

14.8 Section 4C Volume F3 - RC Aerobatics

F3A

- a) **5.1.1. Definition of a Radio Controlled Aerobatic Power Model Aircraft** **F3 Aero Subcommittee**

Add a 2nd paragraph

General Characteristics of Radio Controlled Aerobatic Model Aircraft shall be verified in processing procedures as per FAI Sporting Code, Section 4, Volume ABR, for each participating model aircraft prior to a competition. Not permitted equipment must not be installed.

Reason: To emphasize that a check of model characteristics is not just restricted to Cat 1 events, but may also be implemented at other competitions, i.e. for World Cups etc. Clarification regarding not permitted equipment. The rapidly increased availability of numerous, not permitted technical equipment asks for an immediate implementation of this clarification by May 01, 2015!

Requested implementation date 1st May 2015.

- b) **5.1.2. General Characteristics of Radio Controlled Aerobatic Power Models** **F3 Aero Subcommittee**

Amend paragraph g), delete paragraph h) amend paragraph i) as follows and re-number existing paragraphs i) and j):

g) The sound/noise measurement shall be made immediately prior to each flight **as a part of model processing. Electric powered model aircraft must have installed the same batteries for all model processing procedures.** The sound test area must be located in a position that does not create a safety hazard to officials and other competitors **any person around.**

~~h) No time will be taken while the sound/noise test at the flying site is being made. The competitor shall not be delayed more than 30 seconds for this sound test.~~

i) In the event of a model aircraft failing the sound/noise test, no indication of the result or the reading shall be given to the competitor, ~~or~~ **and** his team **manager,** ~~or the judges,~~ and both the transmitter and the model aircraft shall be impounded by the **a** flight line official immediately following the flight. **sound test.** ~~No modification or adjustment to the model aircraft shall be permitted (other than refuelling or battery recharging).~~ The competitor and his equipment shall remain under supervision of the flight line director **official, while modifications or adjustments may be made and** the propulsion battery is fully recharged. The model aircraft shall be re-tested under regular operational conditions within 90 minutes by a second noise steward using a second Sound Level Meter, and in the event that the model aircraft fails the re-test, ~~the score for the preceding flight shall be zero. The score for the flight may be tabulated but not made public until the result of the re-test is communicated to the tabulators.~~ **its entire model processing has failed.**

Reason: Safety. With reference to a safety issue referred back to the Subcommittee by the Plenary 2014, these and the connected proposals 5.1.8.e), 5.1.8.k), 5.1.11.m) at Agenda items c), e) n) would eliminate the hazards addressed

by the UK NAC.

Safety: Requested implementation date 1st May 2015.

c) **5.1.8. Marking** **F3 Aero Subcommittee**

Amend paragraph e) as follows:

e) The centre line is positioned on the ground perpendicular to the safety line on the ground which is parallel to the runway. **Two starting circles of 3m diameter are marked on the runway, one left and one right at minimum 15 m off the centre line, also serving for sound/noise measurement, if required.** The upper limit of the manoeuvring zone is defined by the virtual plane stretching up 60 degrees from the ground at the intersection of all ground lines.

Reason: Safety. With reference to a safety issue referred back to the Subcommittee by the Plenary 2014, these and the connected proposals, at agenda items b) e) and n) would eliminate the hazards addressed by the UK NAC

Safety: Requested implementation date 1st May 2015.

d) **5.1.8. Marking** **F3 Aero Subcommittee**

Amend paragraph h) as follows:

h) Also, manoeuvres should be primarily performed approximately 150 m in front of the ~~security~~ **safety** line. Infractions

Reason: Corrected the word.

e) **5.1.8. Marking** **F3 Aero Subcommittee**

Amend paragraph k) as follows:

k) If, during a flight, the sound level of the model aircraft increases perceptibly as a result of an equipment malfunction, or of a condition initiated by the competitor, the flight line director may request a sound re-test **and in the event that the model aircraft fails the re-test, the score for the preceding flight shall be zero. For this re-test, both, the transmitter and the model aircraft shall be impounded by a flight line official immediately following the flight. No modification or adjustment to the model aircraft shall be permitted (other than refuelling or battery recharging).-The competitor and his equipment shall remain under supervision of the flight line official. The model aircraft shall be re-tested under regular operational conditions within 90 minutes.** If an equipment malfunction during the flight...

