Owing to unforeseen circumstances, there is a delay in publishing the full CIAM Plenary Meeting agenda. Consequently, Agenda item 12: Sporting Code Proposals has been published as a separate document to enable the Aeromodelling Federations world-wide to begin their internal preparations for the CIAM Plenary Meeting. This separate "Agenda Item 12" must be considered as an integral part of the official CIAM Plenary Agenda."

*Fédération Aéronautique Internationale*

# Agenda Item 12 – Sporting Code Proposals

of the Plenary Meeting of the
FAI Aeromodelling Commission

To be held in Lausanne, Switzerland
on 20 & 21 April 2012

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# 12. SPORTING CODE PROPOSALS

## (Officially issued as a separate, but integral, document to the Agenda.)

The Agenda contains all the proposals received by the FAI Office according to rules A.6 and A.7.

Additions in proposals are shown as **bold, underlined**, deletions as ~~strikethrough~~ and instructions as *italic*.

Bureau proposals now appear in the appropriate rule section of item 12.

Each section begins on a new page.

# SPECIAL PROPOSAL - FAI SPORTING CODE GENERAL SECTION

*Note: if approved, the proposal will be submitted to CASI for consideration.*

**Chapter 6 – International Records** **Bureau**

*Amend the paragraph as follows:*

6.1.2 To be eligible as an International World record, the performance must have been recognised as a national record by the NAC concerned, except for international team performances in Class G (Parachutes largest formation record), in Class D (Multiseat Gliders and Motor Gliders) ~~and~~ all performances in Class K (space craft)**,** ~~and~~ Class P (aerospace) **and in Class F (aeromodelling) the specific "Set in Competition" classes**. In any case the FAI rules have to be fulfilled.

Reason: National records set in a NAC's own country are sometimes higher than those set in a World or European Championship (Aeromodelling "Set in Competition" classes). When this is the case then the NAC cannot approve any "Set in Competition" world record as a national record because it is lower than the existing national record thus the existing General Section rule 6.1.2 can be considered discriminatory against an Aeromodelling Championship competitor. As rule 6.1.2 already has exemptions for classes of other categories, then it would be fair to include the Aeromodelling "Set in Competition" classes so that the anomaly is resolved.

# 12.1 Volume ABR, Section 4A

**(CIAM Internal Regulations – page 20 (2011 Edition))**

**a) A.11 Judges Lists** **United Kingdom**

*New third paragraph as follows:*

**To comply with the principle of NACs and Airsports Persons, NACS are only permitted to submit names of airsports persons of their own NAC.**

Reason: Judges have to be approved by their own NACs. The proposal is related to the proposal on nationality at B.4.5

*cont/…*

**b) A.11 Judges Lists** **Germany**

*Amend the paragraph as follows:*

A. 11 Judges **and Contest Directors** List**s**

Nominations for persons to be put on the List of International Judges **and on the List of International Contest Directors** must be received by the FAI Office no later than November 15. The nominations are valid for two years starting the following January and can be updated annually. If no list is returned by the deadline in any year, then the old one stands for one more year. Judges **and Contest Directors** shall be chosen from the list**s**. Any judges **and any contest directors** appointed for a Championship must be on the list when selected. The nomination must contain the information requested by the FAI Secretariat on the electronic form i**t** sends to NACs.

Reason: Up to now, only in F2A, F2C and F2D contest directors or equivalent positions are to be chosen from the "Judges List" – despite they are no judges as defined for subjective judging aerobatic and scale classes. For F1, F3B, F3D, F3F, F3J, F3K, F5B, F5D, SM Contest Directors should be listed as well to keep a good standard of first category events. But – all aerobatic and scale classes need as well contest directors beside of the judges! The term "Contest Director" contains always the first responsibility of the competition, per class (F2) or per event (e.g. F1A,B,C).

**c) A.12 Technical Experts List** **United Kingdom**

*A new third paragraph as follows and the existing third paragraph becomes paragraph four:*

A.12 Technical Experts List

**To comply with the principle of NACs and Airsports Persons, NACS are only permitted to submit names of airsports persons of their own NAC.**

Reason: Technical Experts should be approved by their own NACs. The proposal is related to the proposal on nationality at B.4.5.

**d) A.15. Change from Provisional to Official Rules** **F4 Sub-committee**

*Upgrade class F4H Stand-off Scale.*

*No text change in this paragraph. If approved, then there will be consequential changes to A.4.2. and the table of CIAM classes.*

Reason: The F4H class now have matured through several international competitions, quite a few of them in conjunction with World and Continental Championship in the F4C class and we ask the Plenary to accept this class as an official class from January 2013.

Supporting data: The class have been flown in three Nordic Championships (International Competition between FIN, DAN, SWE and NOR), at one European Championship in NORWAY (2009) and at two World Championships in Poland (2008 and 2010). All together 11 nations have participated in the class in international competitions; (Add to the Nordic countries: POL, FRA, GBR, ITA, RUS, ESP and GRE.) And this class will also be flown as an international competition at the World Scale in Spain in 2012.)

**Technical Secretary's Note:** Regarding proposal d) above and e) below: this class was only

included in the FAI Sporting Code on 1st January 2009. Over the three year period since then only one country, Norway has held competitions: three in 2009 & 2010, two in 2011 & one is scheduled for 2012. The number of competitions held has reduced each year. Poland held one competition in 2010. In 2009 & 2010 the competitions held alongside the Championships were not listed on the Sporting Calendar therefore they were not FAI competitions. There is no F3H competition listed on the Sporting Calendar for the 2012 World Championships. Fast-tracking F3H to World Championship status seems more than a little premature.

**e) A.16 Eligibility for World & Continental Championships F4 Sub-committee**

*Under A.16.2 to accept F4H Stand-off Scale as a World and Continental Championship Class starting at the 2013 European Championship.*

Reason: The class have been flown in three Nordic Championships (International Competition between FIN, DAN, SWE and NOR), at one European Championship in NORWAY (2009) and at two World Championships in Poland (2008 and 2010). All together 11 nations have participated in the class in international competitions; (Add to the Nordic countries: POL, FR, GBR, ITA, RUS, ESP and GRE.) And this class will also be flown at the World Scale in Spain in 2012 with more than 30 competitors already entered.

**f) A.18 AEROMODELLING SCHOLARSHIP Bureau**

*Amend the paragraphs as follows:*

The Aeromodelling Scholarship may be awarded to one appropriately qualified person **from age 16** up to age 21 ~~of age~~ in the year of nomination **to help with the education of the nominee.**

Only one person …….

…….educational books or other educational facilities directly to the educational establishment.

*Note i: The CIAM Scholarship cycle **is**:*

***November 15*** ***- deadline for candidate submissions ~~deadline~~***
***Following March*** ***- candidate approved by Plenary***
***Following November 15*** ***- deadline for CIAM Scholar's report ~~to~~ for next Plenary by NAC Delegate ~~deadline~~***
***- deadline for next candidate submissions***
***Following March*** ***- next candidate approved by Plenary***

*~~March 2009 - Plenary approval~~*
*~~January 2010 - Rule effective~~*
*~~March 2010 - Education Scholarship Group members "appointed"~~*
*~~November 201**1** - **2nd** time candidate submissions deadline~~*
*~~March 201**2** - **2nd** time candidate approved~~*
*~~November 201**2** - **2nd** CIAM Scholar's report by Delegate deadline~~*
*~~- **3rd** time candidate submissions deadline~~*
*~~March 201**3** - **2nd** CIAM Scholar's report presented to Plenary~~*
*~~- **3rd** time candidate approved~~*
*~~November 201**4** - **3rd** CIAM Scholar's report by Delegate deadline~~*
*~~- **4th** time candidate submissions deadline~~*

*Note ii: The nomination form may be downloaded from the CIAM website.*

Reason: Clarification including some relocation of sentences

**g) Annex A.1a Bid Applications** **Germany**

*Add to the list as follows:*

**The bid must include:**

Year

Type of championship where the championship name conforms to CIAM championship naming policy (see Annex A.1c for the list of appropriate championship names).

Category/categories of model flying

Submitting country

Submitting NAC

Organiser of championship including contact name, telephone & fax numbers & email

**List of international competitions successfully conducted for the same class(es) by the organiser or the submitting NAC**

…..

Reason: Lack of experiences mustn't endanger the quality of our first category events.

**h) Annex A.1c Naming of Championships**

*Amend the list as follows:*

FAI WORLD CHAMPIONSHIPS FOR FREE FLIGHT MODEL AIRCRAFT

**FAI WORLD CHAMPIONSHIPS FOR FREE FLIGHT INDOOR MODEL AIRCRAFT**

**FAI WORLD CHAMPIONSHIPS FOR FREE FLIGHT SLOPE SOARING MODEL AIRCRAFT**

FAI JUNIOR WORLD CHAMPIONSHIPS FOR FREE FLIGHT MODEL AIRCRAFT

**FAI JUNIOR WORLD CHAMPIONSHIPS FOR FREE FLIGHT INDOOR MODEL AIRCRAFT**

**FAI JUNIOR WORLD CHAMPIONSHIPS FOR FREE FLIGHT SLOPE SOARING MODEL AIRCRAFT**

Reason: Strict application of the current naming policy leads to confusion for free flight where the same title is applied to 3 championships in each year. The proposed change introduces specific official names for F1D and F1E championships and retains the existing name to be used for F1A F1B F1C or Junior F1A F1B and F1P championships.

***Volume ABR, Section 4B begins overleaf***

# 12.2 Volume ABR, Section 4B
**(General Rules for International Contests – page 40 (2011 Edition))**

**a) B.3.2 Sporting Licences** **Bureau**

*In paragraph a), a new second and third paragraph as follows:*

**That names on FAI licences must be completed using the Roman alphabet. If it is deemed necessary by a NAC that the names have to be written in an alphabet common to its country then the licence must also show the name in the Roman alphabet.**

**Competitor names as entries in competition lists and results must be listed using only the Roman alphabet.**

Reason: To ensure that competitor names are clear and easily understood for entry into a competition entry list and the results. It will also be easier to verify the authenticity of the licence holder.

**b) B.3.6. Team Manager** **F3 Soaring Sub-committee**

*Amend the second paragraph as follows:*

The team manager may assist the competitors. He is the only person allowed to deal with the Jury or the Organiser in the case of disputes, complaints or protests and must be obligatory for World and Continental Championships. Any member of the officially entered national team may be nominated as team manager.

For Free Flight, Control Line, **RC Soaring,** Scale and Space Model competitions, the team manager may have an assistant, registered with the organiser, who will have the same duties as the team manager except that the assistant will not be allowed to deal with the Jury or the Organiser except to deliver protests.

Reason: In fly-off very often competitors of one team fly simultaneously on distant spots. Then it's difficult for the team manager to serve all of his competitors.

**c) B.3.6. Team Manager** **Germany**

*Amend the paragraph as follows:*

For Free Flight, Control Line, **F3J – RC Thermal Duration, F3K – RC Hand Launch**, Scale and Space Model competitions, the team manager may have an assistant, …

Reason: The F3J- and F3K-rules offer full junior teams of three competitors their own classification alongside of the senior's event. One team manager is not able to care sufficiently for two teams, so informal solutions had been agreed, stressing the rules. Assistant team managers eligible for all classes with full junior teams fulfil the actual demands of international championships and of the Sporting Code.

## d) B.4. CONTEST OFFICIALS — Bureau

### B.4.1 FAI Jury

**a)** ~~The Organiser of~~ **A**ll International contests included in the FAI Contest Calendar shall ~~nominate~~ **have** an FAI Jury of three members at least two of whom shall be chosen for their competence in the category being flown in the event. It is the responsibility of the Jury to see that the event is conducted in accordance with the relevant provisions of the Sporting Code Section 4b and 4c, and ~~they are~~ **it is** empowered to make all decisions dictated by any circumstances which may arise and to rule on disputes. Before the start of the competition, the FAI Jury must make sure that the organiser has satisfied the requirements of B.8 and, where relevant, sections B.9, B.10, B.11.

**b)** The FAI Jury must have at least one language in common.

**c**) The FAI Jury ~~at World and Continental Championships~~ shall remain independent of the organiser(s) to enable ~~them~~ **it** to enforce the rules of the FAI and act as an independent arbiter in disputes between the organiser(s) and the competitors.

**d)** The President of the Jury at each international contest must submit a report to the FAI within one month of the contest. This report must include descriptions of any deviation from the Sporting Code and any exceptional circumstances that arose. In the situation where a new world record is set during a World or Continental Championship, it is the responsibility of the FAI Jury for that event to notify the FAI Headquarters within seven (7) days of the record accomplishment and remind the competitor and organisers of the need to assemble proper documentation within the prescribed time limit for homologation.

### B.4.2 F**AI Jury at World and Continental Championships & WAG**

a) The Jury, including three suitable reserves, should be nominated by ~~the Chairman of~~ the relevant Subcommittee Chairman after consultation with the organisers. This jury composition shall be proposed in ~~the~~ Bulletin 0 ~~which is~~ and considered by the CIAM Bureau. ~~and~~ The Bureau makes the final decision on ~~the~~ jury composition.

**b)** ~~In the case of World Championships,~~ **T**he Jury must include at least one member of the CIAM Bureau **(which includes Subcommittee Chairmen)** or one who, over the last 5 years, has served on the Bureau~~, or the Chairman of the particular CIAM Sub-committee~~.

**c)** The second member **must be another Bureau member**, ~~or~~ a CIAM delegate, ~~or either~~ someone who in the past 5 years has served on a FAI ~~World~~ Championships or WAG Jury, or someone who in the past 5 years has served two consecutive years on a Subcommittee in the same category as the Championships or WAG.

**d)** The remaining member may be ~~delegated by the NAC of the organising~~ **selected from any** country provided that ~~if the choice is made from another country~~ approval ~~will first have~~ **has** been obtained from that ~~Jury member's~~ **person's** NAC.

**e)** The members of ~~a WCh or CCh~~ **the** Jury shall be of different nationalities.

**f)** ~~All WCh and CCh Juries~~ **The Jury** must be approved by the CIAM Bureau.

**g)** **People named on the approved Jury reserve list**, Bureau members, Sub-committee Chairmen, any delegate and relevant Sub-committee members are, in an emergency, automatically approved in that order for appointment as Jury members.

cont/...

**B.4.3 FAI Jury at Other Open International Events including World Cups**

**a)** The Jury must include at least **one** person approved by his own NAC. The other two members ~~can~~ **may** be **assigned** by the NAC of the organising country.

**b)** Members of the Jury must be from at least two different nations.

**c)** The Jury must be announced before the start of the event. When the contest has a subdivision into categories, one or two members of the Jury may compete in a category and must then be replaced by alternate Jury members (not competing in that category) for all matters involving that category. The alternate members must be chosen so that at all times the Jury meets nationality and language rules.

**d)** For competitions which involve a single ~~category~~ **class,** one or two jury members may be nominated from the competitors. An alternate jury member must also be nominated for each competitor jury member, to serve on the jury when considering any protest involving that competitor jury member. The members must be chosen so that at all times the Jury meets the nationality and language rules.

Reason: To clarify and consolidate the rules for FAI Juries. The proposal is a result of the Bureau Working Group that was tasked with the project.

**e) B.4.5 Contest Officials** **Bureau**

B.4.5. The organisers may appoint timekeepers and ~~other~~ contest officials from other countries provided ~~those~~ **that the officials** are approved by their own NAC.

Reason: Clarification

**f) B.4.5 Contest Officials** **United Kingdom**

*New first paragraph as follows and re-number the existing three paragraphs.*

**To meet the CIAM requirements on nationality, the nationality of a Judge or Jury member is deemed to be that of the NAC which is permitted to issue an FAI Sporting Licence to that person.**

Reason: To help ensure that that NACs are aware that they must only submit names of people who belong to their NAC under the FAI regulations regarding citizenship or residency (and Sporting Licences).

**g) B.7.4. Additional Fees** **Bureau**

*Amend the second paragraph as follows:*

For World **and Continental** Championship**s** ~~events~~ that require more than five international judges, a separate additional fee may be charged to each contestant to cover the actual cost of travel, lodging and meals for those judges in excess of five. The additional fee is limited to a maximum of 165 Euro per contestant.

Reason: There is no difference in the costs of judges whether it is a World or Continental Championship.

**h) B.7.4 Additional Fees** **F3 Heli Sub-committee & Germany**

*Amend the paragraph as follows:*

Separate additional fees will be offered at choice for: lodging (hotel and camping); food (banquet not

included) and banquet (and possible other additional events).

Maximum fee = basic fee + lodging (hotel) + food + banquet.

With the exceptions listed below, the maximum possible fee is 600 Euro for seven nights, except for events which require more than five judges or more than seven nights.

F3B: 660 F3C: 700 **F3N: 700** F3D: 720 F4: 700 F5: 660

For World Championship events that require more than five international judges, a separate additional fee may be charged to each contestant to cover the actual cost of travel, lodging and meals for those judges in excess of five. The additional fee is limited to a maximum of 165 Euro per contestant.

Reason: To be able to have an entry fee according to the cost of organising these events. Germany requests an immediate effectiveness because of the upcoming European Championship in 2012 organized by Germany.

**i) B.7.4. Additional Fees** **Germany**

*Amend the paragraph as follows:*

With the exceptions listed below, the maximum possible fee is 600 Euro for seven nights, except for events which require more than five judges or more than seven nights.

**F3A: 750** F3B: 660 F3C: 700 F3D: 720 F4: 700 F5: 660

Reason: Financial demands to run an F3A first category event are possibly the highest of all F-classes. Therefore the limit needs to be raised.

**j) B.9. Free Flight** **USA**

*Add the following to the first paragraph of B.9.1:*

**To retain a flight line's perpendicularity, the organisers can rotate the line approximately through its centre in 30 degree increments, accounting for lines of sight; or relocate it. For F1A, flat pole markers can be used to mark pole locations.**

Reason: Any line move, particularly for the events with stationary equipment (winding stooges or engine starters) is time consuming. So, instead of a stay/move decision, rotating the flight line allows more flexibility in addressing moderate drift/wind changes. For example, with 20 poles, a 30 degree rotation shifts the first and last poles by 52 meters. Rotational adjustments reduce the chances that contestants at one side of the line can glean information from those flying further up wind.

