Fédération Aéronautique Internationale

Agenda

of the Plenary Meeting of the
FAI Aeromodelling Commission

e-Meetings
April & May 2021

For Free Flight Technical meeting April 17 1930 CET

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AGENDA
CIAM PLENARY MEETINGS 2021

14. SPORTING CODE PROPOSALS

The Agenda contains all the F1 proposals received by the FAI Office according to the manner required in rule A.10. Additions in proposals are shown as **bold, underlined**, deletions as ~~strikethrough~~ and instructions as *italic*.

The text of the submitted proposals may have been changed to correct the English grammar or to improve clarity and understanding. Technical Secretary notes should be addressed, if required, at the Technical meetings.

14.6 Section 4 Volume F1 - Free Flight

a) F1.1.2 Provision of Timekeepers **F1 Subcommittee**

F1 Subcommittee opinion: Accept, unanimous

Add a new sentence to F1.1.2 a) as follows:

a) In Free Flight events, provide each starting position with two time keepers in Championships. **At Open Internationals each starting position should be provided** ~~or~~ with at least one timekeeper ~~for other contests~~**, but if the organisers are unable to provide official timekeepers they must announce this in advance in a bulletin.** For fly-offs an additional timekeeper must be provided (i.e. three for Championships, at least two for other contests). All time keepers must have binoculars. Each starting position must be equipped with at least one tripod for supporting binoculars.

Reason: This emphasises that organisers should provide at least one time keeper at each starting position. However, some competition organisers do not manage to meet this basic need and it is important that competitors know in advance if there will be no official timekeepers. They can then make a decision in advance of whether to attend the event.

F1 Chairman's note: The subcommittee has considered the proposal (j) from France using the term "self-timing". Apparently that proposal is not intended to apply to competitors timing their own flights, but it was recognised that it is not stated in the Sporting Code that competitors cannot time their own flights. Within the principle of amendments made during Technical Meetings, it is suggested that an additional clarification is considered for the Timekeeping rules:

F1 Subcommittee opinion: Accept, unanimous

Change item F1.2.1.(b) to read "Competitors may act as timekeepers ***for flights of other competitors.****"*

Reason: To confirm the currently accepted situation that competitors can never be timekeeper for their own flights.

b) F1A - Gliders **Netherlands (Switzerland & Germany)**

F1 Subcommittee opinion: Reject, 5 for, 10 against

Amend three paragraphs 3.1.4, 3.1.5, and 3.1.12 which all pertain to the same ***safety*** *issue.*

3.1.4. Definition of an Official Flight

b) The duration achieved on the second attempt. If the second attempt is also unsuccessful under the definition of any of 3.1.5.a, 3.1.5.b, 3.1.5.c, 3.1.5.d, ~~or~~ 3.1.5.e **or 3.1.5.g**, then a zero time is recorded for the flight.

3.1.5. Definition of an Unsuccessful Attempt *(add a new paragraph 'g')*

g) **The competitor falls during the process of releasing of the model from the cable to the extent that parts of the competitor's body other than the feet come into contact with the ground (jumping allowed).**

3.1.12. Organisation of Launching

a) The competitor must be **standing, walking or running** on the ground **when releasing the model from the cable** and must operate the launching device himself (jumping allowed).

b) All freedom of action and movement is permitted to allow the best use of the cable, except throwing of the launching device.

c) The model must be ~~launched~~ **released to initiate tow** within approximately 5 metres from the starting position marker.

Reason: More and more F1A sportsmen can be seen throwing themselves to the ground when launching their models to generate additional line pull, model speed and therefore altitude of the model to increase flight performance. Tests have shown that line pull can exceed 40 kgf during this stage. The risk of the towline breaking is the highest during this falling down stage as the line pull is highest of all tow phases. This high line pull reduces the impact of the body on the ground. However if the towline breaks and, as one but frequently both hands are holding the towline, the sportsman cannot break the fall with the hands. The head, which is one of the heaviest part of the human body, will hit the ground hard. This may lead to injury like concussion etc., in particular if the head hits a hard object like a stone, rock, dried clay or road, which are commonplace on most of the fields where competitions are flown. Several injuries (head, shoulder, elbow, back) have already been reported by sportsmen. This proposal forces the sportsmen to stand up during the launch, thereby preventing injury. Bonus effects: Since the launch altitude will be reduced by up to 10 metres, flight performance is reduced. No changes in model design are required.