Reason: Safety. With reference to a safety issue referred back to the Subcommittee by the Plenary 2014, this and the connected proposals, at Agenda items b), c) and n) would eliminate the hazards addressed by the UK NAC

Safety: Requested implementation date 1st May 2015.

f) **5.1.8. Marking** **F3 Aero Subcommittee**

Amend paragraph m) as follows:

m) The team manager must be afforded the opportunity to check that the scores on each judge's score sheet **document** correspond to the tabulated scores (to avoid data capture errors). The score board/**monitor** must be located in a prominent...

Reason: Adaption to contemporary scoring equipment using electronic filing etc. This kind of technical equipment is already in use.

Requested implementation date requested 1st May 2015

g) **5.1.8. Marking** **F3 Aero Subcommittee**

Delete paragraph n) as shown:

~~n) All flight results before the completion of a round must be ranked alphabetically, or by country, or by contestant number, but not in order of performance or placing.~~

Reason: The existing alphabetical or by country listing method is practically useless since an intermediate placing can be calculated anyway. However, this awkward procedure does not allow a quick check, which paralyzes any thrill in the ongoing competition, a fact strongly in contradiction with the desired public relations of our sport. In order to give way to significantly enhanced sport promotion, this rule change not affecting the competition rules as such, is meant for immediate implementation by May 01, 2015!

Requested implementation date requested 1st May 2015

h) **5.1.9 Classification** **F3 Aero Subcommittee**

Amend paragraph d) as follows:

d) Only computer tabulation systems containing the TBL algorithm and judge analysis programs that have been **Subcommittee** approved by the CIAM Bureau can be used at World and Continental Championships. **Approved scoring systems are: F3A GNAMI V06.14, MFGL-TBL-F3A-V2.0, SMV Competition 1.0b.**

Reason: The CIAM Bureau asked the Subcommittee to change the rule that way, since the competence to approve a scoring system is rather with the Subcommittee, than with the CIAM Bureau. Helpful listing of scoring systems approved and in use.

i) **5.1.9 Classification** **F3 Aero Subcommittee**

Amend the Note 2 after paragraph f) as follows:

The TBL score tabulation system can only be applied for events with at least 5 competitors and 5 judges. ~~For those smaller events that are not scored with the TBL system, the highest and lowest marks for each manoeuvre will be discarded if four or more judges are used.~~

Reason: Avoid doubling of the rule, 5.1.10 h)

j) 5.1.10 Judging F3 Aero Subcommittee

Amend paragraph a) as follows:

a) The judges must be of different nationalities ~~and must be selected from a current list of FAI International Judges.~~ Those selected must reflect the approximate geographical distribution of teams participating in the previous World Championship with the final list approved by the CIAM Bureau. At least one third, but not more than two thirds of the judges must not have judged at the previous World Championships.

Reason: Avoid doubling of the rule, 5.1.10 b). The rule is meant to refer only to one, the latest previous World Championship.

k) 5.1.10 Judging F3 Aero Subcommittee

Amend the paragraph as follows:

b) The invited judges for a World or Continental Championship, must be selected from ~~the current~~ **the applicable** list of FAI International Judges...