**k) B.12.2 Space Models** **Germany**

*Change the whole paragraph as follows:*

~~B.12.2 Provide for class S8E/P:~~

~~a) a landing line with landing circles in accordance with Volume SM paragraph 11.7.5 and relevant subparagraphs~~

~~b) a spectrum analyser or other adequate radio monitoring equipment for the purpose of detecting radio~~

~~interference and a means of communicating this information to the pilot(s) and/or the RSO.~~

~~c) a pound where all transmitters to be used that day in S8E/P shall be impounded on the morning of the~~

~~competition no later than one hour before the first competition is scheduled to begin and kept under~~

~~the supervision of a special official. This official will issue the transmitter to the competitor only when~~

~~the starting time for each group begins.~~

~~The transmitter frequency must be displayed on the outside of the transmitter or plug-in module or~~

~~frequency switch. Also, frequency synthesised transmitters must be designed to display the current~~

~~frequency and to change to another frequency without RF transmission.~~

**B.12.2 Provide for class S8:**

**a) for S8A – S8F a landing area in accordance with Volume SM paragraph 11.2. and 11.5.c)**

**Technical Secretary's Note:** The above new text will only need to be voted upon if two proposals (ab) and (ac) in the agenda item 12.13 Space Models are approved.

**b) for S8E/P a landing line with landing circles in accordance with Volume SM paragraph 11.7.5 and relevant subparagraphs**

Reason:

1. When the rule change for S8 is accepted, the organiser guide in ABR is to be adapted.

2. Any mentioning of RC is superfluous because of the reference in Vol SM 4.7.1 to Vol ABR 4B B.11. Any specific RC rules in the organisers guide beside of the main rule within ABR causes disturbance only.

**l) B.16.1. Individual classification** **Germany**

*Amend the paragraph as follows:*

e) For those categories where a junior may participate in a Continental or World Championship National Team, individual awards for **all** junior competitors will be awarded to the first, second and third place juniors.

Reason: Clarification

**m) B.16.2. Team Classification** **Germany**

*Delete paragraph c)*

~~c) When teams consist of four competitors or, in the case of F2C, four pairs of competitors (ref B.3.5) then all the team members in first, second and third place will be awarded medals.~~

Reason: B.16.2 a) states clearly, that the performance of the three best scoring team members establishes the team classification. Awarding of medals to team members who might even have no score at all and who's performance is not counted, is inconsistent with the idea of sport and the Olympic spirit.

**n) B16.2. Team Classification** **RSA**

*Amend the paragraph as follows:*

The team classification is established by adding the scores of the three team members **nominated on the entry forms** of the team together ~~unless there is a fourth member of the team (who must always be a junior) in which case it will be the three best scoring members.~~

Reason: The present system is unfair to countries that are unable to enter a junior. It is unfair for the official 3rd. Team member to possibly not receive an award.
The score of a defending champion entered as an individual is not eligible.
Possible future veteran categories also need to be excluded.
Junior entry fees are often reduced.

**o) B.17. Processing of Model Aircraft** **F2 Sub-committee**

*Amend paragraph B.17.1 as follows:*

B.17.1. The number of model aircraft eligible for entry are as follows

Class F4C One (1) only

Class F2A, F2B, F3A, F3C, F5B, F3M Two (2) only **(F2A 3 round competitions)**

Class **F2A** F3D, F2C, F3B, F3J, F5D, F3F, F3P Three (3) only. **(F2A 4 round competitions)**

Class F1A, F1B, F1C, F1P Four (4) only

Class F1E, F3K Five (5) only

Class F1D, F2D unlimited (two per heat in F2D)

Reason: With the introduction of four round F2A competitions, an extra model should be allowed. This will be of particular value to beginners and juniors.

**p) B.17. Processing of Model Aircraft F1 Sub-committee**

*Add a new sentence to B.17.2 as follows:*

B.17.2. Any model may only be used by one competitor during a competition. **The model must not carry FAI stickers (B.17.6) or National Identification Numbers (B.17.10 if required) which relate to any person other than the competitor.**

Reason: To make it clear that this rule should be seen to be followed without any confusion resulting from multiple numbers or stickers on the model.

**q) B.17 Processing of Model Aircraft for International Competitions Bureau**

*Amend the paragraphs as follows:*

**B.17.6. Model aircraft,** except for Indoor Free Flight and Scale, must bear the nationality abbreviation of the International Olympic Committee **followed by the FAI licence number.** The letters or figures must be at least 25 mm high and appear at least once on each model ~~(~~on the upper surface of a wing for Free Flight models). See Annex B.1 for examples and Annex B.2 for the list of nationality abbreviations. (Re-located from 17.10)

B.17.**7**. Each NAC shall process every model aircraft entered for a World or Continental Championships and shall issue for each model aircraft a model aircraft specification certificate, provided by the FAI. A sticker, also provided by the FAI or marking to the pattern of this sticker, shall appear on each model aircraft (except for Indoor and Scale model aircraft). Examples of how to fill out and handle the Model Aircraft Specification Certificate and Sticker are shown at Annexes B.1.a and B.1.b. (Was 17.6)

B.17.**8**. Model aircraft not properly processed by their NAC, with FAI certificates and stickers, must be processed by the organiser at a cost of 8 Euro for each model. (Was 17.7)

B.17.9. Indoor free flight duration models must be processed before each flight to confirm that the model meets the dimensional and weight requirements of the class. Rubber motors are to be weighed before or after the flight to confirm that these are within the specification.

B.17.**10**. Except for Indoor **Free Flight** and Scale, each model ~~shall~~ carry a model identification code (letters and/or numbers). The identification code is to appear on each part of the model aircraft (wing(s), tail, front and rear fuselage if detachable) so that the individual parts of a competitor's different models may be separately identified. The letters and/or numbers must be at least 10 mm high and clearly visible. The identification code of the nominated models will be recorded on the score card **and for World or Continental Championships** this must be recorded on the model specification certificate. (Was 17.8)

~~B.17.10. Except for Indoor and Scale, each model must bear the nationality abbreviation of the International Olympic Committee and for Free Flight models the FAI license number or National Identification Number of the competitor. The letters or figures must be at least 25 mm high and appear at least once on each model (on the upper surface of a wing for Free Flight models). See Annex B.1 for examples and Annex B.2 for the list of nationality abbreviations.~~ (Re-located to 17.6)

Reason: To clarify, harmonise and resolve anomalies throughout the paragraphs.

**r) B.17. Processing of Model Aircraft** **France**

*Modify paragraph B.17.8.*

*Note: if the proposal is adopted, it will be necessary to do the corresponding changes on the annex B.1.b.*

B.1.8. Except for **Free Flight** Indoor and Scale, each model shall carry **FAI model sticker(s)** with **mention of the FAI licence number, national identification mark, competitor name and** ~~a~~ model identification code (letters and/or numbers)~~on the and this must be recorded on the model specification certificate~~. ~~The identification code is to appear on each part of the model aircraft (wing(s), tail, front and rear fuselage if detachable) so that the individual parts of a competitor's different models may be separately identified. The letters and/or numbers must be at least 10 mm high and clearly visible. The identification code of the nominated models will be recorded on the score card.~~ **The letters and numbers on the FAI model sticker must be at least 10 mm high and clearly visible.**

**A FAI model ticker will be put on each part of the model aircraft so that the individual parts (wing(s), tail, front and rear fuselage if detachable) may be separately identified.**

**The model identification code must be also recorded on the model FAI specification certificate and on the score card of the nominated models.**

Reason: Clarification of the way to mark the model with FAI model sticker. Regarding Indoor exception, limitation to Free Flight Indoor classes (and not Radio Controlled).

**s) B.17. Processing of Model Aircraft** **France**

*Modify paragraph B.17.10.*

*Note: if the proposal is adopted, it will be necessary to do the corresponding changes on the annex B.1.b.*

B.17.10. Except for Indoor **Free Flight** and Scale, each model must bear the **national identification mark (**nationality abbreviation of the International Olympic Committee**)** and ~~for Free Flight models~~ the FAI license number or National Identification Number of the competitor. The letters or figures must be at least 25 mm high and appear at least once on each model (on the upper surface of a wing for Free Flight models). See Annex B.1 for examples and Annex B.2 for the list of nationality abbreviations.

Reason: Clarification of the way to mark the model with the national identification mark (nationality abbreviation of the International Olympic Committee) and the FAI license number (or National Identification Number) of the competitor.

Regarding Indoor exception, limitation to Free Flight Indoor classes (and not Radio Controlled).

Reintroduction (except for Indoor Free Flight and Scale) of the mark the FAI license number (or National Identification) Number of the competitor in all classes and not only for Free Flight as actually mentioned.

**t) B.18. Protests** **France**

*Amend the paragraph as follows:*

B.18.1. All protests must be presented in writing to the Contest Director at the competition and must be accompanied by the deposit of a fee. The amount of this fee shall be the equivalent of 35 Euro. The deposit is returned only if the protest is upheld.

**The same person (Team-Manager or competitor depending of the type of the competition) cannot present two consecutive protests on the same subject.**

Reason: Avoid the situation which has been encountered for the F2C final at the 2010 Control Line World Championships.

**u) B.19.4 Safety Precautions & Instructions** **France**

*Amend paragraph b) of B.19.4 as follows:*

b) All spinners and other forward-facing **(except wings)** metal or equally rigid projections should have a minimum radius of 5 mm.

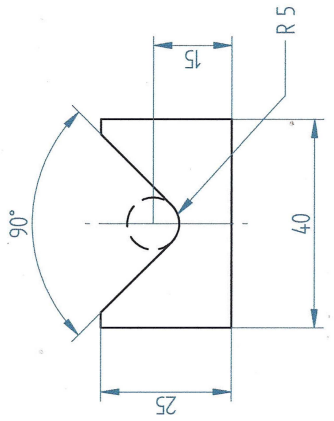
**A jig (as sketched below) will be applied to the front of the part to be controlled.**

**Whenever this part reaches the 5mm radius curve at 1 or more points, without being in contact with the two adjacent, tangent straight lines, the model will not be eligible to fly.**

Reason: To define the way of controlling the 5mm mandatory radius. To avoid further protests, as it occurred during last EC and WC in F2B.

This is a safety matter, and we must emphasize the fact that F2B judges usually stand or sit inside the fenced area.

Also the use of sharp spinners represents a real danger in other categories, from F1, F2 and F3 classes.



**v) B.19.7. Flying Sites** **F3 Aero Sub-committee**

*Add a new paragraph four as follows:*

**At each operational flightline an appropriate fire extinguishing equipment shall be available.**

Reason: Modern electric drive systems, such as for model aircraft propulsions or winches, as well as turbines, etc. or flammable substances in use in or near the competing model aircraft and the persons around are subject of fire risk, which may require a sudden and quick action of fire fighting.

Eg at the 2011 World Championship F3A an ESC exploded during the sound test on ground causing the model aircraft to catch fire. If fire extinguishing equipment would have been available on spot, the damage to the model aircraft could have been significantly reduced. Luckily no personal injury resulted from the accident.

***Volume ABR, Section 4C, Part One begins overleaf***

# 12.3 Volume ABR, Section 4C, Part One
**(General Regulations for Model Aircraft – page 67 (2011 Edition)**

**a) 1.3.2. Category F2 – Control Line Circular Flight** **F2 Sub-committee**

*Delete all and replace by:*

**a) Control Line Circular Flight is flight during which all control is accomplished via physical connection to the pilot through one or more inextensible wires or cables directly connected to the model aircraft.**

**b) Power plant and Primary Flight Control shall be via mechanical and/or preset, onboard processes.**

**c.) For permanent shutdown of the engine(s), any device or system is permitted including the use of 2.4 GHz Spread Spectrum technology legal for use in the country of competition. The competitor will determine the suitability for use of the chosen system. Any such device or system must 1) be operated only by the pilot, and 2) not affect any other model.**

**d.) A safety strap connecting the competitor's wrist to the control handle must be provided by the competitor and used during all flights. A pull test shall be applied separately to the safety strap. This pull test will be applied according to each class specification concerning the lines' pull test**

**e.) The regulations for classes must be set forth in class rules. Except for reasons of safety, class rules must not contradict or invalidate ABR 1.3.2**

**f.) Control Line Circular Flight Classes are:**

F2A - SPEED MODEL AIRCRAFT
F2B - AEROBATIC MODEL AIRCRAFT
F2C - TEAM RACING MODEL AIRCRAFT
F2D - COMBAT MODEL AIRCRAFT
F2E - COMBAT MODEL AIRCRAFT WITH COMPRESSION IGNITION ENGINES
F2F - DIESEL PROFILE RACING MODEL AIRCRAFT
F2G - ELECTRIC SPEED

Reason: Clarification and update.

**b) Annex 1.1 World Championship Events** **Czech Republic**

*Adjust the status of the provisional class F3M to World Championship class*

4. RC category for Seniors & Juniors

**h) F3M Radio Controlled Large Aerobatic Power Model Aircraft**

**c) 2.1 World Class Records** **F7 Sub-committee**

*Amend the rules to include Aerostat World Records.*

See the reason and the rules in Agenda Annex 7a.

**d) 2.8.1 Verification of Measurements United Kingdom**

*Move paragraph d) to become paragraph b) and add a second paragraph as follows. Re-number the subsequent existing paragraphs.*

**The measuring device must be zeroed at the point of launch. If the device does not have such a facility, then the start (launch) point altitude must be established and recorded. A statement clearly indicating the altitude of the start (launch) point, and the altitude attained, is required. This must be signed by the pilot and substantiated by the official observer(s) and must be included in the dossier.**

Reason: To ensure accurate altitude measurement above the start point and to substantiate this for the record claim dossier.

***Volume F1 – Free Flight begins overleaf***

# 12.4 Section 4C Volume F1 - Free Flight

## Free Flight Outdoor

**a) 3.1.2. Characteristics of Gliders F1A** **Bulgaria**

*Amend the final paragraph as follows:*

~~F1A models may use radio control only for irreversible actions to restrict the flight (dethermalisation). Any malfunction or unintended operation of these functions is entirely at the risk of the competitor.~~

**Any radio control or wireless communications with F1A glider is prohibited.**

Reason: Modern electronic devices putted in F1A gliders give wide field for unsportsmanlike behaviour. Now F1A electronically commanded gliders are fully radio controlled and no way to stop unsportsmanlike controlling glide path from a ground device.

Supporting data: Additional technical stuff must control on starting positions electronic devices on board or after flight to verify using of this rule. In case of discovering any radio or wireless communication devices on board of model on starting position or after flight – competitor must be DQ for whole competition.

**b) Annex 1 Rules for Free Flight World Cup** **F1 Subcommittee**

*Amend paragraphs 3 and 5.*

See the reason and the rules in Agenda Annex 7b.

**c) Annex 1 Rules for Free Flight World Cup** **F1 Subcommittee**

*Add a new paragraph at the end of item 4 as follows:*

**e) If a junior competitor scores more World Cup points in an F1A, F1B, F1C or F1E open event than he would be awarded in the Junior World Cup from the junior classification, then his Junior World Cup points will be increased to the same as his open event points.**

Reason: To reward junior flyers who have a good result in the open competition. Currently it is possible for such a junior not to receive any junior World Cup points if there are only a few juniors flying in the event. For example, a junior F1B flyer at Poitou 2011 placed 6th out of 40 flyers in F1B but he received no junior world cup points because there was only one other junior flying - who won the event. The proposed addition to World Cup rules would reward flyers such a position.

*cont/…*

**d) Annex 1 Rules for Free Flight World Cup** **F1 Subcommittee**

*Amend the second sub-paragraph as follows:*

Each competitor awarded placing points is eligible for a bonus according to the number of competitors they have beaten in the competition. The bonus points are calculated as ~~1 point per 20 people beaten in F1A,~~ 1 point per 10 people beaten in **F1A,** F1B, or F1E, 1 point per 5 people in F1C, F1Q, F1A Junior, F1B Junior, F1P Junior and F1E Junior. The number of bonus points is rounded down to the nearest whole number. The number of people beaten by someone in place P is (N-P) with N the number of competitors defined in b) below.

Reason: Bonus points in F1A are low compared to other events. While entries in F1A are usually slightly greater than in F1B the difference does not justify a factor of 2 between bonus points and so it is proposed to simplify bonus points allocation by making F1A the same as F1B and F1E with one bonus point per 10 people beaten.

***Volume F2 Control Line*** begins overleaf

# 12.5 Section 4C Volume F2 - Control Line

**F2A**

**a) 4.1.2 Characteristics of a Speed Model Aircraft** **F2 Sub-committee**

*Amend the paragraph as follows:*

Maximum swept volume of motor or motors 2,5 $cm^3$

~~Minimum total projected area 2 $dm^2/cm^3$ swept volume of the motor(s)~~

**Minimum total projected area 5.0 dm2**

**Maximum total projected area 6.0 dm2**

Maximum loading 100 $g/dm^2$

Maximum wingspan 1000 mm

Reason: To simplify and clarify model specification

**b) 4.1.7. Control Handle and Pylon Fork** **F2 Sub-committee**

*Amend the paragraph as follows:*

A pylon with supports as shown in the sketch will be placed at the disposal of the competitors by the organisers. It is compulsory that a pylon fork and control handle of standard dimensions as specified, be employed. The distance between the flexible point of attachment on the control handle and the point of contact of the horizontal bar on the fork shall be a maximum of 6 mm **(this is equal to half the diameter of the U shaped bracket material)**. The horizontal bar (handle pivot) must be in continuous contact with the pylon fork during the official flights. **(See notes in F2A Judges Guide)**

The pylon fork shall be infinitely adjustable between ~~1100~~ **1000** mm and 1600 mm from the ground and be steadily fixed to the ground surface. Mandatory dimensions are shown in the sketch. The pylon fork in its highest position may not deflect more than 20 mm when it is subjected to a horizontal pull test of 250 N.

Reason: The pylon minimum height of 1100mm is considered to be too high.

**c) 4.1.12 Number of Helpers** **F2 Sub-committee**

*Replace the whole of the paragraph as follows:*

**a) A pilot may not receive telecommunicated information during an attempt/flight.**

**b) Two helpers may assist the pilot in the contest circle.**

**c) In the case of a complete national Speed team, the two helpers must be two of the other team members or one team member and the team manager.**

**d) In the case of an incomplete national Speed team, supporters or members of other incomplete national Speed teams may act as helpers provided that they are registered as such to no more than one national team for the duration of the contest.**

**e)** **In the case where there are two entrants in an incomplete team, the second team member must act as one of the helpers for the other entrant from his own country. In this case, the entrants from the incomplete team may employ only one registered entrant from another incomplete team or one registered supporter from any country or the entrant's team manager as their second helper.**

**f)** **In the case where there is a single entrant from a country the competitor may use two registered helpers. In this case the entrant from the incomplete team may employ up to two registered entrants from other incomplete teams or up to two registered supporters from any countries. Or the entrant's team manager and one other helper as specified above.**

**g)** **In any case, the team manager may also enter the contest circle.**

**Note 1:- A maximum of four people may enter the circle, the pilot plus two helpers and the team manager, the fourth person may only act as an observer.**

**Note2:- All references to "team" mean "Speed Team"**

Reason: This change is necessary in order to help competitors from countries which are not able to send full teams to Championships.

