rotation, left or right, chosen by the pilot for the first roll of the roll combination is *not* a factor in the determination.

Regardless of how seldom a particular figure or figure combination may occur in aerobatic competition, if that figure or figure combination is possible (i.e., legal) then it is essential for both pilots and contest officials to have the appropriate guidance in place to ensure the fairest possible competition. After all, all figures in Family 3, Family 7 vertical eights and S's, and many other figures found in the *Catalogue* are virtually never seen in competition, but we have the necessary design and judging criteria in place should those figures be encountered. It should be no different for knife edge flick rolls.

The following change to the *Aresti Aerobatic Catalogue, Part 1*, will ensure that all pilots, judges, and Juries will be "on the same page" when choosing the catalogue number and K-factor for any flick initiated from knife edge.

Proposed Change

Add a new paragraph number 25 to the *Aresti Aerobatic Catalogue (Condensed), Part 1*, as follows:

25. *In the case of flick rolls initiated from knife edge flight, the K-factor accorded to the manoeuvre shall be determined by whether the flick is initiated using top rudder or bottom rudder. When top rudder is used, the lower coefficient shall apply, while the higher coefficient shall apply to flicks initiated with bottom rudder.*

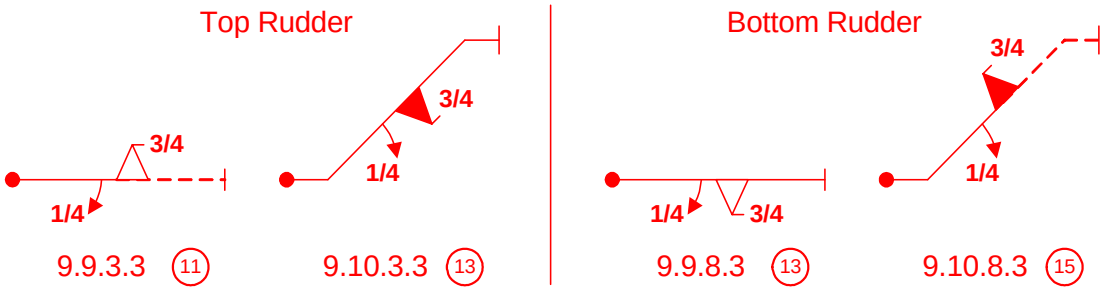


Figure 24

The paragraph and figure numbers following this addition would be renumbered appropriately.

The proposal is referred to the Catalogue Sub-Committee which will issue its own recommendations to plenary.

USA Proposal #3

Addition of 7.2.4 to the legal Advanced Unknown figures

The USA proposes to amend Section 9.10 of the *FAI Sporting Code*, Section 6, Part 1, to make the Aresti 7.2.4 figure legal for Advanced Programmes 2 & 3 (Unknowns).

Rationale

The 7.2.4 figure (inside half-loop down from inverted, exit inverted) is the *only* half-loop *not* currently allowed for Advanced Programmes. There is no reason or limitation (mechanical or physiological) that this particular half loop cannot or should not be performed in Advanced competition. Adding this figure to the Advanced Unknown catalogue makes figure selection easier by including all members of Sub-Family 7.1 – 7.4; increases the diversity of figures available to the Advanced Programmes 2 & 3; and potentially reduces the amount of heavy pushing required within an Unknown sequence.

Proposed Change

In Section 9.10, change the color of the 7.2.4 figure to red and add the "boxed-A" icon to indicate that this figure is legal in Programmes 2 & 3 for both the Unlimited and Advanced categories.

The proposal is recommended by Sub-Committees.

PROPOSALS OF THE PRESIDENT OF CIVA

CIVA President's Proposal #1

Section 6, Part 2, paragraph 2.1.3.1 a) states the following:

In order for a judge to have a "G" rating on the FAI International Judges List, he or she must have been an assistant judge for an entire FAI glider aerobatic championships. Judges must be rated as "G" or "P & G" but not "P" only. However, a judge with a "P" rating can be invited (at least two weeks prior to a championship) with the agreement of the CIVA Glider Aerobatics Sub-Committee.

This paragraph does not exist in Power regulations (Section 6, Part 1).

Proposal

To delete 2.1.3.1 a) in its entirety.

Rationale

The requirement for all Judges who wish to have a "G" rating on the FAI International Judges List to serve as an Assistant Judge at an FAI Championships is not reasonable. While this experience can be valuable, that fact is that many Judges already appear first on the international scene as Assistants. But to make this a requirement does not recognize the value of experience gained at national level and restricts the number of new Judge applicants severely.

This has resulted in a very small number of "G" Judges available for FAI Championships compared to Power. At this year's WGAC, only the minimum number of 7 Judges are participating despite new CIVA policy which permits both "CIVA selected" and "non-CIVA selected" Judges to serve.

Many years of experience in judging in Power aerobatics have shown that the existing systems in place for judging analysis and selection of Judges for FAI Aerobatic Championships does not justify this requirement to continue.

Wording in the existing rule which would permit a "P" rated Judge to be invited with the agreement of the GASC does not make sense. The Sub-Committee is too large and not an appropriate body to consult on organizational issues like this.

The proposal is recommended by Sub-Committees.