Reason: Since the available number of international judges may be limited in a “current” list, ie a list becoming effective in the year of the championship actually held should also serve as a resource of appointable judges.

l) 5.1.10 Judging F3 Aero Subcommittee

Amend the paragraph as follows:

h) For open international events **or other smaller events**, where the TBL statistical averaging scoring system is not used,

Reason: Applies not only to open international events.

m) 5.1.10 Judging F3 Aero Subcommittee

Amend the paragraph as follows:

g) ~~During the flight the competitor must stay in the proximity of the judges and under the supervision of the Flight Line Director.~~

Reason: Avoid doubling of rules, issue is regulated in 5.1.11 o)

n) 5.1.11 Organisation for Radio Controlled Aerobatic Contests F3 Aero Subcommittee

Amend the paragraph as follows:

m) A competitor is allowed two (2) minutes of starting time and eight (8) minutes of flying time for each flight. The timing of an attempt starts when the contest director, or timekeeper, gives an instruction to the competitor to start and the **2-min** starting time begins. The openly displayed timing device/clock will be stopped **re-started to count the 8-min flying time when the model aircraft has been placed in the take-off circle.** ~~when the competitor is ready to take the sound measurement. The helpers who place the model aircraft, must ensure that the model aircraft is-~~

positioned as per paragraph 5.1.2. If the model aircraft is not placed correctly for the sound test **with its wheels in the starting circle** before/at **the expiration of the 2-minute starting time** mark, the contest director/time keeper will advise the competitor and helper that the flight may not proceed. The flight shall score zero points.

~~When the contest director/sound steward is satisfied that he has obtained a reading from the SLM, he will indicate this to the competitor, and the timing device will be re-activated to start the 8-minute flying time. If the propulsion fails during the sound test and before the test is finished, the flying time of eight (8) min may have started. If so it will be interrupted to enable the sound test to be completed after the propulsion is restarted.~~

Reason: With reference to a safety issue referred back to the Subcommittee by the Plenary 2014, at Agenda items b), c) and e) would eliminate the hazards addressed by the UK NAC.

Safety: Requested implementation date 1st May 2015.

o) 5.1.13. Schedule of Manoeuvres F3 Aero Subcommittee

Amend the paragraph and manoeuvres as shown in Agenda Annex 7c.

Reason: F3A schedules change every two years

p) ANNEX 5A - Description of F3A Manoeuvres F3 Aero Subcommittee

Delete the existing schedules A-14, P-15, and F-15 and replace with those in Agenda Annex 7d.

Reason: F3A schedules change every two years

q) ANNEX 5B- F3A Manoeuvre Execution Guide F3 Aero Subcommittee

Add a new paragraph at 5B.8.8 as follows and re-number the subsequent paragraphs:

5B.8.8. TORQUE-ROLLS

A torque-roll is a roll, which is executed while the model aircraft is hovering in a vertical attitude and in a fixed position at no flying speed. If the duration of a torque-roll is less than 3 seconds and/or the fixed position is not maintained in all directions, it must be downgraded by 1 point or more, depending on the severity of the defect(s). Absence of a hover must be zeroed. Otherwise torque-rolls are judged the same way as axial rolls as far as the roll rates, the start and stop of the rotation and the roll direction is concerned.

Reason: Torque Rolls have not been mentioned yet.

r) ANNEX 5G - F3A Unknown Manoeuvre Schedules F3 Aero Subcommittee

Add a new paragraph 5G.2.5, re-number the subsequent paragraphs and amend existing paragraphs 2.6 and 2.8 as follows:

2.5 Minimum one manoeuvre of group 19. or G, and 20. or H, and 22, and 23.

cont/...

2.6-~~Four~~ **Five** manoeuvres of each schedule must have K = 5.

2.8 The summary of K-factors must be at least ~~70~~ **72**

Reason: Ensure higher diversification of manoeuvres in unknown schedules

s) ANNEX 5G- F3A Unknown Manoeuvre Schedules F3 Aero Subcommittee

At paragraph 8.2, amend the list of F3A Turnaround Manoeuvres as shown in Agenda Annex 7e.

Reason: Increase the difficulty of turnaround manoeuvres by adding higher K-factor manoeuvres with different manoeuvre elements.

t) ANNEX 5G France

At paragraph 8.2, add the list of F3A Turnaround manoeuvres as shown in Agenda Annex 7f.

Reason: For the composition of Unknown schedules, to Increase the difficulty of turnaround manoeuvres by adding higher K-factor manoeuvres.

u) ANNEX 5G - F3A Unknown Manoeuvre Schedules USA

At paragraph 8.2, add the list of F3A Turnaround manoeuvres as shown in Agenda Annex 7g.