**d) Annex 4A - F2A Judges' Guide** **F2 Subcommittee**
**Rule 4.1.7 Control Handle and Pylon Fork**

*Amend the paragraph as follows:*

- ~~The drawing accompanying this rule shows the dimension between the cross bar bobbins to be a minimum of 60 mm.~~
- ~~The maximum is 79 mm because it must be possible to fit the cross bar between the forks of the pylon.~~

**It is recommended that the locking of the pylon height should be by a clamping mechanism which allows for unlimited adjustment and not by preset increments.**

Reason: To delete unnecessary text and to clarify the preferred locking system to be used to adjust the pylon height.

**F2B**

**e) 4.2.8. Number of Rounds** **France**

*Amend the paragraphs.*

See the reason and the rules in Agenda Annex 7c.

*cont/…*

**F2C**

**f) 4.3.4. Characteristics of a Team Racing Model Aircraft F2 Sub-committee**

*Amend the paragraph as follows:*

~~b) The maximum exhaust outlet area is 60 $mm_2$ at the cylinder liner projected exhaust outlet or crankcase exhaust outlet. If a silencer is used the measurement is taken at the exhaust outlet of the silencer. The piston face at the exhaust outlet shall not be visible from the exterior of the model aircraft when side or front exhaust engines are used.~~

**b) The model shall be equipped with a silencer. The silencer shall reduce the noise at least 15 dB(A) when tested on a standardised audio noise generator. In 2013 – 2016 only side exhaust engines are permitted.**

Reason: At the 2010 Plenary Meeting, the F2 subcommittee was tasked to provide rules to reduce the noise level to about 96 dB. To make it easier to verify silencing efficiency it is proposed to have a silencer that can be measured separately from the model. The test itself is easy and means that there is no need to test the model either on the ground or in the air.

The restriction to side exhaust engines in 2013 – 2016 prevents costly investment in new engines initially and also gives engine manufacturers more time to develop new engines.

Supporting data: F2C models have been tested with prototype silencers fitted. A demonstration of the feasibility of adding a silencer to present F2C engines was done during the 2011 European Championships. Measurement in the centre of the flight circle showed a reduction from 97 dB(A) to 82 dB(A).

**g) 4.3.4. Characteristics of a Team Racing Model Aircraft The Netherlands**

*Add a new paragraph as follows:*

**4.3.4 g The model aircraft shall be fitted with a silencing system that:**

**a) reduces the noise emitted by the engine with 14 dB(A) on a standardized test unit , see 4.3.4 e in case a muffler is used, or**

**b) reduces the overall noise emitted from the model aircraft to 84 dB(A), measured in the piloting circle as described in 4.3.5 e in case no separate muffler (that can be tested on a standardized unit) is used.**

Reason: Noise reduction for F2C is necessary in order to keep the sport acceptable for governing bodies, social acceptance of the sport in general, and reducing the loss of flying sites due to environmental demands

Supporting data: The reduction of noise in this order is suitable with relative simple mufflers, as demonstrated during the EC in Poland this year.

Adding a muffler to the existing models/engines does not lead to necessary investments in new engines/models

This rule proposal is still in line with 4.3.4 b (60mm2 section area), this rule should not be changed!

The second option for acceptable noise levels beside the use of mufflers is introduced in order to allow technical developments in engine construction in a way

that reduces noise emitted , but does not use a separate muffler . As long as the result is similar, all techniques may be used.

The control line SC possesses a report, issued by Rob Metkemeijer with all the supporting data and test results of the use of a muffler and its effects.

**h) 4.3.5 Technical Checks The Netherlands**

*Add a new paragraph as follows:*

**e. Noise test**

**The noise test has to be carried out with a calibrated sound level meter according to IEC 61672-1 2002 Class 1 with a wind screen .**

**The "A" frequency weighting shall be used.**

**The performance of the muffler, when a muffler is used shall be done by using an electric acoustic actuator, both during processing and contest.**

**This actuator can be an 1" horn driver, fitted with an adaptor to fit the inside the intake side of the muffler.**

**The actuator will be fed by white noise with a limited bandwidth of 500-4000Hz, and an electric power input of approximately of 1 Watt.**

**The measured difference of sound level measured at the top of the actuator with and without muffler shall be at least as specified in 4.3.4.q**

**In case no muffler is used, the sound level shall be measured with the described sound level measuring device at the end of official practice, with just the to be checked team flying solo, in the "race" setting of the model.**

**The sound level testing meter shall be held in a height of app. 1,5 meter over the piloting circle.**

**The sound level shall not exceed the value specified in 4.3.4.q.**

Reason: These rules are a necessary addition if rule 4.3.4.q is accepted.

Supporting data: This is the same muffler measuring set up as used in Class F3D Pylon racing.

**i) 4.3.10 Team Qualification and Classification Bureau**

*New paragraph as follows:*

**4.3.10 f) In the case where any of the finalists tie for first or second place, the teams' next best times will be used as a tie break. If the tie still exists after this, then the next best times for the teams will be taken into account and so on until the tie is broken. The times will be taken firstly from the semi-finals and then from the qualifying races.**

Reason: It can happen that there is a head heat for the 1-2-3 places in a Team Race final therefore a tie-break rule is required. There are existing rules for tie-breaks in the heats and the semi-finals.

**j) 4.3.10 Team Qualification and Classification** **France**

*Add a new paragraph as follows:*

**f) A specific junior final will be flown if, at least, three junior teams have recorded a time after the eliminating races.**

**The result of this junior final will be taken into account only for the specific junior classification, and will not change the general placing.**

Reason: Correction of a mistake : the paragraph has been deleted by error in the 2009 Edition of the Sporting Code Volume F2.

**Technical Secretary's Note:** The 2008 proposal of the full re-write of the F2C rules did not contain this paragraph. This is the reason the paragraph was not in the 2009, or future, editions of the Code.

**k) 4.3.12 Judges and Timekeepers** **France**

*Amend the paragraph as follows:*

c) The time retained is the average of the registered time, made up to the next upper 1/10$^{th}$ second. A maximum tolerance of 0,18 seconds is allowed between ~~watches~~ **the median time watch and each of the two other times watches (lower and higher ones)**. Any single watch exceeding this tolerance shall not be counted in the average. **In the case of both the lower and upper recorded times exceeding the tolerance, the team with be given the choice between having a reflight or accepting the registered official time corresponding to the median time. Once the team has made its choice, the decision is irreversible.**

Reason: Clarification of the interpretation of the tolerance between watches and how to do when only one registered time is remaining.

**F2D**

**l) 4.4.8. Streamer** **F2 Sub-committee**

*Change the first paragraph as follows:*

The streamer shall consist of double weight crepe paper (80 g/m$^2$) or any replacement of equivalent strength, not less than ~~2,25~~ **3** m or more than ~~3~~ **3,5** m long and 3 +/ 0,5 cm wide, fixed to a sisal (or any replacement of equivalent strength) string of ~~3,25~~ **2,75** m minimum length.

All streamers must be of the same length.

There shall be a clearly visible ink mark ~~2,5~~ **2** m from the junction of the string and streamer.

Reason: To allow for more cuts and hopefully get away from the tactic of giving away your streamer in one cut.

**m) 4.4.9. Heat from Start to Finish** **F2 Sub-committee**

*Amend paragraph k) as follows:*

Only the streamer/string may be moved around the circle by the mechanics/pilot. Models in the pitting area may not be moved, other than to maintain a safe distance of approximately 5 metres from the opponent's mechanics. ~~Unless otherwise~~

~~directed by the judges, it is the rearmost team's responsibility to move back before pitting~~. Under conditions of heavy wind, the Judges can allow models with a non-running engine to be moved to a safer starting position.

Reason: None given.

*Amend paragraph l) as follows*

When moving around the circle the mechanics/pilots must be on the outside of the pitting circle. Within ~~the pitting area and~~ flight circle, mechanics may only move radially inward and outward. **Within a pit crew/teams pitting area they are free to move around and also choose where to enter and step out of the pitting circle.**

Reason: Clarification.

n) **4.4.10. Scoring** **F2 Sub-committee**
**4.4.12. Penalties and Disqualifications**

*Amend the paragraphs.*

See the reason and the rules in Agenda Annex 7d.

**o) 4.4.11. Reflights** **F2 Sub-committee**

*Amend paragraph a) as follows:*

In the event of a line tangle ~~resulting in the control line(s) breaking~~ and only one model aircraft being grounded, making it impossible to clear the line tangle.

Reason: Giving a reflight when there is a line tangle that is impossible to clear has nothing to do with if the lines break or not.

*Amend paragraph c) as follows:*

At the discretion of the Judges/Circle Marshal if an unfair **or unsafe** situation occurs and none of the pilots/mechanics is to blame.

Reason: Safety. If a situation occurs where safety is a matter the Judges should be able to stop the match and give a reflight.

**p) 4.4.12. Penalties and Disqualifications** **United Kingdom**
**Section C**

*Amend the paragraph n) as follows:*

n) If he releases the handle ~~and~~ **or** the safety strap separates from handle or wrist, or **if** he removes the safety strap, for any reason, while the model aircraft is flying.

Reason: As written, it is not clear that there are three separate disqualifiable incidents in the rule.

**q) Annex 4D – F2D Judges' Guide** **F2 Subcommittee**
**Processing 3**

*Amend the paragraph b) as follows:*

~~that the model is marked with the FAI License Number (minimum size specified in the ABR volume of the Sporting Code.)~~

Reason: To conform to the ABR Section of the porting Code.

**r) Annex 4D – F2D Judges' Guide** **F2 Subcommittee**
**4.4.8 Streamer**

*Amend the first paragraph as follows:*

The mechanic(s)/pilot may not ask for another streamer just to save time in a heat; for example if it is wrapped around the lines **or if a fly-away occurs. If a fly-away occurs and the model is stuck up in a tree or a net or is unable to be reached the pilot may choose to continue with a new full length streamer instead of having a reflight (if granted be the Judges).**

Reason: Clarification.

**s) Annex 4D – F2D Judges' Guide** **F2 Subcommittee**
**4.4.9. The Heat from Start to Finish**

*Amend paragraph k) as follows:*

In conditions of heavy wind, a grounded model which does not have a running engine may be moved to a safer launching position under supervision by the Judges. While doing this, the mechanics are not allowed to carry the model aircraft and lines over an opponent's grounded model aircraft and/or pitting crew. Parts of a crashed model aircraft are not considered a grounded model aircraft. **It is a crashing/landing team's responsibility to maintain a safe distance. If two teams crash/lands close to each other it is the rearmost teams responsibility to move backwards unless they are blocked by the other teams second model. This will be supervised by the Judges and they will advise the teams if any unclear situation occurs.**

Reason: None given.

*Amend paragraph l) as follows:*

The mechanic(s)/pilot may move around ~~in the vicinity~~ **within their pitting area. A teams pitting area is considered to be the place where they have one or both of the models and a distance of approximately 2 metres on each side of the model(s).**

Reason: Clarification.

**t) Annex 4D – F2D Judges' Guide** **F2 Subcommittee**
**4.4.11. Re-Flights**

*Amend paragraph c) as follows:*

A reflight may be granted if, for instance, the model is stuck high up in a tree or in a safety net where it will take too long, or be impossible, to retrieve the streamer**. The pilot may choose to continue with a new full length streamer instead of accepting the granted reflight. It is also possible for the Judges to grant a reflight if an unsafe situation occurs and continuing the heat would cause risk to the competitors or others.**

Reason: Clarification.

**u) Annex 4D – F2D Judges' Guide** **F2 Subcommittee**
**4.4.12. Penalties and Disqualifications**
**Section A**

*Amend paragraph b) as follows:*

In order to reach a grounded model the mechanics are not allowed to cut across the flying or pitting circle (See sketch). If a model has crashed close to the centre circle, it is especially important that the mechanic(s) are observant regarding the point at which to enter the circle.

A penalty should be given if, for example, the pilot picks up the crashed model on one side of the centre circle and brings it out on the opposite side of the circle.

**If the mechanics run in the pitting area and jumps over the other teams model or lines they should be disqualified instead of getting minus 40 points as this is a safety issue.**

Reason: Clarification.

**v) Annex 4D – F2D Judges' Guide** **F2 Subcommittee**
**4.4.15. Judges and Timekeepers**

*Amend the paragraph b) as follows:*

All scorers should count cuts as well as record airtime for the competitor. Every scorer should have a notepad where he/she can make records of the number of cuts as well as the air time (after the heat). A good way is to divide the six scorers into three pairs and spread them around the circle. Each pair will consist of a scorer for each pilot and they should be instructed to talk to each other during the scoring. If, after the heat, the scorers have a different cut count they must confer and try to come to a decision. They may also ask the Judges for advice. **It is recommended to use three Scores per competitor also at World Cup contests.**

Reason: Clarification. To improve scoring at World Cup contests.

**w) Annex 4E - F2 World cup Rules** **F2 Subcommittee**
**4.E.3 Contests**

*Amend paragraphs a) and b) as follows*

a) ~~a maximum of two contests in each class may be selected for any one country unless the particular country extends over three or more time zones, when two competitions may be organised and held within each time zone.~~ **Any country may host two competitions on its own behalf** unless the particular country extends over three or more time zones, when **it may host** two competitions **on its own behalf** within each time zone.

**Additionally, any country may host a maximum of one competition on behalf of another organising country regardless of whether or not the host country extends over three or more time zones.**

b) **E**ach competitor (team in F2C) may count only one competition from each **organising** country in Europe (taking the better score for any European **organising** country in which he has scored in two competitions). When two competitions per time zone have been organised and held within a time zone, the better score per time zone counts.

Reason: Currently, any country may host multiple contests on behalf of other organising countries and the members of the host country can thus increase their chances by attending multiple contests in their own country. They can then have all three counting competitions for their total score from contests within their own country. This is against the intention and spirit of the F2 World Cup.

**x) Annex 4F – Control line Organisers' Guide** **F2 Subcommittee**

*Add a new section as follows:*

**8.8 Recording of Results**

**The organisers shall use software programmes which are approved by the F2 sub committee to record the Championships results. Where possible results shall be transferred electronically between contest directors and the Championship secretariat.**

Reason: This new text is intended to reduce the workload on Championship organisers by providing them with proven software. It will also minimise the possibility of mistakes in recording of the results, and to produce the results in a standard format.

**y) Annex 4F – Control line Organisers' Guide** **The Netherlands**

*Amend paragraph 8.5 as follows:*

**Sound level measuring device as specified in 4.3.5.e**

**Sound level test actuator, as described in 4.3.5.e**

Reason: If rules for noise reduction are accepted, this equipment is necessary for processing.

# 12.6 Section 4C Volume F3 - RC Soaring

**F3F**

**a) 5.8.2. Characteristics of Radio Controlled Slope Gliders** **Germany**

*Insert the relevant template without the gap for the tow-hook*

Characteristics of Radio Controlled Slope Gliders

Maximum surface area (St) ..... 150 dm2

Maximum flying mass . ..... 5 kg

Loading on St ..... between 12 and 75 g/dm2

Minimum radius of fuselage nose……..7.5 mm in all orientations ~~(see F3B nose definition for measuring technique).~~ **(see template)**

*Template for nose radius to be inserted here.*

Reason: By adding the relevant template the reference to F3B is no longer necessary.

**b) 5.8.2. Characteristics of Radio Controlled Slope Gliders** **Germany**

*Eliminate the lower limit of the wing-loading*

Characteristics of Radio Controlled Slope Gliders

Maximum surface area (St) ..... 150 dm2

Maximum flying mass . ..... 5 kg

Loading on St ..... ~~between 12 and~~ **≤**75 g/dm$^2$

Minimum radius of fuselage nose 7.5 mm in all orientations (see F3B nose definition for measuring technique).

Reason: Specifying a minimum wing loading is senseless and irrelevant for F3F model aircraft

**c) 5.8.2. Characteristics of Radio Controlled Slope Gliders** **Germany**

*Add a new final paragraph:*

**Any transmission of information from the model aircraft to the competitor is prohibited, with the exception of signal strength and voltage of the receiver battery. Any additional/other use of any kind of transmission (sending or receiving data of any kind e.g. height, climb or decline, temperature, wind speed, humidity, etc.) and telecommunication devices (including like transceivers, and telephones, headphones, earphones, etc) in the field by competitors, helpers or team managers is not allowed. If an infringement to this paragraph occurs the flight will be penalized with 1000 points. The penalty of 1000 points will be a deduction from the competitor's final score and shall be listed on the score sheet of the round in which the penalisation was applied.**

Reason: With the technological impact of the possibilities of modern transmission not only devices like transceivers, telephones, headphones, etc. shall be banned from the competition airfield. Any kind of data transmission other than the necessary

data for piloting the model aircraft should be prohibited. Especially at competitions with any kind of gliders any means of technological support to facilitate detection of thermal activity and the supply of data of the conditions of the surrounding air should be prohibited.

**d) 5.8.6. Cancellation of a flight** **Germany**

*Amend paragraph h) as follows:*

h) the model (ie ~~the centre of gravity~~ **any part of the model aircraft)** fails to pass above a horizontal plane, level with the starting area, within five seconds of exiting the course.

Reason: The speed of the models is nowadays very high, that the helpers at the sighting device are not able to decide which part of the model aircraft has crossed the plane, especially not the centre of gravity.

On the other hand, the wording should be equal to the wording when a model aircraft crosses the Bases A and B and safety plane.

**e) 5.8.9. The Speed Course** **Germany**

*Removal of three words and addition of six words in 5.8.9.*

The speed course is laid out along the edge of the slope and is marked at both ends with two clearly visible flags. The organiser must ensure that the two turning planes are mutually parallel and perpendicular to the slope. Depending on the circumstances, the two planes are marked respectively Base A and Base B. Base A is the official starting plane. At Base A and Base B, an official announces the passing of the model aircraft (ie ~~the fuselage nose~~ **any part of the model aircraft)** with a sound signal when the model is flying out of the speed course. Furthermore, in the case of a signal announces the first time the model is crossing Base A in the direction of Base B.

Reason: The speed of the models is nowadays very high, that the officials at the sighting device are not able to decide which part of the model aircraft has crossed the plane.

On the other hand, the wording should be equal to the wording when a model aircraft crosses the safety plane and horizontal plane after leaving the speed course.

**F3J**

**f) 5.6.1.3. Characteristics of Radio Controlled Gliders** **Germany**

*Amend paragraph c) as follows:*

Any transmission of information from the model aircraft to the competitor is prohibited, with the exception of signal strength and voltage of the receiver battery. **Any additional/other** use **of any kind of transmission (sending or receiving data of any kind eg height, climb or decline, temperature, wind speed, humidity, etc) or** devices **such as** transceivers, telephones, **headphones, earphones, etc)** in the field by competitors, helpers or team managers is not allowed. **If an infringement of this rule occurs, the flight will be penalized with 1000 points. The penalty of 1000 points will be a deduction from the**

**competitor's final score and shall be listed on the score sheet of the round in which the penalisation was applied.**

Reason: With the technological impact of the possibilities of modern transmission not only devices like transceivers, telephones, headphones, etc. shall be banned from the competition airfield. Any kind of data transmission other than the necessary data for piloting the model aircraft should be prohibited. Especially in thermal duration soaring any means of technological support to facilitate detection of thermal activity and the supply of data of the conditions of the surrounding air should be prohibited to keep emphasize of the competitors 'air reading' skills.

**g) 5.6.1.4 Competitors and Helpers** **USA**

*Amend paragraph b) as follows:*

b) Each competitor is allowed three **four** helpers. ~~When a team manager is required, he is also permitted to help the competitor~~. When a team manager is available he is considered one of the four helpers. A maximum of two helpers are permitted for towing during the launch as described in 5.6.8.2. **During the flyoffs any four helpers are permitted.**

Reason: At the 2008 WC there was a discussion that the current rule penalizes smaller teams where the team manager is also a pilot. In that case the TM is only allowed 3 helpers. The rule is also unfair in the flyoffs if more than one team member (or the TM makes the flyoffs) allowing differing numbers of helpers. Some previous WC events have ignored this rule for the flyoffs. The simple solution is to allow 4 helpers at all times. This also clarifies the helper rule for non-WCh contests where there is no team manager "required". This makes the rule consistent for all contests and all team sizes.

**h) 5.6.4 Re-Flights** **USA**

*Amend sub-paragraphs of the fourth paragraph and replace the final paragraph in its entirety:*

The new working time is to be granted to the competitor according to the following order of priorities:

**1. if the event causing the reflight occurs in the first 30 seconds of the slot, the entire group will be called down and a new prep and working time will be started. No results from the aborted slot will be recorded.**

~~1~~ **2**. in an incomplete group, or in a complete group on additional launching/landing spots;

~~2~~ **3**. if this is not achievable, then in a new group of several (minimum 4) re-flyers. **The reflight group can be completed by accumulating pilots requiring reflights from multiple flight groups and flown at a time chosen by the CD**. Other competitors **may be** selected by random draw to the number of 4 **if required**. If the frequency or team membership of the drawn competitor does not fit or the competitor will not fly, the draw is repeated;

~~3~~ **4**. if this is also not achievable, then with his original group at the end of the ongoing round.

~~In priority case 2 and 3, the better of the two results of the original flight and the re-flight will be the official score, except for the competitors who are allocated the new~~

~~attempt. For those the result of the re-flight is the official score. A competitor of this group who was not allocated the new attempt will not be entitled to another working time in case of hindering.~~

**Scores for randomly selected pilots will only be used to calculate the group scores for the competitors who are allocated the new attempt. For competitors who are allocated the new attempt the result of the re-flight is the official score. A competitor of this group who was not allocated the new attempt will not be entitled to another working time in case of hindrance.**

Reason: The current process for allocating reflight groups has 2 problems – 1) it slows down the contest as every round with a reflight requirement requires a new reflight group. 2) Selecting pilots at random to participate in the reflight and awarding them the better of their 2 scores provides an unfair luck factor – it is the "reflight lottery". This proposal can speed up the contest as you can group multiple reflight pilots into a single group. This group might be flown at the end of the day or other CD selected time. It would require fewer pilots to be selected at random to participate. It may require more than one group to be flown as a result of frequency or team conflicts, but then would be no worse than the current process. This proposal also eliminates the reflight lottery. Pilots can no longer be saved from a bad flight by being selected in the lottery. Pilots who choose to fly in the reflight group are flying as "spoilers" in order to provide competition for the reflight pilots. This is no different from a current competitor that has a 1000 already and chooses to fly as a spoiler. This proposal attempts to limit the luck factor in reflight selection. Since the majority of reflights result from mishaps at the start of the slot, this proposal provides a fair restart with no advantage for pilots that are randomly selected to participate in the reflight.

**i) 5.6.8.7. Towlines b) Bulgaria**

*Amend paragraph b) as follows:*

The length of the towline shall not exceed ~~150~~ **100** metres when tested under a tension of 20 N.

Reason; Short lines will make more difficult to reach 10 minutes in no thermal or hi wind conditions. One more step to separate tight results.

**F3K**

**j) 5.7.2.2. Unintentional jettisoning F3 Soaring Sub-committee**

*Amend the paragraph as follows:*

If the model glider suffers any unintentional jettisoning during the flight, then the flight shall be scored zero ~~according to 5.3.1.7~~. If, during the landing, any unintentional jettisoning occurs (ref. 5.7.6.) after the first touch of the model glider with ground, any object or person, then the flight is valid..

Reason: Wrong reference. Reference not necessary.

**k) 5.7.9.3. Landing window** **F3 Soaring Sub-committee**

*Delete the last sentence of the first paragraph in article 5.7.9.3 Landing window.*

**5.7.9.3.** Landing Windows

No points are deducted for flying over the maximum flight time or past the end of the working time. Immediately after the end of the working time, or after each attempt for the task "all-up-last-down", the 30 seconds landing window will begin. Any model gliders still airborne must now land. ~~If a model glider lands later, then that flight will be scored with 0 points.~~

The organiser should announce the last ten seconds of the landing window by counting down.

Reason: The proposed change corrects conflict of penalties. In article 5.7.9.4 there is already stated a penalty for flying outside the testing time, working time or landing window. With the present wording it is not clear whether the 100 points penalty should be also applied.

**l) 5.7.9.4. Flight testing time** **F3 Soaring Sub-committee**

*Amend the fourth paragraph as follows:*

**5.7.9.4**. Flight testing time

After all the model gliders of the previous group have landed, the competitors flying in the next group receive at least 2 minutes of flight testing time, which is part of the preparation time. During this flight testing time the competitors are allowed to perform as many test flights inside the start and landing field as necessary for checking their radio and the neutral setting of their model gliders.

Each competitor has to ensure that he is finished in time with his test flights and is ready to start when the working time of the group begins. The last 5 seconds before the start of the working time have to be announced by the organiser.

A competitor will receive a penalty of 100 points if he starts or flies his model glider outside of the working **time,** ~~and preparation~~ **flight testing** time **and landing window** of his assigned group.

Competitors may test fly before the transmitter impound and after the last working time of the day.

Reason: Consequent change. In 2008 the flight testing time was introduced. The fourth paragraph of the article 5.7.9.4 didn't reflect this change.

***Volume F3 Helicopter begins overleaf***

# 12.7 Section 4C Volume F3 - Helicopter

**F3C**

**a) 5.4.10. Scoring** **Germany**

*Amend first paragraph as follows:*

Each manoeuvre is given a score between 0 and 10 (including half) points by each judge. A new score sheet is issued to each competitor for each round. Only the competitor's number (no name or nationality) will appear on the score sheet. Any manoeuvre not completed shall be scored zero (0) points. If a manoeuvre is scored zero points all judges must agree. **Manoeuvres must be performed where they can be seen clearly by the judges. If a judge, for some reason beyond the control of the competitor, is not able to follow the model aircraft through the entire manoeuvre, he may set the "Not Observed" (N.O.) mark. In this case, the scoring tabulators will, as the judge's mark for that particular manoeuvre, enter the average of the numerical marks given by the other judges, rounded down to the nearest whole number.** There shall be an official located on the field where any flight over the prohibited area can be observed. The prohibited area is the shaded area in Figure 5.4.A behind the judges' line. The area extends to infinity to the left, right and rear. A visual or audible signal shall be given to indicate such over flights. Competitors flying over this area will be penalised by scoring zero (0) points for the current flight. However, the judges shall score all manoeuvres. If an infringement has been made, the scores will be deleted from all score sheets after the flight. In addition, there shall be no score when:

Reason: Clarification in order to improve the classification. **Request immediate implementation.**

**Technical Secretary's Note:** This clarification, which some may consider to be a rule change, has been submitted out-of-step with the rule change cycle. Only ***urgent*** clarifications may be considered out-of-step with the rule change cycle. F3C has managed perfectly well for many years with the existing rule.

**b) 5.4.12. Judging** **Bureau**

*Amend the paragraph as follows:*

At Continental and World Championships the organiser must appoint a panel of five judges for each round/flight line. When the entry exceeds 55, two flight lines must be used. The judges must be of different nationalities and must be selected from the current CIAM list of international judges. When using two separate panels, the organiser is allowed to use two judges of the same nationality, one on each panel. Those selected must reflect the approximate geographical distribution of teams participating in the previous World Championship with the final list approval by the CIAM Bureau. **At least 20% but not more than 40% of the judges must not have judged at the previous World Championships.**

Reason: Rotation of judges in line with ABR A.11.

**c) 5.4.13 Organisation** **Norway**

*Amend paragraphs three and five as follows:*

PREPARATION TIME

A competitor must be called at least 5 minutes before he is required to enter the start circle. A start circle 2m in diameter will be provided away from the flight line, spectators, competitors and model aircraft (see FIGURE 5.4.A). When the previous competitor's flight time reaches 6 minutes the flight line director can give the signal to start the engine. **In the case of electric motors, the battery must not be connected before signal has been given.** The competitor is given 5 minutes to start the engine and make last minute adjustments. The model aircraft may only be hovered in the start circle up to 2m and must not be rotated beyond 180º left or right relative to the competitor. If the model aircraft is rotated beyond 180º the flight is terminated.

RESTRICTIONS

After starting the model aircraft in the start circle the model aircraft must be flown at 2m to the helipad along the model entry path shown on the Contest Area Layout (Figure 5.4.A). The pilot may test hover the helicopter on the helipad and reposition it, before announcing the start of the first manoeuvre, to accommodate wind conditions. If the engine stops the flight is terminated.

**After the flight: In case of electric motors, the battery must be disconnected before the pilot brings the helicopter over the judging line**.

Reason: Safety. Due to the special danger by having the battery connected in the public area.

**d) 5.4.14 Manoeuvre schedules** **F3 Heli Sub-committee**

**Technical Secretary's Note:** An amendment is needed to the second sentence as it conflicts with the proposed additional text in the third sentence.

*Amend the paragraph as follows*:

PERFORMANCE OF THE SCHEDULES

The competitor must stand in the 2m circle (labelled P in Figure 5.4.A - F3C Contest Area Layout) located 6m in front of the centre judge. Before the start of the first manoeuvre the competitor must fly the model aircraft at 2m altitude to the 1m circle of the helipad. **The pilot or his helper may also carry the model to the helipad.** The model aircraft may face left or right but must be parallel with the judges' line. Each hovering manoeuvre ends with a landing on the helipad and after each landing the model aircraft may be repositioned (but maintains same direction) prior to the next take off. After completing the hovering manoeuvres the competitor is allowed one free pass to set up for the flying sequence. All aerobatics manoeuvres must be performed in an airspace that will allow them to be clearly seen by the judges. This airspace is defined by a field of view up to 60º above the horizon and between lines 60º to the right and left of judges 1 and 5. The non-observance of this rule will be penalised by a loss of points. The aerobatics manoeuvres must be performed in a smooth flowing sequence, with a manoeuvre performed on each pass before the judges. There are no restrictions on turnaround manoeuvres. The competitor must perform each listed manoeuvre only once during a flight. The competitor or his caller must announce the name (number) and start and finish of each manoeuvre. A manoeuvre performed out of sequence will result in a zero score for that

manoeuvre only. Before the autorotation manoeuvre the competitor is allowed another free pass to accommodate a possible change in wind direction.

Reason: The rule made about hovering the helicopter to the helipad has earlier been based on safety and with the reason that a piston engine helicopter may stop on the way to the helipad. With the new stronger electric Helicopters it is advisably to carry the helicopter to the helipad. By making it possibility to carry the helicopters as an option, the pilot is free to decide what he prefers.

**e) Annex 5D – F3C Manoeuvre Descriptions & Diagrams F3 Heli Sub-committee**
**5D.2 P10 Autorotation with two 90°turns – (DU)**

*Amend the paragraph as follows:*

MA flies at a minimum altitude of 20 m. Manoeuvre begins when MA crosses an imaginary plane that extends vertically upward from a line drawn from the centre judge out through the helipad. MA must be in the autorotation state when it cuts this plane. The engine power must be reduced to idle (or off) at this point and the MA must be descending. The first 90º turn must be made after the MA has made 1/3 of the total descent. After this turn the MA must fly straight before the next turn is made after the MA has made 2/3 of the descent. The MA then flies straight down to the helipad. Each leg of the manoeuvre must be a minimum of 10m in length. The descent rate must be constant from start to a point just before touchdown on the helipad. The flight path of the MA must appear as an open square when viewed from above, starting at the vertical plane and ending at a line drawn from the centre judge through the helipad. **If the helicopter flies out of the 120°window dur ing the second turn it shall not result in a downgrade of 2 points.**

Scoring criteria for landing: See ANNEX 5E Paragraph 5E.6.10.

Reason: It has never been the intention that this manoeuvre should be forced inside the 120°box. In order to make the manoeuvre inside the box the autorotation has to be done in a steep and tight manner. **Request immediate implementation.**

**f) Annex 5E – F3C F3C Judges Guide F3 Heli Sub-committee**
**5E.6.3 STOPS**

*Amend the paragraph as follows:*

For the hovering manoeuvres the stops must be equal to or greater than 2 seconds in duration if not otherwise specified. All stops must be of the same duration. If a stop is less than 2 seconds long, a downgrade of half a point should be made. If a stop is greater than 2 seconds, no downgrade should result as long as the MA does not move.

**In manoeuvres containing stops of unspecified duration (but are a necessary part of the manoeuvre) no downgrade shall be made for the stops.**

Reason: There have been questions about downgrade unspecified stops. This is clarification makes it possible for the pilot to perform the manoeuvre he finds best. **Request immediate implementation.**

**F3N**

**g) 5.11.5 Number of Model Aircraft** **Bureau**

*Amend the paragraph as follows:*

The number of MA is not limited. ~~One MA may be used by several pilots~~.

Reason: To bring F3N in line with all the classes in all the other categories where it is not permitted to share model aircraft.

**h) 5.11.7 Scoring** **Bureau**

*Amend the paragraph as follows:*

The number of judges is at least three, and no more than five. **At least 20% but not more than 40% of the judges must not have judged at the previous World Championships.** In the Freestyle ……..

Reason: Rotation of judges in line with ABR A.11.

***Volume F3 Pylon Racing begins overleaf***

# 12.8 Section 4C Volume F3 – Pylon Racing

**F3D**

**a) 5.2.18 Timekeeping and Judging** **Germany**

To initiate a project to substitute human pylon judges for an electronic judging system for all pylons as mentioned in 5.2.16.a.

Reason: Countries and model airplane clubs hosting pylon events face big problems providing enough helpers appointed as pylon judges. There is a need of 9 persons to judge the three pylons. Because of the high speed of the model airplanes, it is difficult to require a constant judging performance during the days of race. Concentration is disappearing and wrong decisions are the consequence. Therefore even more qualified people as judges are needed to alternate - a demand almost impossible to fulfil. In order to guarantee the best possible judging, an electronic judging system is to be developed.

**b) Add a new class F3T** **Germany**

*Add a new Pylon Racing class.*

See the reason and the rules in Agenda Annex 7e.

***Volume F4 Scale begins overleaf***

# 12.9 Section 4C Volume F4 - Scale

**F4C**

**a) 6.1.4 Judges** **Norway**

*Amend the first paragraph as follows:*

The organiser of Scale R/C World or Continental Championship (F4C) shall appoint three (or six for two panels) judges to do static judging, plus a separate panel of five to judge the flying. **If there are more than 50 competitors at a World Championship, then the organisers can use two flightlines with three judges on each flightline.**

Reason: To get more flights done in a shorter time period to save both time and money for all involved.

**b) 6.1.6. Remarks** **F4 Sub-committee**

*Amend paragraph h) as follows:*

…

No modification of the model aircraft except exhausting of fuel and cleaning of the model aircraft is allowed, ~~but any items which were dropped during the official flight (eg bombs, tanks), must be replaced on the model aircraft.~~ If found to be overweight, then …

Reason: The ordinances' weight is negligible and impossible to control as some will be destroyed during the flight, and we prefer to keep them out of the weight control.

**c) 6.1.8 Helpers** **F4 Sub-committee**

*Amend the first paragraph as follows:*

Each competitor is permitted one (1) helper during a flight. An additional helper may assist with engine starting and pre-flight preparation, should the competitor require this. All but one helper must retire clear of the flying area before the ~~flight~~ **take-off** is called. For radio control events no helper may touch the transmitter during an official flight.

Reason: To better indicate when the flight begins.

**d) 6.1.10. Judging for Fidelity to Scale and Craftsmanship** **Spain**

*Amend as follows:*

| | | K Factor | |
|---|---|---|---|
| 1. | Scale accuracy | | |
| | a. Side view | ~~13~~ | **12** |
| | b. End view | ~~13~~ | **12** |
| | c. Plan view | ~~13~~ | **12** |

cont/…

| | | | |
|---|---|---|---|
| 2. | Colour | | |
| | a. Accuracy | 3 | |
| | b. Complexity | 2 | |
| 3. | Markings | | |
| | a. Accuracy | 8 | |
| | b. Complexity | 3 | |
| 4. | Surface texture and scale realism | | |
| | a. Surface texture | 7 | |
| | b. Scale realism | 7 | |
| 5. | Craftsmanship | | |
| | a. Quality | 12 | |
| | b. Complexity | 5 | |
| 6. | Scale detail | | |
| | a. Accuracy | ~~9~~ | **8** |
| | b. Complexity | ~~5~~ | **4** |
| **7.** | **Operational scale details** | | |
| | **a. Accuracy** | **3** | |
| | **b. Complexity** | **2** | |

Total K factor K = 100

Items .1 to be judged at a minimum distance of 3m in F4B, and 5m in F4C**/G**, from the centre of the model aircraft. Judges must not touch the model aircraft.

Reason: According with the actual rules some operational scale details as cockpit light, operational stick, landing gear sequence and sped, operational doors, cabin lights, etc can`t have the just score according with the work needed to realize, respect others prototypes without this operational scale details even the prototype haven't this possibility

**e) 6.3.2 Noise** **F4 Sub-committee**

*Amend the first paragraph as follows:*

If a model aircraft appears to be noisy in flight, the **Chief** Judge~~s~~ or ~~Contest/~~Flightline Director can demand a noise test. The transmitter and the model aircraft will then be impounded by the flightline official immediately following the flight. No modification or adjustment to the model aircraft shall be permitted other than refuelling. If the model aircraft features variable pitch propeller(s), the noise test will cover the total variation of pitch. The model aircraft shall be tested by a noise steward and in the event the model aircraft failing the noise test it will be re-tested by a second noise steward, using a second noise meter. If the model aircraft **also** fails the retest, the score for the preceding flight shall be zero**, this is a final decision.** The sonometers must be of good quality with a test system (reference noise).