Reason: Increase the difficulty of turnaround manoeuvres by adding higher K-factor manoeuvres with different manoeuvre elements.

v-1) ANNEX 5H - F3A Explanation of the Tarasov-Baur-Long (TBL) scoring system France

Insert a new Annex 5H to explain the Tarasov-Baur-Long (TBL) scoring system. See Agenda Annex 7n.

Reason: For several years we use TBL to obtain the rankings of the pilots in Continental and World championships Most of the pilots and team managers do not understand what does the TBL process. To clean up the climate it is thus important to explain what TBL does.

v-2) ANNEX 5N - F3A Aerobatic World Cup France

Amend the title and 1st paragraph as follows:

F3A, F3P & F3M AEROBATIC WORLD CUP

5N.1 The F3A, **F3P and F3M** classes ~~is~~ **are** recognised for World Cup competition.

Reason: To contribute to the development of the classes F3P and F3M, it is important to introduce a world cup into each of these classes.

- w) **ANNEX 5N - F3A Aerobatic World Cup** **F3 Aero Subcommittee**
Amend the 1st paragraph as follows:

4. Points Allocation. The points to be allocated to competitors will depend on the number (N) of competitors who have completed at least one flight in the event **with a normalised result of minimum 750.00 points** . ~~A competitor has completed a flight if he registers a score greater than zero (0).~~

Reason: Avoiding the inclusion of very poor scores in the N- count leads to a much fairer comparison of world cup competition results.

- x) **ANNEX 5N - F3A Aerobatic World Cup** **France**
Re-structure 5N.4; add a title to the existing tables a) & b) and add a new sub-paragraph and tables as follows:

4. Points Allocation. Points are allocated to the competitors who have completed at least one flight in the event, according to their placing in the results, as given in the following tables:

5N.4.1.Class F3A

[existing tables & three paragraphs]]

In the event of a tie between competitors(round up to the score to the nearest whole number of point).

5N.4.2.Classes F3M and F3P

a) N>15

<u>Placing</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>.....</u>	<u>15</u>	<u>16</u> <u>and after</u>
<u>Points</u>	<u>15</u>	<u>14</u>	<u>13</u>	<u>12</u>	<u>11</u>	<u>10</u>	<u>.....</u>	<u>1</u>	<u>0</u>

A bonus of 8 points is given to the first placed competitor; 5 points to the second placed and 3 points to the third placed.

b) N=<15

<u>Placing</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>.....</u>	<u>N-1</u>	<u>N</u>
<u>Points</u>	<u>N</u>	<u>N-1</u>	<u>N-2</u>	<u>N-3</u>	<u>N-4</u>	<u>N-5</u>	<u>.....</u>	<u>2</u>	<u>1</u>

The bonus is defined as follows:

- For first place: N/3 rounded up to the nearest whole number of points, with a maximum of 7 points;

- For second place: N/5 rounded up to the nearest whole number of points, with a maximum of 4 points;

- For third place: N/7 rounded up to the nearest whole number of points, with a maximum of 3 points.

In the event of a tie between competitors for any placing, the competitors will share the points which would have been awarded to the places covered had the tie been resolved (round up the score to the nearest whole number of

points).

Reason: Different allocation of points for the three classes (F3M and F3P different from F3A)

F3M

y) 5.10 Class F3M LARGE RADIO CONTROLLED AEROBATIC POWER MODEL AIRCRAFT France

Replace the whole of 5.10 with the rules and a Judges Guides as shown in Agenda Annex 7h:

Reason: The Large R/C aerobatic power aircraft is now days practised by a large range of competitors throughout the world. There is a large international development potential for this subject, still, three different organizations coexist (CIAM F3M class, AMA RC scale aerobatics - IMAC, European Acro Cup - DMFV) and having each one its own rules (meanwhile the specifications of the planes which are flying with those settlements are almost the same).

Because of a lack of representation of F3M class at the F3 subcommittee these last years, of inapplicable or missing rules, the current F3M rules are not suitable.