Reason: To clearly show that the noise test cannot be protested.

**f) 6.3.3. Official Flights** **F4 Sub-committee**

*Amend paragraph a) as follows:*

a) Each competitor will be called to fly three ~~times~~ **rounds** and must execute an official flight within the required time limit (see 6.3.4.) on each occasion to be eligible for flight points for that flight.

Reason: We do fly rounds, not times

**g) 6.3.3. Official Flights** **Norway**

*Amend paragraph a) as follows:*

a) Each competitor will be called to fly three times, and must execute an official flight within the required time limit (see 6.3.4.) on each occasion to be eligible for flight points for that flight.

**If there are more than 50 competitors in a WCH. the organiser is allowed to use two flightlines. In that case, the competitors will fly four rounds (two in front of each panel) and the and lower score from each panel will be deleted.**

Reason: Try to make the championship shorter and save money to competitors and organizers. See also change in number of judges (6.1.4. Judges.)

**Technical Secretary's Note**: There is text missing from the latter part of the second sentence of the proposal indicated in grey highlight.

**h) 6.3.7. Optional Demonstrations** **F4 Sub-committee**

*Amend the second paragraph as follows:*

Competitors may demonstrate up to two different flight functions of their own choice, but must ~~be prepared to~~ supply evidence that each function was performed by the prototype modelled. Competitors must indicate **on the declaration form and** to the **Chief** Flight Judge~~s~~ the nature of the demonstration(s) before going to the flight line).

Reason: The declaration form is already modified and the rules needs catching up.

**i) 6.3.7. Optional Demonstrations** **F4 Sub-committee**

*Amend the third paragraph as follows:*

Selection must be indicated on the score sheet and given to judges before commencing the flight. The options may be flown in any order. Options A (Chandelle), N (Overshoot), R (Flight in triangular circuit), S (Flight in rectangular circuit), T (Flight in a straight line at constant height), ~~W (Wing over)~~ and Z (Procedure Turn) may only be chosen by subjects certified and approved as "non-aerobatic" on the Competitor's Declaration Form (Annex 6E.1). These are aircraft designed with limited manoeuvrability where the original prototypes of which were restricted by the manufacturer or licensing government agency.

Reason: Consequence of changed description of the manoeuvre, available to all aircraft.

**j) 6.3.11. Safety** **F4 Sub-committee**

*Amend the text as shown.*

c) If a model aircraft is, in the opinion of the **Chief** Judge or ~~Contest/~~Flightline Director, unsafe or being flown in an unsafe manner, they may instruct the pilot to land.

Reason: These two persons are always present at the flightline and are also the authorities at the flightline, the Contest Director might be elsewhere and the Judges speaks through the Chief Judge. This will also bring the text in line with the same text in other paragraphs.

**k) Annex 6A – F4 Judges Guide for Static Judging** **F4 Sub-committee**
**6A.1. General**

*Amend paragraph a) as follows:*

a) Before static judging commences the judges should review the whole entry ~~at a distance not closer than 3 metres~~ in order that a standard be established for grading the points to be awarded. The entries should be studied in relationship to each other from a superficial aspect before detailed examination commences. The Chief Static Judge should take this opportunity to ensure that all judges are of a similar mind as to what is involved, particularly with respect to complexity aspects where these are applicable.

Reason: Due to the layout of the hangars used it is usually impossible to enforce this distance and it really does not matter if the judges gets closer, but this will make the walk around much easier and quicker.

**l) Annex 6A – F4 Judges Guide for Static Judging** **F4 Sub-committee**
**6A.1. General**

*Amend paragraph c) as follows:*

c) A Chief Judge shall be appointed as a spokesman for the static judges, and if two panels of static judges are to be used, the second panel will have a Deputy Chief Judge appointed to assist the Chief Judge in his work. The Chief/Deputy Chief Judge should discuss the merits and criticisms of each item in his responsible area with the other judges in his team, ~~making~~ **asking for** suggestions for the scores.

Reason: It is wrong that the Chief Judge should influence the other judges, much better that the other judges suggests the score and then discuss with the Chief.

cont/…

**m) Annex 6A – F4 Judges Guide for Static Judging F4 Sub-committee**
**6A.1. General**

*Amend paragraph e) as follows:*

e) The chief judge should discuss the merits and criticisms of each item with the other judges, ~~making~~ **asking for** suggestions for the scores to be awarded as a basis for further discussion. The use of half points (see 6.1.5.) is important when judging top-class model aircraft. There may be instances where, for example, a 9 would be too low and a 10 too high, and a suitable score might be, say, 9,5.

Reason: It is wrong that the Chief Judge by the rules should influence the other judges, much better that the other judges suggests the score and then discuss with the Chief.

**n) Annex 6A – F4 Judges Guide for Static Judging F4 Sub-committee**
**6A.1.9. Documentation for Proof of Scale**

*Amend paragraph a) as follows:*

a) Less than 3 full photos of prototype: ZERO points for Scale Accuracy (6.1.10.1)
~~Likely~~ **Possible** downmarking of Realism (6.1.10.4)
~~Likely~~ **Possible** downmarking of Craftsmanship (6.1.10.5)
~~Likely~~ **Possible** downmarking of Scale Detail (6.1.10.6)

Reason: Better English.

**o) Annex 6A – F4 Judges Guide for Static Judging F4 Sub-committee**
**6A.1.9. Documentation for Proof of Scale**

*Amend paragraph c) as follows:*

c) No photo of subject aircraft: ZERO points for markings (6.1.10.2)
~~Likely~~ **Possible** downmarking for Realism (6.1.10.4)
**Possible downmarking of Scale Details (6.1.10.6)**

Reason: Using the same expression through the rules and also adding one point that has been missing in downgrading.

**p) Annex 6C – F4 Judges Guide for R/C Flight F4 Sub-committee**
**6C.3.7. Optional Manoeuvres**

*Delete the last paragraph.*

The selection of optional manoeuvres should demonstrate the fullest possible capabilities of the aircraft subject type modelled.

The selection of manoeuvres and the order in which they are to be flown must be shown on the score sheet and given to the judges before each flight. This order must be adhered to and any manoeuvre flown out of sequence will score ZERO.

~~Whilst a competitor may choose any of the optional manoeuvres listed, the following six manoeuvres, Options A (Chandelle), N (Overshoot), R (Flight in triangular circuit), S (Flight in rectangular circuit), T (Flight in a straight line at constant height)~~

~~and W (Wing Over) are intended for aircraft for which the original prototype had little or no aerobatic capability.~~

Reason: Already covered in rule 6.3.7. (repetition)

**q) Annex 6C – F4 Judges Guide for R/C Flight** **F4 Sub-committee**
**6C.3.7.W. Wingover**

*Amend the first paragraph as follows:*

**W Wingover**

The model aircraft approaches in straight and level flight on a line parallel with the Judges' line. After passing the judges' position a smooth climbing turn is commenced away from the judges. At the apex of the turn the bank should be at least 60º. The nose of the model aircraft then lowers and the bank comes off at the same rate as it went on. The turn is continued through 180º to recover straight and level flight at the same height and on a heading opposite to that of the entry. **Non aerobatic aircraft, the climb angle to be less than 60°, other aircraft the climb angle is expected to be more than 80°.**

A low powered aircraft would be expected to execute a shallow dive at full throttle in order to pick up speed before commencing the manoeuvre.

Reason: The manoeuvre can now be used by all aircraft, not only non aerobatic.

**r) Annex 6C – F4 Judges Guide for R/C Flight** **F4 Sub-committee**
**6C.3.6.10. Approach and Landing**

*Amend item 12 in the Errors section*

12. Model aircraft noses over (note ~~30%~~ **2 points** penalty if only nose-down - zero if it over-turns).

Note: A crash landing scores zero points, but if the model aircraft makes a good landing and then stops nose down towards the end of the landing run, then the landing marks that would have been otherwise awarded should be reduced by ~~30%~~.**2 points.**

Reason: Much easier and quicker for the judges and all will know the exact penalty involved.

**s) 6C.3.6.11 Realism in Flight** **Spain**

*Add a new paragraph (location to be decided) as follows:*

**Judges will take in consideration the different type of flight characteristics expected from the prototype, by sample the different type of flight from an early biplane to a WW2 fighter or to a jet trainer or fighter**

Reason: Specify the differences types of flight among the different classes of prototypes, not specified in the rules at the moment

**F4G**

**t) 6.8 Class F4G - Large Scale R/C Model Aircraft (PROVISIONAL)** **United Kingdom**

*Replace the entire existing F4G rules with the new rules as shown below.*

Note (i): This will make the F4G competition a FLYING ONLY event.

Note (ii): Adoption of this proposal will result in a change to ANNEX 6E.1

Paragraph 6.8.1. General Rules

**This is a 'Flying Only' class using the flying rules for F4C. with the exception that the maximum take-off weight shall be 25Kg.**

**No Static Judging will take place, the competition result being settled entirely on the flying of the model.**

**Models used must be clearly recognisable as bona fide models of full size prototypes. The Contest Director may disallow any entries that he considers do not fit this specification.**

**The requirement for the competitor to have constructed his own model (Rule 6.1.9.4e) does not apply and the Declaration Requirements are for Flight Judging only (ANNEX 6E.1 refers).**

Reason: A Flying Only Class as described will attract many high quality models currently not eligible for F4C and many skilful pilots who are unlikely to appear at International competitions.

Such a competition will also provide useful training for Scale fliers who may not be selected for their National Team but who wish to gain the experience of flying at an International competition.

With no requirement for Static Judging the cost of organising such a competition will be substantially reduced and it is considered that such a competition can be more easily run in parallel with a World or Continental Championship and will add to the appeal of the Championship.

Supporting data: There is concern in many countries that the popularity of Scale Competition is reducing but the UK has no such concern.

The introduction of Flying Only events in the UK over four years has resulted in a substantial increase in the number of scale modellers competing in scale events and has also resulted in an improvement of the quality of flying in R/C scale competition.

'Flying Only' is now the most popular R/C Scale event in the UK.

With no requirement for the competitor to have constructed the model, many new models including ARTF models have become eligible to compete. The absence of Static Judging has simplified the organisation and because the flying schedule is the same as F4C, flying only events are run together with F4C.

**F4H**

**u) 6.9 – Stand-off Scale** **United Kingdom**

*Replace the existing Class F4H rules with the new rules.*

See the reason and the rules in Agenda Annex 7f.

Note (i): There are three additional proposals submitted separately in relation to the proposed rule changes. These are:

ANNEX 6E.3 GBR12 - Competitors Declaration for F4H

ANNEX 6E.4 GBR12 - Static Score Sheet for F4H

ANNEX 6F GBR12 - Static Judges Guide for F4H

Note: (ii) Adoption of these proposals will result in a consequential change to ANNEX 6E.1

Reason: The existing rules for Class F4H are ambiguous, imprecise, incomplete, unworkable and un-sporting. A more detailed explanation of what is wrong with the existing F4H rules can be see in Agenda Annex 7g.

**v) 6.9.2 Documentation** **F4 Sub-committee**

*Amend paragraph 1 & 3 as follows:*

1. Scale drawings should be limited to one 3-view or set of scale drawings of normal size, **not less than 150 mm.**

Reason: Too avoid small drawings that the judges cannot use.

3. Proof of colour – colour photographs, ~~and~~ black & white photographs ~~as well as~~ **with** colour chips **and colour profiles** can be used.

Reason: Correcting unclear text and add one more option.

**w) 6.9.3. Competitor's declaration** **F4 Sub-committee**

*Amend the paragraph as follows:*

The competitor has to declare that the complete colour scheme and markings are applied to the surface of the model by the competitor. No other **static** declaration is required. **If selecting option P or Q these have also to be described on the Declaration Form.**

Reason: To correct unclear text.

**x) Annex 6E Forms for Use in Scale Contests** **United Kingdom**
**6E.1 Classes F4B, F4C, F4G Competitor's Declaration Form**

*Amend Annex 6E.1.*

See the form and the reasons for the proposal in Agenda Annex 7h.

**y) Annex 6E Forms for Use in Scale Contests** **United Kingdom**
**6E.3 Class F4H Competitor's Declaration Form**

*Insert the new Annex 6E.3.*

See the form and the reasons for the proposal in Agenda Annex 7i.

**z) Annex 6E Forms for Use in Scale Contests** **United Kingdom**
**6E.4 Class F4H Static Score Sheet**

*Insert the new ANNEX 6.E.4.*

*Note: There will be a consequential change to the existing ANNEX 6E.1 to remove any reference to F4H*

See the form and the reasons in Agenda Annex 7j.

**aa) Annex 6F Class F4H Static Judges' Guide** **United Kingdom**

*Insert the new ANNEX 6F*

See the F4H Static Judges' Guide and the reasons in Agenda Annex 7k.

**ab) 6.10. New class F4K Team Scale** **F4 Sub-committee**
**R/C Model Aircraft (Provisional)**

*To introduce a new subclass of F4C with rules as follows:*

**6.10.1. Model aircraft specification: The same as F4C (§ 6.3.1.)**

**6.10.1.1. A F4K team shall consist of one pilot and one builder with their Sporting license issued by the same NAC. The pilot can only be the pilot of one builder.**

**6.10.2. Documentation: The same as F4C class (§ 6.1.9.)**

**6.10.3. Competitor's declaration, the same as F4C class (Annex 6E.) to be signed by both the Builder and the pilot.**

**6.10.4. Judging for Fidelity to Scale and Craftsmanship. Same as F4C class (6A.1.)**

**6.10.5. Flight: The flight schedule is the same as the F4C class. (6C.1.)**

Reason: This class combine the expert builder that do not dare to fly his model himself and a good pilot that do not have the skill or patience to build a F4C himself. This class could also give us a wider variety of model types. The letter "J" is the next in line for scale class letter, but as this letter is used by the IJMC we selected the next letter, the "K".

**Technical Secretary's Note**: The next F4 letter that should be applied to a Scale class is "J". Class designations used by a non-FAI organisation should not influence our FAI class allocation system.

**ac) 6.10. New class: F4K Flying Scale Models Aircraft Team R/C (Provisional)** **Spain**

*To add a new F4 class with rules as follows:*

**6.10.1 Specific Rules.**

**In the F4K class the team will be formed by the pilot and one builder's official representative. A builder, will be a particular person, a group of persons or a company.**

**During the championship and in the contest area, will be present, the pilot and the builder's official representative(one person).**

**To the podium can ascend, the pilot and the builder's official representative(one person).**

**All the other rules and specifications as F4C.**

**This class is a individual classification class**

Reason: There are lot of good scale builders unable to do a great flight and lot of great pilots unable to build a great scale model, now they can have the opportunity to compete in championships with this new class.

***Volume F5 Electric begins overleaf***

# 12.10 Section 4C Volume F5 - Electric

**General Rules**

**a) 5.5.1.4 Energy Limiter** **F5 Sub-committee**

*Amend the paragraph as follows:*

In classes where an energy limit is defined an energy limiter device must be used. The energy limiter cuts off the motor when the given energy limit is reached. **The energy limiter should also cut off the motor if it detects more than 400 A persisting for more than 0.2 seconds, any condition which will prevent a correct energy measurement being made.** The energy limiter is located in the electric circuit between the battery and the motor. The interruption must either persist permanently or for a defined period of time. **Instead of an energy limiter, the contest organiser can supply a "real time radio telemetry logger" that transmits logged data to the ground.**

Reason: Clarification of the energy limiter device updated with new possibilities of data transmission

**b) 5.5.1.5 Procedure for Limiter Checking** **F5 Sub-committee**

*Amend paragraph b) as follows:*

b. The check shall be carried out immediately after landing. All limiters/loggers shall be tested using the same method. **The limiter checking device can be an external device or a device that is carried within the model.**

*Amend paragraph f) as follows:*

~~f.~~ A variable current load should be used, simulating, as far as possible, a typical flight. ~~In the case where the limiter checking device is external to the model a variable current load should be used, simulating, as far as possible, a typical flight. All limiters must log the data necessary to supervise the energy-limit. This recorded data must be accessible to the CD or his designated official(s) immediately after the flight.~~

Reason: Limiter checking procedure in consequence of amended paragraph 5.5.1.4

**c) 5.5.1.5 Procedure for Limiter Checking** **Kazakhstan**

*Add a new paragraph as follows:*

**k) For World and Continental Championships, directly after landing each limiter from the top 10 competitors is determined by the results from all previous round will be disconnected under supervision of an official and the device checked for correct operation. In the case of round 1, a minimum of 5 random competitors will be checked**

Reason: Actual rules do not describe clear and useful who must to be checked. And this does not help to determinate the real winner.

**F5B**

**d) 5.5.4.1. Definition** **Austria**

*Amend paragraph f) as follows:*

f) Starting order for other competitions

**Before starting the first round the contest director will inform the pilots which mode of starting order will be established.**

**Mode A:**

The starting order for the first round will be established by random draw.

The number of pilots is then divided by the number of rounds giving “x” result.

For each subsequent round, the first number “x” of pilots in the starting order moves to the end of the starting order

Example:

Given that there are 24 pilots and four rounds then the calculation results in 6.

The starting order for the rounds would then be as follows:

Round 1: Starting order 1-24.

Round 2: Starting order – the first six pilots move to the end of the starting order which is now 7-24 and 1-6.

Round 3: Starting order – the first six pilots move to the end of the starting order which is now 13-24 and 1-12

Round 4: Starting order – the first six pilots move to the end of the starting order which is now 19-24 and 1-18.

**Mode B:**

**The starting order for the first round will be established by random draw.**

**This starting order will be used for all subsequent rounds except for the last round.**

**For the last round the starting order will follow the reversed ranking list.**

Reason: The mode B starting order improves the fairness of the competition and increases the suspense as to who will win the competition.

The leaders of the ranking list will fly within a short time at the end of the last round, underlying the same weather conditions and daytime.

For spectators it is also highly interesting to see the leading pilots flying right one after the other in the last round . So the suspense can be kept high right to the end of the contest.

**e) 5.5.4.1. Definition,** **F5 Sub-committee**

*Amend paragraphs b), c), d) as follows:*

5.5.4.1 b) Model Aircraft specifications:

| | |
|---|---|
| Minimum weight without battery | 1000 g |
| Minimum surface area | 26.66 $dm^2$ |
| Type of battery | Lithium Polymer |
| Maximum number of only serial cells | 10 |

Cells in parallel are not permitted.

*cont/…*

| | |
|---|---|
| Minimum weight of battery pack | 450 g |
| ~~Maximum weight of battery pack~~ | ~~600 g~~ |
| Limitation of energy by an electronic limiter/**logger** ~~that stops the motor~~ | max 1750 Watt-min |

~~The limiter is checked by the organiser during the contest.~~

**The limit is checked by an electronic limiter that stops the motor, checked during the competition, or by an organiser supplied logger which is read during or immediately after the flight. With the logger, 1 (one) point is deducted for every 3 (three) watt-min used over the limit.**

~~c) Maximum number of battery packs enter the contest:1 pack per 2 rounds; 1 pack for reflights.~~

~~d) Repair of battery packs is permitted providing the cells used in the repair come from battery packs that were checked at the start of the contest for that pilot~~

Reason: Clarification of limiter checking and update with new technologies. Battery rules c) and d) are not relevant in practice.

**f) 5.5.4.1 Germany**

*Amend paragraph c) as follows:*

c) **For Continental and World Championships only**: Maximum number of battery packs to enter the contest: 1 pack per 2 rounds; 1 pack for reflights

Reason: The original paragraph c) was established when NiMH Cells have been used and destroyed very often after one or two flights because of excessive power extraction. Therefore lots of battery packs and thus high financial investments had been necessary to compete successfully.

Today only LIPO cells are allowed for use in F5B. These cells can handle much more cycles compared to NiMH cells at same power extraction. Additionally we have the Energy Limiter in combination with the minimum weight of the battery pack to prevent the battery packs from being totally discharged.

Beginning 2012, up to 10 LIPO cells (instead of 6 LIPO cells) with the 1750 Wmin limit are allowed to reduce the current. If paragraph c) would not be changed to the new wording each pilot who wants to make use of the new rules and attends national or international “weekend” competitions is again forced to spend a lot of money for new battery packs. (Three new battery packs minimum). With the clarification proposed the pilots may use the old equipment with one model and test the new equipment according to the new rules. This reduces the investment for batteries (one new battery pack only). For CC and WC contests the new wording also limits the amount of money which has to be spent for the battery packs.

**g) 5.5.4.1.Definition Kazakhstan**

*Amend paragraph e) as follows:*

e) Starting order for World and Continental Championships : the starting order for the first round will be established by random draw. For the next rounds the starting order will follow the reversed ranking list. Frequency will not follow frequency and team member will not follow team members. **For continental and world championships, is mandatory integration of participants into groups of 5-6**

**pilots in the group, consisting of consecutive pilots in the start list. Groups vary in the composition of each round in accordance with the change of the order of the start**

Reason: Results count for whole round from 09.00 till 13.00 with drastically different weather condition is not correct. Tighten the group in same round will help to do the race more selective.

**h) 5.5.4.3 Scoring** **Kazakhstan**

*Amend paragraph d) as follows:*

**d) For the continental and world championships, the individual results of each pilot of each round is normalised to the points of the best competitor of his group.**

$$\text{P group round} = 1000 \times \frac{\text{Individual points}}{\text{Points of the best competitor in group}}$$

Reason: Results count for whole round from 09.00 till 13.00 with drastically different weather condition is not correct. Tighten the group in same round will help to do the race more selective.

**i) 5.5.4.2 Course Layout and Organisation** **F5 Sub-committee**

*Amend paragraph a) as follows:*

a) Two imaginary vertical planes at a distance of 150 m from each other determine the turnlines and are named Base A and Base B. A safety plane is established perpendicular to these planes. The safety plane is endless.

The sighting devices used to detect the crossing of the Bases A and B are placed at a distance of a **minimum 5 m from the safety plane outside of the course.**

Reason: Safety: Position of sighting devices must be as far as possible outside of the course

**j) 5.5.4.2. Course Layout and Organisation** **Kazakhstan**

*Amend paragraph c) as follows:*

**c) Alarm button on the intersection of the base must be directly connected to single piece of cable with speaker, power source and back-up warning light. Inadmissible any intermediate devices. Speaker and signal lamp shall be installed at the intersection of the projection on the ground plane of the base "A" and the projection on the ground plane of the security. The sound volume should be sufficient to uniquely identify the signal on the intersection of the base is not only a pilot, but also with other participants located in the zone of teams.**

Reason: Too many errors in jury computer and audio system during the championships, make system easy helps to do the race better.

**k) 5.5.4.2 Course Layout and Organisation** **Kazakhstan**

**d) For continental and world championships, in order to obtain an objective and a guaranteed result, to ensure control of intersection of each plane bases, two judges at the same time. Alarm buttons should be duplicated at each base and connected in parallel.**

Reason: Too much base man errors, doubled helps to do race better. F3B has till eight base man during the distance task. And have no problem with.

**l) 5.5.4.2 Course Layout and Organisation** **Kazakhstan**

*Amend paragraph e) as follows:*

**e) For the continental and world championships, to accept the video registered as the instrument which allows to determine the outcome or validity of the pilot implementation of the required manoeuvres and other race situation.**

Results: Too many human errors in race. With so HiTech planes do not use the video register is great mistake. This paragraph, can legalise the video registered during the race as correct instrument to clear any doubt.

**m) 5.5.4.8 Re-Flights** **Belgium**

*Add a new paragraph*

Whenever a refly needs to be granted to a competitor because of an error of the timekeepers (example: a timekeeper forgets to press the button when the model passes his line of sight), the refly needs to be performed with the same model the original flight was performed with. No part of the model can be changed other than the charging or replacement of the propulsion and/or receiver battery. To enforce this rule, the model will remain under the supervision of an official at all times from the moment the model lands after the flight where the error occurred until the moment the refly starts.

Reason: Discourage pilots to trigger an error on the part of the timekeepers when they experience a technical failure on their model or feel they are doing a bad flight.

**F5D**

**n) 5.5.6.4 Racing Course Specification** **Austria**

*The legend in the drawing should correspond with the wording in the applicable rules.*

~~Pylon judge #1~~ **Pylon #1 judges**

~~Pylon judge #2~~ **Pylon #2 judges**

~~Pylon judge #3~~ **Pylon #3 judges**

~~Time/Lap counter~~ **Time/Lap counters**

Reason: Clarification in the drawing of the F5B Course Layout regarding the number of pylon judges at each pylon and the number of Time/Lap counters.

The drawing should correspond with rule 5.5.6.6. a) to avoid any misinterpretation.

**o) 5.5.6.6 Officials** **Austria**

*Amend paragraphs c), f) g) as follows:*

c) At the No. 1 pylon there will be one official as pylon judge and signaller for each competitor in the heat.

The pylon judge/signaller will stand perpendicular to the direction of the course on the safety side of the course**. A sighting device for the judge(s) is obligatory.** Each pylon signaller will have a distinctive colour allocated, and the contest director will arrange for each model aircraft to be identified by one pylon judge-signaller before the start of every heat.

f) Pylon judge No.2 is placed behind the base of the triangle at a safe distance in a 45 degrees ~~angel~~ **angle** to the line between pylon 2 and 3. **A sighting device for the judge(s) is obligatory.**

g) Pylon judge No. 3 is placed at a safe distance in a 45 degrees ~~angel~~ **angle** to the line between pylon 2 and 3 in the direction of pylon No. 1. **A sighting device for the judge(s) is obligatory.**

Reason: Clarification in the rules regarding the obligatory use of a sighting device for the pylon judges at each pylon as shown in the drawing.

**p) 5.5.6.7 Starting Procedure** **Austria**

*Add a new paragraph at g) as follows:*

**g) Cutting a pylon after the motor of the model aircraft has stopped due to the energy-limit constitutes disqualification for that flight.**

Reason: Intentionally shortcutting the flight path after the motor has stopped due to the energy-limit is a very dangerous manoeuvre. The gliding model aircraft will cut slowly into the flight path of the other model aircrafts still on the racing course or fly over the pilots, helpers and officials inside the racing course triangle. In the past this manoeuvre was named “supercut”, which shows the intention to shortcut the last lap considerably. The 10 percent time-penalty for one cut was considered less severe than the additional time needed to complete the last lap flying the correct flight path with the motor already stopped. For safety reasons this infringement has to be penalized by disqualification for that flight.

**q) 5.5.6.9 Scoring** **F5 Sub-committee**

*Amend paragraph g) as follows:*

~~g) The winner of the event is the competitor who has accumulated the lowest score after the conclusion of all heats. If four or more rounds are flown, each competitor's worst score shall be discarded. If nine or more rounds are flown, each competitor's worst two scores shall be discarded.~~

**g) The winner of the event is the competitor who has accumulated the lowest score after the conclusion of all heats. If four or more rounds are flown, each competitor's worst (highest) score shall be discarded. If eight *or* more rounds are flown, each competitor's worst (highest) two scores shall be discarded. If twelve or more rounds are flown, each competitor’s worst (highest) three scores shall be discarded.**

Reason: Harmonizing with F3D for using same timing system incl. software.

**r) New class Indoor Racing Model Aircraft F5 Sub-committee**

**Technical Secretary's Note:** The correct class designation is F5K and the correct paragraph numbering is 5.5.12

### 5.5.9 F5I – Indoor Racing Model Aircraft (Provisional)

#### 5.5.9.1 General

a) This contest is a racing contest in halls and indoor sport arenas.

b) Racing course depends oft the size of building and is marked by two poles or lines hanging from the ceiling.

c) Model aircraft specifications.

Maximum weight 200 g

Only electric motor(s)

Only 2.4 GHz RC equipment

#### 5.5.9.2 Operation oft the Race

a) A maximum of four (4) model aircrafts per heat will be allowed.

b) Model aircrafts start from the ground (no hand launching is allowed).

c) All laps must be flown counter-clockwise with turns to the left.

d) 10 laps must be completed.

e) Every cut will be penalized by one more lap.

Reason: Indoor Racing events with small and light electric powered model aircrafts are very attractive for competitors and spectators.

***Volume F7 Aerostats begins overleaf***

# 12.11 Section 4C Volume F7 - Aerostats

**F7A**

**a) 7.1.11.8 Circle** **F7 Sub-committee**

*Amend the fourth paragraph as follows:*

~~Scoring is based on the final position of the dropped marker. The flight score will be zero if the drop of the marker fails. Nevertheless, the competitor is allowed to draw his balloon out of the circle for immediate action and to retry but the timing of the flight continues.~~

**The measured distance is from the centre of the container to the first contact of the marker with the ground. If the marker is dropped, the final position of the marker is considered for measurement.**

**If the competitor decides to restart his flight (ie for corrective action) the timing of the flight continues.**

The precision bonus is obtained if the marker is dropped and remains in the container.

Reason: Need for precision for scoring and the handling of the corrective action. The possibility to make corrective action is included in the Flight rules (chapter 7.1.8.2) as the competitor is allowed to move back to the take-off area (for corrective action in this case) provided he has announced his decision to restart his flight.

Supporting data: At the last French championship, it was pointed a potential misunderstanding between the general flight rules and the specific rules of this task.

**F7B**

**b) 7.2.11.4 Precision Flight** **F7 Sub-committee**

*Delete paragraphs 7.2.11.4 to 7.2.11.11 inclusive.*

*Paragraphs to be deleted not shown because of space restrictions.*

Reason: These tasks are related to hot air balloons only. Therefore they will never be implemented with airships.

*Add a new paragraph 7.2.11.4 as follows.*

**7.2.11.4 Precision task**

**Prior to the flight, the Flight Director places, or asks to be placed, 5, 8 or 10 targets (horizontal or vertical circle surfaces, 1 meter diameter) at different places on the flight site. The airship of the competitor must try to have a clear contact with each of the targets in a specified order. The contact is obtained from the bottom part (gondola) of the airship for horizontal targets or from the nose of the airship for vertical targets.**

**If the competitor fails on one target, he can decide not to retry and to fly to the next target.**

*cont/…*

**The flight duration is recorded starting/ending when the nose of the airship crosses the start/finish line(s).**

**Out of the targets, contacts with the soil or with any other parts on the site are allowed but induce one penalty each time.**

**For the targets score, each obtained target is 200 points if 5 targets, 125 points if 8 targets or 100 points if 10 targets.**

**For the time score, the best competitor obtains 1000 points. The time score of the other competitors is the ratio : 1000 x Competitor time / best competitor time. No time factor is to be applied.**

**The basic score of the competitor is the total of the targets score plus the time score less the penalties but cannot be negative. For the calculated score, refer to paragraph 7.1.10.2**

Reasons: With the current rules, competitions are only based on speed. Not to have only speed based tasks which may induce too specific type of competitions and push toward too specific airships which may affect the homogeneous development of the category.

***Space Modelling begins overleaf***

# 12.12 Section 4C Volume Space Modelling

**Part One – General Regulations**

**a) 2.4. Construction Requirements** **Serbia, United Kingdom, USA, Romania**

*Amend paragraph as follows:*

**2.4.3** Construction shall be of **any modelling material (like** wood, paper, rubber, breakable plastic, **carbon** or similar materials) without substantial metal parts. **A substantial metal part is a nose cone, body tube, fins, any hard, sharp and external pointed part or any internal heavy metal part that can cause injuries to persons or damages to property.** ~~Models of Classes S1, S2, S3, S6, S9 and S10 must have minimum diameter of 30 mm of enclosed airframe for at least 50% and for Class S5 for at least 20% of the overall body length. In case of Class S1 the smallest body diameter must be not less than 18 mm for at least 75% of the overall length of each stage, including their back sections. No boat tails or reducers are allowed unless they meet this requirement.~~

Reason: To clarify which materials taking into account new technologies may be used for making space models and which are "substantial metal parts". Ending of the paragraph tells about dimensions of the models that is defined in the next paragraph 2.4.4 and data on dimensions belong there.

**b) 2.4. Construction Requirements** **Serbia**

*Amend the paragraph and table as follows:*

**2.4.4**. Minimum dimensions of subclasses of classes S1, S2, S3, **S4**, S5, S6,**S8,** S9 and S10 must not be less than:

| Classes | S1, S2, S3, S5, S6, S9 and S10 | | | | S4 and S8 | |
|---|---|---|---|---|---|---|
| Event Class | Minimum Body [*] Diameter (mm) | | Minimum Overall Length (mm) | | Minimum Wing Span (mm) | |
| A/2 | ~~30~~ | 30 | ~~350~~ | 350 | - | 300 |
| A | ~~40~~ | 40 | ~~500~~ | 500 | ~~500~~ | 500 |
| B | ~~40~~ | 50 | ~~500~~ | 650 | ~~650~~ | 650 |
| C | ~~50~~ | 60 | ~~650~~ | 800 | ~~800~~ | 950 |
| D | ~~60~~ | 70 | ~~800~~ | 950 | ~~950~~ | 1100 |
| E | ~~70~~ | 80 | ~~950~~ | 1100 | ~~1100~~ | 1250 |
| F | ~~80~~ | 90 | ~~1100~~ | 1250 | ~~1250~~ | 1400 |

[*]For at least 50% of overall length for (S1, S2, S3, S6, S9 and S10) and 20% for S5.

**Minimum diameter of upper stages of multi stage space models shall not be less than 20 mm (except at the nose cone). Boat tails and/or reducers are allowed if they meet this requirement.**

*cont/…*

Reason: It is necessary to have all data on dimensions for all event classes of spacemodels gathered at one place. Changes of data are proposed after a thorough discussion with spacemodellers from many countries. They shall allow further improvement of classes and also encourage further development of this kind of modelling.

**c) 2.4. Construction Requirements** **Serbia, USA**

*Amend the paragraph as follows:*

**2.4.5** Design and construction shall include attached surfaces that will provide aerodynamic stabilising and restoring forces necessary to maintain a substantially true and predictable flight path. If required by **the rules for a specific class, local rules for competition** and/or safety officers or judges, the builder of the model must present data regarding the locations of the centre of gravity, centre of pressure, gross weight, burnout weight, and/or calculated or measured flight performance of the model. **These data must be submitted with models at model processing before a model in entered to competition.**

Reason: Necessary clarification. This is to improve safety and quality of flights in Classes S1, S2, S5 and S7.

Supporting data: There was noticed a high percentage of disqualifications in altitude classes and scale space models classes because of instability and other construction reasons. There was 21,78% of disqualified flights in class S7 in 2010 and 22,12% in 2011 in 16 and 17 World Cup competitions respectively. This means that every fifth flight is not correct according the rules and requires regulation by the rules. Reason for that is because of too much attention is paid to appearance of S7 models than to their flyability. Static judging takes up to 850 points and flight only 300 although S7 is firstly a **flying model.** In altitude classes situation is little different – A and B models have not enough energy and to small dimensions for good and safe multistage flights. Good and safe flights must become mandatory in these classes.

**d) 2.4. Construction Requirements** **Germany**

*Amend the paragraph as follows:*

**2.4.7.** In classes S4, S8 and S10, the minimum weight of the gliding portion of the model that returns to ground in stable gliding flight supported by aerodynamic lifting surfaces, shall not be less than ~~30~~ **80** % of the maximum specified weight for the particular subclass.

Reason: Boost Gliders (S4) up to now are too flimsy to be regarded as serious models within FAI first category events, even with a gliding weight of 30 % of the maximum. RC Rocket Gliders (S8) and Flex Wing Duration Gliders (S10) are not to separate or discarding of engine castings(s). 80% of the maximum specified weight for the gliding flight as a requirement takes a burning loss of the engine weight into account and offers still enough challenge to construct light but durable models.

**e) 2.4. Construction Requirements** **Serbia**

*Amend the paragraph as follows:*

**2.4.7.** ~~In classes S4, S8 and S10, the minimum weight of the gliding portion of the model that returns to ground in stable gliding flight supported by aerodynamic lifting surfaces, shall not be less than 30% of the maximum specified weight for the particular subclass.~~

**Models in Classes S4, S8 and S10 must fly and land without separation of any part in flight.**

Reason: The rule should remove from competition ultra light styrofoam flying wings that are taken to high altitude with ordinary space models and there jettisoned as "gliding parts". These models instead of having a stabile gliding path just hover or tumble, but because of light weight stay very long in the air. Their carrier models are declared as engine pods, which were common with classical American boost-gliders and so present an unfair competition to other competitors, but formally can not be excluded from competitions, although are against the spirit of the rules.