The F3M rules have to be deeply reconsidered in order to make sure that it will be compatible with the other rules in force and suitable for organisation of a World Cup, World and continental championships and World Air Games.

Almost all items are to be modified, deleted or added in comparison to the actual rules. Some explanations are to be given to facilitate the understanding of the changes.

See Agenda Annex 7i for the comprehensive explanations.

F3P

z) F3P Indoor R/C Aerobatic Power Model Aircraft Poland

Re-locate rules as requested below:

Please to remove the subclass F3P-AFM from the class F3P and to confer a new provisional status eg marked F3E or F3N with the name Indoor Aerobatic Model Aircraft Freestyle. We propose these solutions corresponding to situation in the class F3C (Aerobatic) and F3N (Freestyle) for model helicopters. Many potential competitors are very interested in Indoor Freestyle and Music and so in future this standalone “new class” can get the first one status. The provisions enclosed in existing Sporting Code are not optimal. **Attending in the F3P-AFM subclass do not effect with the results at all. This subclass seems to be “sports dead” if it stays a part of the F3P class.**

Note that this requires editorial changes at the CIAM Technical Secretary level.

Technical Secretary's Note: If this proposal is successful the new class designation would be “F3E” as F3N is already allocated.

Reason: We can observe increasing numbers of competitions for RC indoor models in Europe with running Aerobatics and Freestyle and Music The visitors and the media very much like the indoor freestyle and music and we have a duty to fully connect it with the sport. This proposal does not interfere with the development of

the twin F6B WAG class but rather will contribute significantly to its development.

aa) 5.9.10 c) Judging **F3 Aero Subcommittee**

Amend the paragraph as follows:

For World or Continental Championships the organiser must appoint one or more panels of five judges each. The judges must be of different nationalities ~~and must be selected from a current list of international Judges.~~ Those selected must reflect the approximate geographical distribution of teams having participated in the previous World Championships (if applicable) and the final list must be approved by the CIAM Bureau. **At least one third, but not more than two thirds of the judges must not have judged at the previous World Championship. Judge assignment to the panels will be by random draw.**

Reason: Avoid doubling of the rule, see 5.9.10 d). The rule is meant to refer only to one, the latest previous World Championship. Adaption to F3A

ab) 5.9.10 d) Judging **F3 Aero Subcommittee**

Amend the paragraph as follows:

The invited judges for World or Continental Championships must be selected from a ~~current~~ the **applicable** list of FAI international judges and must have had **a reasonable amount of F3P or F3A** judging experience ~~within the previous twelve months~~ and must submit a resume of his judging experience to the organiser when accepting the invitation to judge at a World or Continental Championship. The organiser must in turn submit the resumes to the CIAM Bureau for approval.

Reason: Since the available number of international judges may be limited in a „current“ list, ie. a list becoming effective in the year of the championship actually held should also serve as a resource of appointable judges. Judging criteria in F3P are equal to F3A with both of them referring to the ANNEX 5B.

ac) 5.9.13 Schedule of Manoeuvres **F3 Aero Subcommittee**

Add a new 1st paragraph as follows, delete obsolete schedules AP-15, AF-15 and add new schedules AA-17, AP-17, AF-17

The schedule F3P-AA is recommended to be flown in local competitions, so as to offer advanced pilots a suitable way to achieve skills to step-up to schedules F3P-AP.

ADVANCED SCHEDULE AA-17 (2016-2017)

<u>AA-17.01 Tilted Humpty-Bump</u>	<u>K3</u>
<u>AA-17.02 Stall Turn</u>	<u>K3</u>
<u>AA-17.03 Horizontal Circle 8</u>	<u>K6</u>
<u>AA-17.04 Half Horizontal Square Circle</u>	<u>K2</u>
<u>AA-17.05 Roll Combination with consecutive ½ roll, ½ roll</u>	<u>K4</u>
<u>AA-17.06 Knife-Edge Humpty-Bump</u>	<u>K3</u>
<u>AA-17.07 Cobra Roll with ½ roll, ½ roll</u>	<u>K5</u>

cont/...