**Part Four – General Rules for International Contests**

**f) 4.1 World Championship Events for Space Models** **Serbia, Slovenia**

*Amend the two paragraphs as follows:*

The following events are recognised (2001) as World Championships for Space Models:

**i) W/CH for Senior classes:**

a) altitude models – ~~S1B~~ **S1C**

~~b) parachute duration models – S3A~~

c) boost glider duration models – S4A

d) scale altitude models – ~~S5C~~ **S5D**

~~e) streamer duration models – S6A~~

f) scale – S7

g) rocket glider duration and precision landing models – ~~S8E/P~~ **S8D/P**

h) gyrocopter duration models – S9A

**ii) W/CH for Junior classes:**

a) altitude models ~~S1A~~ **S1B**

b) parachute duration models – S3A

c) boost glider duration models – S4A

d) scale altitude models – ~~S5B~~ **S5C**

e) streamer duration models – S6A

~~f) scale – S7~~

g) rocket glider duration models – ~~S8D~~ S8C

~~h) gyrocopter duration models – S9A~~

Reason: In order to make SM Championships more relaxed and cheaper two most complicated classes for juniors (S7 and S9A) and two simplest classes for seniors

(S3A and S6A) were deleted. So the new program should attach many juniors but seniors should appear with more attractive and sophisticated models than those which remind to toys.

**Technical Secretary's Note:** A consequential change may be necessary to ABR B.2.4

**g) 4.3 LAUNCHING** **Serbia**

*Add the following sentence just below the title.*

**Before the beginning of any Spacemodelling competition the organizer is obliged to provide conditions for competition in accordance with the provision of the FAI Sporting Code, Section 4, Volume ABR, paragraph B.12.**

Reason: This is a clarification of the rules – a cross-connection to Volume ABR paragraph B.12 – Space Models – The organizer must.

Supporting data: Many organizers and sportsmen are not aware of the rules that relate Spacemodelling in the general section of the rules especially with their changes, which causes problems in competitions or in their preparations. Such updated cross-connections are very necessary.

**h) 4.3.3 Launching device** **Serbia**

*Amend the paragraph as follows:*

A launching device or mechanism must be used that shall restrict the horizontal motion of the model until sufficient flight velocity shall have been attained for reasonably safe, predictable flight **(for example a launching rod)**. **Launchers like piston are allowed if they meet provisions of paragraph 4.3.4.** A launching angle of more than 60 degrees from the horizontal must be used.

Reason: It is necessary to define piston launchers that are "zero length launchers" that use only energy of a space modelling engine used in model.

**i) 4.4.2 Model Marking and Identification** **Serbia**

*Amend the paragraph as follows:*

Each entry shall carry, prominently displayed upon its body, fins, or other exterior part, the competitor's FAI license number in letters and numbers approximately one (1) centimetre high **except in classes S5 and S7 where it is 7 mm for the 1stage and 4 mm for upper stages.** The name, national insignia, or international identification mark (see Section 4b, Annex B.2) of the competitor's nation must be displayed on the exterior of the model.

A light coloured area of minimum dimensions 1 cm by 3 cm must be provided for the organiser's processing mark **except in classes S5 and S7 where the mark shall be put on interior of the model**.

Reason: To keep the appearance of the scale models unharmed by judges markings and data not existing in the technical data for a specific scale model.

**j) 4.4.3 Builder of the model** **Serbia, Slovakia, USA**

*Amend the paragraph as follows:*

The judges shall make every reasonable effort to insure that each competitor has completely constructed the model entered in the competition with "construction" to be interpreted as the action required to complete a model starting with no more prefabrication than the amount used in the average kit. Models that are completely prefabricated or require only a few minutes of unskilled effort for their completion shall be excluded from competition. Materials and design may be obtained from any source, including kits. **The competitor must prepare his model himself for flight assisted by one helper, who must be junior in junior classifications.**

Reason: Nowadays is very difficult for judges to find out is the competitor builder of the model for different reasons. The easiest way to find out how much is he/she competent in Spacemodelling is to require him to prepare his model himself for flight particularly in sophisticated classes like S5 and S7. This is especially important in junior classifications, where are recently noticed very young competitors with very sophisticated models. This clarification is necessary to avoid „formal competition" of too young competitors, who are only staying by "their models" and the adults do everything else.

**k) 4.7. Radio Controlled Space Models** **Germany**

*Amend the paragraph as follows:*

4.7.1. For transmitter and frequency control see Volume ABR, Section 4b, paragraph B.~~10~~. **11**

Reason: ABR Sect. 4b B.10. relates to Control Line

**l) 4.7. Radio Controlled Space Models** **Germany**

*Amend the paragraph as follows:*

4.7.4. **Using an am/fm transmitter** the competitor has to have ability to fly on at least two frequencies.

Reason: For spread spectrum transmitters the paragraph doesn't make sense.

**m) 4.8. Timing and Classification** **Germany**

*Amend the paragraph as follows:*

4.8.1. See Section **Volume ABR**, Section 4b, paragraph B.~~12~~. **13.**

Reason: Without naming the Volume ABR, the mentioning of "Section 4b" doesn't make sense. Paragraph B.12 relates Space Models, but not their timing.

**n) 4.9 Altitude Data** **Serbia, Slovakia, USA**

**Technical Secretary's Note:** If this proposal is approved then there are two a consequential changes:

( i) the data in rule 4.9.3 Minimum Horizontal Distance Method (S1X Method) must be deleted;

(ii) in Part Fourteen, Space Model Records, Sheet 3 of Table V must be deleted.

*cont/…*

*Amend paragraph b) as follows:*

For measuring and calculating altitudes may be used the method based on the principles of triangulation, the method of electronic or radar tracking ~~or the method based on calculation of the height where the horizontal distance of tracking lines of pairs of stations in space achieves their minimum.~~

Reason: This method was never used in the FAI international Spacemodelling contests and is obsolete, slow and too expensive because it requires at least three tracking stations with very qualified crew and special computer program. Now when electronic altitude measurements are commonly used in altitude classes and do electronic measurements very quickly, reliably and cheap there is no more need for this method and it should be deleted from the rules.

**o) 4.9.2.1 Electronic Altitude Measurements Serbia, Poland, USA**

*Amend the paragraph as follows:*

Electronic altimeter carrying requirements and application:

a) An electronic altimeter carried in a space model shall be completely enclosed and contained within the model, so as to be removable. It shall not be capable of separating from the model in flight.

b) An electronic altimeter shall fulfil the following technical specifications:

Must use barometric measurement technique.

Must record, as the flight altitude, the difference between peak altitude achieved and the altitude of the pad from which it was launched.

Have a data readout resolution of 1 metre or better.

Have a measurement accuracy of 2% of the recorded altitude or 2 metres, whichever is greater.

Have a data sampling rate of 10 samples per second or greater.

**Must be able to register the whole trajectory during the flight that can be reproduced, measured and compared with other flights on a lap-top computer with use of standardized software.**

**Must be able to eliminate by filtering influences of side winds and other disturbances in flight.**

**Must have adjustable delay time from 0 – 300 s to prevent start of measurements before the device is inserted into a model and launched.**

**For second class FAI events may be used simpler devices that** give the data readout of peak altitude by audio or visual means directly from the altimeter, with no external device required.

Must be capable of being completely cleared of all previous flight data before flight.

c) The technical specifications of this equipment and container shall be announced in the local rules for each altitude contest.

d) All electronic altimeters shall be impounded before the start of the event, kept safe by an official and checked and calibrated by the judges, or a qualified calibrating team, equipped with the relevant electronic equipment.

e) Competitors shall take checked and calibrated electronic altimeters from the pound and mount them on the model under the supervision of the judges. The competitor shall return the electronic altimeter to the judges as soon as possible

after the flight has finished for readout data and recheck or recalibration if the judges find that necessary.

Reason: Electronic altitude measurements became in last two years a standard measurement method. It is fast, cheap and reliable. Technology develops very quickly and it was necessary to do some changes in the rules to update them and match with nowadays technology possibilities.

**Part Five – Class S1**

**p) 5.3 SUB-CLASSES** **Serbia**

*Amend the table as follows:*

The following event classes are in effect for altitude competition:

| CLASS | TOTAL IMPULSE ( Newton-seconds ) | MAXIMUM WEIGHT (g) |
|---|---|---|
| ~~S1A~~ | ~~0,00 - 2,50~~ | ~~30~~60 |
| S1B | 2,51 - 5,00 | ~~60~~90 |
| S1C | 5,01 - 10,00 | 120 |
| ~~S1D~~ | ~~10,01 - 20,00~~ | ~~240~~ |
| S1E | 20,01 - 40,00 | 300 |
| S1F | 40,01 - 80,00 | 500 |

Reason: The “bigger classes” were never flown in competitions. “A” class when used for juniors as two staged model has pure flight characteristics. These proposal assumes two competition sub-classes and one for future development (S1E).

**Part 6 – Class S2**

**q) 6.1 Definition** **Serbia, USA**

*Amend the paragraph as follows:*

This event is open to models that carry one or more standard FAI space model payloads to the highest altitude as tracked and reduced **or to a target altitude in a specified time**.

Reason: To increase sophistication of the models, dynamic of competition and also to shorten duration of competition See: Provisional Classes – S2/P for details.

**r) 6.2 Standard FAI Payload Specification** **Serbia, USA**

*Amend the paragraph as follows:*

The Standard FAI space model payload is a ~~solid~~ cylinder, **sphere or ellipsoid of any modelling or natural material according paragraph 2.4.3**.~~either lead (Pb) or an alloy of lead containing no less than 60% lead by weight and weighing no less than 28 grams.~~ ~~This cylinder~~ It shall be 45 +/- 5 mm in diameter and shall weigh 60 +/- 3 grams. ~~No holes may be drilled or punched into it, and no other material may be affixed to it.~~ **The organizer may by the local rules define sophistication of the payload (photo or movie camera or electronic equipment)and to add optional tasks.**

Reason: To contribute to technical development of the class, dynamic of

competition and to increase interest of public and media in this activity.

**s) 6.7 Subclasses** **Serbia, USA**

*Amend the table as follows:*

| CLASS | TOTAL IMPULSE (Newton-seconds) | | MAXIMUM WEIGHT (g) | NUMBER OF PAYLOADS CARRIED |
|---|---|---|---|---|
| ~~S2C Single~~ | ~~5,01~~ | ~~- 10,00~~ | ~~90~~ | ~~1~~ |
| S2E ~~Dual~~ | 20,01 | 40,00 | ~~180~~ 300 | ~~2~~ 1 |
| S2F Open | 40,01 | 80,00 | 500 | 4 2 |

Reason: Subclasses and technical specifications are selected so to give best performances for nowadays competition conditions and safety.

**t) 6.8 – New Class - S2/P Precision Fragile Payload Competition** **Serbia**

**Technical Secretary's Note:** If this new class is approved then it will need to be added to the table at 6.7 (proposal (t) above).

*Add a new class as follows:*

**6.8. Class S2/P Precision Fragile Payload Competition**

**6.8.1 Definition/Description**

**This event provides a precision performance challenge in both altitude and duration for single-stage space models that are carrying a fragile payload (as a raw egg or a small fragile plastic/glass container filled with liquid). The objective is to come as close as possible to the target altitude of 300 meters and a flight duration of 60 seconds in each of three flights with one model without breaking the payload.**

**6.8.2. Model Requirements**

**Each contestant may enter only one model. The model shall have one stage but may have any weight that is in compliance with the FAI SC4 Volume SM paragraph 2.1 and any combination of engines that is in compliance with paragraph 2.2. It must contain and wholly enclose a fragile payload throughout the flight. It must use one or more parachutes as its sole recovery device. No form of external control may be used to regulate duration. During the flight no part of the model other than parachute protectors or wadding may be detached or jettisoned.**

**6.8.3. Payload Requirements**

**The fragile payload shall be in diameter than 45 +/- 5 millimetres and shall be between 60 +/- 3 grams in weight. One fragile payload shall be provided to the contestant before the first flight, flown on each flight, and inspected after the final flight.**

**6.8.4. Disqualification**

**If there is any external damage to the fragile payload when it is inspected after the contestant's final flight, the contestant shall be disqualified from the event.**

*cont/…*

**6.8.5. Scoring**

**The score for each flight shall be the absolute difference between the recorded altitude and 300 meters (always a positive number) plus 3 times the absolute difference between the recorded duration and 60 seconds (always a positive number). Any flight which is disqualified for a reason other than a broken fragile payload, or which receives no altitude score, shall receive a score of 100 for that flight. The score for the event shall be the sum of the scores from each of the three flights. The lowest score is the winner. In the case of tie the best (the lowest score) in a round is decisive.**

**The following scoring formula shall be used for point allocation:**

**B = IH-300I + 3 * IT-60I,**

**where B=points awarded to the competitor,**

**H – flight altitude of the model (meters),**
**T – flight time of the model (seconds).**

**6.8.6. Model Processing and Precautions**

**Every model entered to this competition shall be inspected and marked before the first flight by the judges according to the SC4 Volume SM paragraph 4.4.1. The contestant must for safety reasons on request of the judges present data regarding the locations of the centre of gravity, centre of pressure, gross weight, burnout weight and/or calculated or measured flight performances of the model in accordance with the SC4 Volume SM paragraph 2.4.5.**

Reason: A new provisional class for payload classes S2/P with a target altitude to be achieved during the target flight time is intended to revitalize payload competitions that were not flown in Europe and Asia for mote than 30. However these events are very popular in the USA as national events and it would be good to apply this good practice to increase interest of competitors in this competition area.

**Classes S3 & S6**

**u) 7.4 Subclasses** **Serbia**

*Amend the table as follows:*

For Parachute and Streamer Duration Competitions the classes and their respective maximum flight tines are:

| CLASS | TOTAL IMPULSE (Newton-seconds) | MAXIMUM WEIGHT (g) | MAXIMUM PARACHUTE (sec) | FLIGHT TIME STREAMER (sec) |
|---|---|---|---|---|
| S3A/S6A | 0,00 - 2,50 | ~~100~~60 | 300 | 180 |
| S3B/S6B | 2,51 - 5,00 | 10090 | 420 | 240 |
| ~~S3C/S6C~~ | ~~5,01 - 10,00~~ | ~~200~~ | ~~540~~ | ~~300~~ |
| ~~S3D/S6D~~ | ~~10,01 - 20,00~~ | ~~500~~ | ~~660~~ | ~~360~~ |

Reason: Subclasses and technical specifications are selected so to give best performances for nowadays competition conditions and safety. Deleted classes were not flown in competitions for decades.

*cont/…*

**Class S4**

**v) 8.4 Subclasses** **Serbia**

*Amend the table as follows:*

For Boost/Glider Duration Competitions the classes and their respective maximum flight times are:

| CLASS | TOTAL IMPULSE (Newton-seconds) | MAXIMUM WEIGHT (g) | MAXIMUM FLIGHT TIME (sec.) |
|---|---|---|---|
| S4A | 0,00 - 2,50 | 60 | 180 |
| S4B | 2,51 - 5,00 | 90 | 240 |
| S4C | 5,01 - 10,00 | 120 | 300 |
| ~~S4D~~ | ~~10,01 - 20,00~~ | ~~240~~ | ~~360~~ |
| ~~S4E~~ | ~~20,01 - 40,00~~ | ~~300~~ | ~~360~~ |
| ~~S4F~~ | ~~40,01 - 80,00~~ | ~~500~~ | ~~360~~ |

Reason: Subclasses and technical specifications are selected so to give best performances for nowadays competition conditions and safety. Deleted classes were not flown in competitions for decades.

**Class S7**

**w) 9.11 Scale Judging** **Serbia**

*Amend the paragraph as follows:*

**9.11.1.** A competitor who presents the following proper technical data may be awarded ~~a maximum 50 points~~ **with points defined in the paragraphs below only for items documented in these technical data:**

- authentic, authorised drawing(s) of the prototype with at least ten dimensions and three cross sections, i.e. data which define colour of cross sections and markings on it;
- workshop drawing of scale model - scale 1:1;
- at least one colour photograph of the whole prototype with clearly visible details of colour and markings;
- at least three photographs of details and assemblies;
- file containing all necessary technical data **including data regarding the locations of the centre of gravity, centre of pressure, gross weight, burnout weight and/or calculated or measures flight performance of the model necessary for safety reasons.**

Reason: Technical data serve to a modeller to build the model, but they are not his work or merit and should not be awarded with points. The better they are, the better a model will be and the higher score will be awarded. Data on CG, CP etc. are necessary for safety reasons because there were a lot of DQs in classes S5 and S7 because unstable flights last years – about 22%.

**x) 9.11. Scale Judging** **Serbia, Slovakia**

*Amend the paragraph as follows:*

**9.11.2. Adherence to scale: ~~250~~ 200** points maximum. To be considered as a scale model the dimensions of the body diameter, overall length, **nose cone length and one selected dimension mm** ~~overall fin span (if finless, use body length~~) should not depart from scale by more than 10% or else the model is disqualified. The judging category should be judged in ~~three~~ two areas: 1) nose cone and bodies **of each of up to three stages** – ~~125~~ **160** points maximum; ~~2) fins - 75 points maximum;~~ 3) colour and markings - ~~50~~40 points maximum. This rule shall not be applied to dimensions less than ~~5~~ 10 millimetres

~~For models with clear plastic fins see Annex 9, Cat. Scale Adherence, Sub-Cat. Fins~~

Reason: Number of dimensions to be measured is decreased and the process simplified to accelerate the judging process and also to give more importance to flying part of competition than to the static. Scale models must be flying models and must prevail sports elements not only building skills.

**y) 9.11. Scale Judging** **Serbia**

*Amend the paragraph as follows:*

**9.11.3. Workmanship:** ~~350~~ **250** points maximum. To be judged on neatness, care of construction, and degree of finish. The judging category will be judged in two areas: Workmanship of nose cone, body, fins and details: ~~200~~ **150** points maximum and Finish of nose cone, body and fins ~~150~~ **100** points maximum. Good workmanship that detracts from scale-such as a high gloss finish on a model that should have a flat or dull finish - will detract from maximum points.

Reason: Points for workmanship should be reduced so to make relation between points for static judging and for flight characteristics more competitive. Total static points so far is 850 and for flight only 300 so, a good looking scale model with poor flying characteristics in any case must win over good flying and fairly looking scale model. It is necessary find a correct balance for that because number of competitors in scale model classes is rapidly decreasing.