<u>AA-17.08 ½ Horizontal Circle</u>	<u>K3</u>
<u>AA-17.09 Vertical Upline with consecutive two ½ rolls</u>	<u>K5</u>
<u>AA-17.10 ½ Square Loop</u>	<u>K3</u>
<u>AA-17.11 Loop with ½ roll</u>	<u>K5</u>
	<u>Total K = 42</u>

PRELIMINARY SCHEDULE AP-17 (2016-2017)

<u>AP-17.01 Double Immelman with roll, roll</u>	<u>K3</u>
<u>AP-17.02 Figure M with ¼ roll, ¼ roll</u>	<u>K3</u>
<u>AP-17.03 Horizontal Circle 8 with two rolls</u>	<u>K6</u>
<u>AP-17.04 ½ Horizontal Square Circle with ½ roll</u>	<u>K2</u>
<u>AP-17.05 Roll Combination with consecutive 1 ¼ roll, 1 ¼ roll</u>	<u>K4</u>
<u>AP-17.06 Knife-Edge Humpty-Bump with ½ roll</u>	<u>K3</u>
<u>AP-17.07 Knife-Edge Cobra Roll with ¼ roll, ¼ roll</u>	<u>K3</u>
<u>AP-17.08 ½ Horizontal Circle with four consecutive ¼ rolls</u>	<u>K5</u>
<u>AP-17.09 Vertical Upline with consecutive two ½ torque rolls</u>	<u>K5</u>
<u>AP-17.10 ½ Square Loop with consecutive two ¼ rolls</u>	<u>K3</u>
<u>AP-17.11 Knife-Edge Loop with ¼ roll, ½ roll, ¼ roll</u>	<u>K5</u>
	<u>Total K = 42</u>

FINAL SCHEDULE AF-17 (2016-2017)

<u>AF-17.01 Knife-Edge Humpty-Bump with ¾ roll, ¾ roll</u>	<u>K3</u>
<u>AF-17.02 Figure 9 with roll</u>	<u>K3</u>
<u>AF-17.03 Vertical 8 with roll integrated</u>	<u>K5</u>
<u>AF-17.04 ½ Horizontal Circle with consecutive eight 1/8 rolls</u>	<u>K4</u>
<u>AF-17.05 Horizontal Double Immelmann Circle with ¼ roll, ½ roll integrated, 1 ½ roll, ½ roll integrated, 1 ½ roll, ¼ roll</u>	<u>K6</u>
<u>AF-17.06 Knife-Edge Top Hat with two consecutive ¼ rolls</u>	<u>K3</u>
<u>AF-17.07 Double Fighter Turn with ¾ roll, ¾ roll</u>	<u>K6</u>
<u>AF-17.08 ½ Horizontal Square Circle with ¼ roll, two consecutive ½ rolls, ¼ roll</u>	<u>K4</u>
<u>AF-17.09 Barrel Roll</u>	<u>K5</u>
<u>AF-17.10 ½ Square Loop</u>	<u>K2</u>
<u>AF-17.11 Clover Leaf with ½ torque roll, ¾ torque roll, ¾ torque roll</u>	<u>K6</u>

ad) F3 Aero Subcommittee

Replace obsolete schedules AP-15, AF-15, with AP-17, AF-17 and add a new schedule AA-17 as shown in Agenda Annex 7j.

Reason: New schedules.

cont/...

F3S

ae) 5.12.13) Judging

F3 Aero Subcommittee

Amend the paragraph as follows:

Schedule S-15 (2011-2015 2016 -2017)	K Factor
S15.01: Triangle with roll	3
<u>Loop with roll integrated over top 90 degrees</u>	4
S15.13: Loop with roll integrated over top 90 degrees	4
<u>Triangle with roll</u>	3

Reason: The exchange of manoeuvre 01 and 13 is preferred, because the „Triangle with roll“ is critical to be performed with a full tank (at the beginning of the schedule).

Volume F3 Soaring begins overleaf