**z) 9.11. Scale Judging** **Serbia**

*Amend the paragraph as follows:*

**9.11.4.** Degree of difficulty: ~~200~~ 150 points maximum. To be judged on the degree of difficulty involved in constructing the model **up to 110 points**. Factors to be considered include symmetry of model. Number of external components, intricacy of paint pattern, degree of detailing, and degree of difficulty in adapting the model for flight conditions. **Bonus of 40 points for "originality" shall be awarded to a prototype that is only one in the event and of 20 points if two prototypes of the same kind enter the event. For three or more same models there will be no bonus points.**

Reason: Points for Degree of difficulty should be reduced so to make relation between points for static judging and for flight characteristics more competitive. Degree of difficulty was misjudged for a long time instead of awarding complexity of

the scale model and degree of difficulty involved in constructing model judges used to award points to complexity of prototypes. So Soyuz, Arianne and Saturn 1B used to be awarded with highest points and all other prototypes with much lower points. This caused only these three types to win and also to decrease number of entered prototypes. Therefore was based on experience of the jet plane-modellers introduced bonus of 40 points for a models which is only of one prototype in the event. This should contribute to versatility of models and to increase interest in these competitions of sportsmen, public and media.

**Class S5**

**aa) 10.5 Sub-classes** **Serbia**

*Amend the table as follows:*

Scale Altitude Competition may be flown in the following classes:

| CLASS | TOTAL IMPULSE (Newton-seconds) | MAXIMUM WEIGHT (g) |
|---|---|---|
| S5A | 0,00 - 2,50 | 90 |
| S5B | 2,51 - 5,00 | 120 |
| S5C | 5,01 - 10,00 | 150 |
| ~~S5D~~ | ~~10,01 - 20,00~~ | ~~180~~ |
| S5E | 20,01 - 40,00 | 240 |
| ~~S5F~~ | ~~40,01 - 80,00~~ | ~~500~~ |

Reason: Subclasses and technical specifications are selected so to give best performances for nowadays competition conditions and safety. S5A is deleted for poor flying specifications and the other two classes were not flown in competitions for decades. S5E is left for future development of this class with more powerful engines.

**Class S8**

**ab) 11.2. Purpose** **Germany**

*Amend the paragraph as follows:*

**Technical Secretary's Note:** The designation11.2 refers to Class S8 (a non-championship, non-precision-landing class); this rule change and reasons in this proposal refer to class S8E/P which is the Championship, precision-landing class and which already has an expressly stated purpose and landing area according to the class specifications.

The purpose of this competition is to achieve the longest flight duration times **in combination with a landing within a given landing area of 20 by 20 meters**. Model shall be timed from the instant of first motion on the launcher until the instant it touches the ground.

Reason: In theory and in practice, a S8 contest is the only RC event within the FAI in which a flight going OOS earns a score. That opposes the idea of RC model flying.

Supporting data: At the SM World Championships 2010 a junior won a medal in S8. During one flight, her RC glider went out of sight – that very flight scored a maximum as well.

**ac) 11.3. Disqualification** **Germany**

*Add a new paragraph as follows:*

**Technical Secretary's Note:** The designation 11.2 refers to Class S8 (a non-championship, non-precision-landing class); the rule change and reasons in this proposal refer to class S8E/P which is the Championship, precision-landing class with a landing area already specified.

**11.3.5. Any entry without landing within the landing area of 20 by 20 meters shall be disqualified.**

Reason: In theory and in practice, a S8 contest is the only RC event in which a flight going OOS earns a score. That opposes the idea of RC model flying, which includes a landing within a defined area.

Supporting data: At the SM World Championships 2010 a junior won a medal in S8. During one flight, her RC glider went out of sight – that very flight scored a maximum as well.

**ad) 11.5. Radio Controlled Flight** **Germany**

*Add a new paragraph as follows:*

**11.5.c) The contest director is responsible for determining the landing field. Any changes of the indicated landing area are forbidden during the round. The landing area must be located at a place on the field where there is no danger of collision with any person during the landing of the models.**

Reason: When the proposals for rules 11.2. and 11.3.5. are accepted, the landing area for S8 must be determined.

**ae) 11.6 Sub-classes** **Serbia**

*Amend the table as follows:*

| CLASS | TOTAL IMPULSE (Newton-seconds) | MAXIMUM WEIGHT (g) | MINIMUM WING SPAN (mm) | MAXIMUM FLIGHT TIME (sec) |
|---|---|---|---|---|
| S8A | 0,00 -2,50 | 60 | 500 | 180 |
| S8B | 2,51- 5,00 | 90 | 650 | 240 |
| S8C | 5,01- 10,00 | 120 | ~~800~~950 | 300 |
| S8D **& S8D/P** | 10,01- 20,00 | 300 | ~~950~~1100 | 360 |
| ~~S8E & S8E/P~~ | ~~20,01 -40,00~~ | ~~300~~ | ~~1100~~ | ~~360~~ |
| ~~S8F~~ | ~~40,01 80,00~~ | ~~500~~ | ~~1250~~ | ~~360~~ |

Reason: Class S8 is the most sophisticated RC Spacemodelling class. There is too many sub-classes and they reduced activities to only two S8D and S8E/P. S8D junior flyers easily achieve maximum flights of 360 seconds with D engines. E engines fly too high and unnecessarily increase expenses. S8A and S8F models were never flown not exist such models so far. Therefore it is better to focus on promising classes S8D&S8D/P with preserving S8E wing span as a recommendation by the S8 flyers and also allow two smaller classes to develop promotional or competition cheaper and simpler models for beginners.

## Class S8E/P

**af) 11.7 (Title)** **Serbia**

*Change the title 11.7 from S8E/P to S8D/P with a consequential change to the drawing at 11.7.5.4.*

*Amend the second paragraph as follows:*

### 11.7.2. SPECIFICATIONS

The competition has only one subclass determined for models which comply with subclass ~~S8E~~**S8D**. Total impulse of engine(s) ~~20,01 to 40,00~~ **10,01 to 20,00 NS and a wing span of 1100 mm is allowed**.

The radio shall be able to operate simultaneously with other equipment at 20 kHz spacing. Where the radio does not meet this requirement, the working bandwidth (Maximum 50 kHz) shall be specified by the competitor. **2.4 GHz radio is allowed for this competition but must be impounded along with all other radios.**

Reason: Class S8 is the most sophisticated RC space modelling class. S8D junior flyers easily achieve maximum flights of 360 seconds with D engines and there was no need for seniors to fly with E engines too high and unnecessarily to increase expenses. This change is a consequence of the change in the previous proposal 11.6 Subclasses.

**ag) 11.7.5 Organization of starts** **Serbia**

*Amend the paragraph as follows:*

11.7.5.4 In normal situations the circles will overlap each other but the centres should never be closer than 5 metres apart. In normal practice, the circle centres should be 10 metres apart as in the diagram above.

**Competitors (pilots) can stay at model's landing outside and/or inside landing circles.**

Reason: Necessary clarification because in some East European countries national rules require pilots to stay at a line 10 meters far from the centre of the landing circle. This make confusion in SM Championships and must be clearly stated in the rules that pilots are free to stand at any appropriate position for safe and precise landing of their RC models.

*cont/…*

## Class S9

**ah) 12.5 Sub-classes** **Serbia**

*Amend the table as follows:*

**12.5. SUB-CLASSES**

| CLASS | TOTAL IMPULSE (Newton-seconds) | MAXIMUM WEIGHT (g) | MAXIMUM FLIGHT TIME (sec.) |
|---|---|---|---|
| S9A | 0,00 - 2,50 | 60 | 180 |
| S9B | 2,51 - 5,00 | 90 | 240 |
| S9C | 5,01 - 10,00 | 150 | 300 |
| ~~S9D~~ | ~~10,01 - 20,00~~ | ~~200~~ | ~~360~~ |

Reason: Class S9D was never flown and is expensive for building and competition. S9A and S9B are regular competition classes and S9C is left for further development, because gyrocopter class can become technically very much sophisticated with larger models.

## Class S10

**ai) 13.6 Sub-classes** **Serbia**

*Amend the table as follows:*

| CLASS | TOTAL IMPULSE (Newton-seconds) | MAXIMUM WEIGHT (g) | MAXIMUM FLIGHT TIME (sec.) |
|---|---|---|---|
| S10A | 0,00 - 2,50 | 60 | 180 |
| S10B | 2,51 - 5,00 | 90 | 240 |
| S10C | 5,01 - 10,00 | 120 | 300 |
| ~~S10D~~ | ~~10,01 - 20,00~~ | ~~240~~ | ~~360~~ |

Reason: Class S10D was never flown and is expensive for building and competition. S10A and S10B were regular competition classes and S10C is left for further development, because flex-wing class can become technically very much sophisticated with larger models if radio controlled.

*cont/…*

## Part Fourteen – Space Model Records

### aj) Space Models "S" Classification of Records — Serbia

*Amend the table as follows:*

**TABLE I - SPACE MODELS "S" CLASSIFICATION OF RECORDS**

| Space Model Category | Record No. | Class | Total Impulse N sec | Maximum Weight | Number of Payloads |
|---|---|---|---|---|---|
| S-1 Altitude | ~~240~~ | ~~S1A~~ | ~~0,00 - 2,50~~ | ~~30~~ | |
| | 141 | S1B | 2,51 - 5,00 | ~~60~~ | |
| | 102 | S1C | 5,01 - 10,00 | 120 | |
| | ~~142~~ | ~~S1D~~ | ~~10,01 - 20,00~~ | ~~240~~ | |
| | 143 | S1E | 20,01 - 40.00 | 300 | |
| | ~~104~~ | ~~S1F~~ | ~~40,01 - 80,00~~ | ~~500~~ | |
| S-2 Payload Altitude | ~~105~~ | ~~S2C~~ | ~~5,01 - 10,00~~ | ~~90~~ | ~~1~~ |
| | 106 | S2E | 20,01 - 40,00 | ~~180~~ 300 | ~~2~~ 1 |
| | 107 | S2F | 40,01 - 80,00 | 500 | ~~4~~ 1 |
| S-3 Parachute Duration | 208 | S3A | 0,00 - 2,50 | ~~100~~ 60 | |
| | 109 | S3B | 2,51 - 5,00 | ~~100~~ 90 | |
| | 110 | S3C | 5,01 - 10,00 | 200 | |
| | ~~111~~ | ~~S3D~~ | ~~10,01 - 20,00~~ | ~~500~~ | |
| S-4 Boost Glider Duration | 012 | S4A | 0,00 - 2,50 | ~~30~~ 60 | |
| | 013 | S4B | 2,51 - 5.00 | ~~60~~ 90 | |
| | 014 | S4C | 5,01 - 10,00 | 120 | |
| | ~~044~~ | ~~S4D~~ | ~~10,01 - 20,00~~ | ~~240~~ | |
| | ~~045~~ | ~~S4E~~ | ~~20,01 - 40,00~~ | ~~300~~ | |
| | ~~016~~ | ~~S4F~~ | ~~40,01 - 80,00~~ | ~~500~~ | |
| S-5 Scale Altitude | ~~217~~ | ~~S5A~~ | ~~0,00 - 2,50~~ | ~~90~~ | |
| | 018 | S5B | 2,51 - 5,00 | 120 | |
| | 119 | S5C | 5,01 - 0,00 | 150 | |
| | 146 | S5D | 10,01 - 20,00 | 180 | |
| | 147 | S5E | 20,01 - 40,00 | 240 | |
| | ~~121~~ | ~~S5F~~ | ~~40,01 - 80,00~~ | ~~500~~ | |
| S-6 Streamer Duration | 222 | S6A | 0,00 - 2,50 | ~~100~~ 60 | |
| | 123 | S6B | 2,51 - 5,00 | ~~100~~ 90 | |
| | 124 | S6C | 5,01 - 10,00 | 200 | |
| | ~~125~~ | ~~S6D~~ | ~~10,01 - 20,00~~ | ~~500~~ | |
| S-8 Rocket Glider Duration | ~~026~~ | ~~S8A~~ | ~~0,00 - 2,50~~ | ~~60~~ | |
| | 027 | S8B | 2,51 - 5,00 | 90 | |
| | 028 | S8C | 5,01 - 10,00 | 120 | |
| | 029 | S8D | 10,01 - 20,00 | ~~240~~ 300 | |
| | ~~030~~ | ~~S8E~~ | ~~20,01 - 40,00~~ | ~~300~~ | |
| | ~~031~~ | ~~S8F~~ | ~~40,01 - 80,00~~ | ~~500~~ | |
| S-9 Gyrocopter Duration | 232 | S9A | 0,00 - 2,50 | 60 | |
| | 133 | S9B | 2,51 - 5,00 | 90 | |
| | 134 | S9C | 5,01 - 10,00 | 150 | |
| | ~~135~~ | ~~S9D~~ | ~~10,01 - 20.00~~ | ~~200~~ | |
| S-10 Flex-wing Duration | 236 | S10A | 0,00 - 2,50 | 60 | |
| | 137 | S10B | 2,51 - 5,00 | 90 | |
| | 138 | S10C | 5,01 - 10,00 | 120 | |
| | ~~139~~ | ~~S10D~~ | ~~10,01 - 20,00~~ | ~~240~~ | |

*"Note" is continued overleaf.*

Note: Three figures record numbering was introduced to designate version of rules revision. First figure "0" shows the rules stayed unchanged with respect to the FAI Sporting Code Section 4d - edition 1997. The first figure "1" shows the new rules became effective Jan 1, 2001, and established record was retired. The first figure "2" corresponds to the rules effective Jan 1, 2005 and established record was retired."

Reason: There were to many classes, too many records and therefore almost no activity in establishing record. It is necessary to reduce all that to real frame and to motivate people design and construct models based on new design concepts and to achieve top results.

**ANNEXES**

**ak) Annex 1 – S7 Scale Space Models Judges Guide** **Serbia, Slovakia**

*Amend the Judges Guide in four sections.*

See Agenda Annex 7l.

**al) Annex 2 –Judges & Organisers Guide** **Serbia, Russia**

*Amend the paragraphs as follows:*

**2. Judges Tasks:**

**~~Flight Timers~~ Time-keepers/Field-monitors/Judges Duties:**

a. Impound, safeguard, and distribute certified contest engines.
b. Impound, safeguard, and distribute FAI approved payloads.
**c. Impound, safeguard, and distribute electronic altimeters.**
c. Maintain stocks of flight cards as needed for the competitors.
d. Check models and recovery devices for proper identification.
e. Measure the size of recovery devices, if needed.
f. Know the maximum time limit for each duration type round.
g. Determine flights adherence to rules and safety. (safety rulings will also be made by the RSO or his deputies).
h. Declare disqualifications and note rationale on flight cards.
i. Time and record duration data onto flight cards.
j. Ensure completed flight cards are sent for data reduction.
k. Check-in and out stop watches, binoculars, and clipboards as needed to perform their duties.

**Special Judge Duties:**

a. Announces the start and stop of each round/event.
b. Responsible for the check-in and out of judges' stop watches, binoculars, **electronic altimeters** and other tools.
c. Radio control events require that all transmitters **(including 2.4 GHz)** be impounded and kept under control of a steward and be issued to the competitor at flight time then returned. The steward or the judge will also monitor radio frequencies to detect interference and communicate this information to the pilot.
d**. Altitude events with electronic altimeters require that all electronic altimeters be impounded and kept under control of a steward and be**

**issued to the competitor at the flight time and than returned.**

**Safety and Rule Compliance Officials:**

a. Will give models and recovery devices a pre-flight safety and rule compliance inspection and mark each part.
b. Attest to the appropriateness of submitted FAI payloads.
**c. Supervise calibration of electronic altimeters.**

**Engine Test Officials:**

a. Will attest to the certification of team submitted engines.
b. Engines will not exceed Newton Seconds value of class.
c. Test two engines of each batch.
d. Any failure of tested engines requires rejection of batch.
e. Batch is defined as the engines required for one engine class in an event regardless of delay length. Maximum three batches are allowed per an engine class per an event.

**Electronic Altimeter Test Officials:**

**a. Will attest to the certification of team submitted electronic altimeters.**

**b. Will give electronic altimeters to competitors and after flights readout, register and safely store results during the competition and when competition is finished to present them on an electronic memory to organizer of the event..**

**Scale Judges:**

a. Will award scale static and flight points in accordance with scale judging guide.
b. Will be responsible for giving copies of the scale judging forms used to record a competitor's points in Scale (S7) and Scale Altitude (S5) to each competitor in these events, before the end of the contest.

Reason: Clarification because newly obtained judges tasks which came out introduction of electronic altitude measurements..

**5. Organisers Tasks** **Serbia**

*Add the following paragraph immediately after the section title.*

**Before the beginning of any Spacemodelling competition the organizer is obliged to provide conditions for competition in accordance with the provision of the FAI Sporting Code, Section 4, Volume ABR, paragraph B.12.**

Reason: This is a clarification of the rules – a cross-connection to Volume ABR paragraph B.12 – Space Models – The organizer must.

**5. Organisers Tasks** **Serbia, USA**

*Add a new second paragraph in front of the existing second paragraph.*

**In World and Continental Championships a panel of five judges shall award their points independently. The highest and the lowest score shall be neglected and the average of the remaining three scores shall give the final score. In World Cups and/or in Open International-non World Cup events a**

**panel of three judges not necessarily from different countries shall give points.**

Reason: Clarification that should a long existing practice put into the rules and makes it mandatory.

**am) Annex 3 –Space Model Rules for World Cups** **Serbia**

*Amend the paragraph as follows:*

4. Points Allocation

Points are to be allocated to competitors at each contest according to their placing and results as given in the following formula below:

$$B = K \times \left( \frac{X}{Y} + \frac{\log(A) - \log(N)}{10} \right) \times 100 + \textbf{(C-2)}$$

where B = points awarded to the competitor
X = competitors score
Y = winners score
A = number of competitors
N = placing of competitor
**C= number of participating countries.**

Points are awarded only to competitors completing at least one flight in the contest.

In the event of a tie for any placing, all competitors with that placing receive the number of points appropriate to that placing, rounding up the score to the nearest whole number of points

Reason: There are events with only two countries and quite a number of local inexperienced competitors. These points should stimulate organizers for better foreign participation. (C-2) is because host and one guest country make the event eligible for international event. That means only when 3, 4 or more countries enter bonus points are awarded – because difference is >0..

**an) Annex 4 – Space Models International Ranking** **Serbia**

*Amend the paragraph as follows:*

**5. Points Allocation**

Points are allocated as follows:

$$B = K \times \left( \frac{X}{Y} + \frac{\log(A) - \log(N)}{10} \right) \times 100 + \textbf{(C-2)}$$

B = points awarded to the competitor
X = competitors score
Y = winners score
A = number of competitors
N = placing of competitor.
**C= number of participating countries.**

*cont/…*

K = ranking factor of a contest where for:

- World Championships .....K = 2
- Continental Championships.....K = 1.5
- World Cups.....K = 1
- Open Internationals not World Cup .....K = 0.75

Reason: There are events with only two countries and quite a number of local inexperienced competitors. These points should stimulate organizers for better foreign participation. (C-2) is because host and one guest country make the event eligible for international event. That means only when 3, 4 or more countries enter bonus points are awarded – because difference is >0..

End of Agenda Item 12