Supporting Evidence:

Allard van Wallene, the author of this proposal, measured the tow line pull during the falling down launch technique in 2-3 m/s wind speeds to be well over 40 kgf by using a spring scale and painters tape as a marker. The scale was attached to the end of the towline.

A picture of Michael Kosonoshkin all padded up (once bitten twice shy?) to avoid injury. As can be seen, both hands are used to pull the towline, which can therefore not be used to break the fall. If the towline would break at this moment, the body is thrown to the ground and the head will hit the ground hard leading to potential injury.

Here Per Findahl from Sweden can be seen in an edited photo showing him shortly before (right side) and shortly after (left side) the release of the towline. A single hand technique is used, however the risk of injury is still present (hand/wrist/elbow/head); in particular when the towline breaks at this moment.

Photos: Malcolm Campbell

c) F1B: 3.2.8 Classification **F1 Subcommittee**

F1 Subcommittee opinion: Accept, 11 for, 2 against

Modify item (c) as shown below. All other items (a, b, d, e) in this paragraph remain unchanged:

c) The organiser will establish a 7 minute period during which all fly-off competitors must **wind their rubber motor and** launch their model. ~~Competitors may use one rubber motor which was wound before the start of the 7 minute period and may wind additional rubber motors during the period.~~ Within these 7 minutes the competitor will have the right to a second attempt in the case of an unsuccessful attempt for an additional flight according to para 3.2.5. Starting positions will be decided by a draw for each fly-off.

Reason: When the flyoff period for F1A F1B F1C was reduced to 7 minutes, F1B flyers were given the option of winding a motor before the start of the 7 minute period. This has been difficult to control and has been open to different interpretations. It is proposed to forbid winding motors before the start of the flyoff rounds, in exactly the same way that winding motors is not allowed before the start of the basic official flights. While this gives a reduced launch period compared to F1A and F1C, there is no relationship between the classes and the rule will be uniform for all F1B flyers.

d) F1.3.1, F1.4.1, ANNEX 1, ANNEX 3 **Poland**

F1 Subcommittee opinion: Reject, 2 for, 8 against

The below changes and the following proposal (e) all relate to the proposal to run first-class events for Juniors in the class F1C instead of in the Junior class, F1P.

F1.3.1 Processing of Free Flight Model Aircraft - Class F1A, F1B, F1C, F1E, ~~F1P~~ …

c) Before the start and during the contest, the competitors have the right to have launching cables (F1A) and motors (F1B) and swept volumes of motors (F1C~~, and F1P~~) officially checked.

F1.4.1 Team Classification

Team Classification at all Free Flight Championships will be made according to the scheme described in C.15.6.2.a (ii). As a clarification of the application for free flight, the initial classification is based on the score in the regular flights and the next stage is based on the sum of the individual placing of team members (including flyoffs for F1A, F1B, F1C, F1E, ~~F1P~~ or counting more flights in F1D).

3.6 Class F1P Model Aircraft with Piston Motors should be transferred to the Provisional Rules and given number 3.P.

Annex 1. Classes

The following separate classes are recognised for World Cup competition: F1A, F1B, F1C, F1E, F1Q, F1A Junior, F1B Junior, ~~F1P Junior~~ and F1E Junior. 2. Competitors.

All competitors in the specified open international contests are eligible for the World Cup. Only Junior competitors are eligible for the F1A Junior, F1B Junior, F1E Junior and ~~F1P Junior~~ World Cup.

Annex 3.A2.1……

This guide is applicable to World and Continental Championships in classes F1A, F1B, F1C ~~and for Junior Championships at which F1P is flown in place of F1C.~~ Organisers of Championships should note the administrative advice given in the CIAM General Rules on the organisation of Championships. For organisers of FAI Open International events, appendix A gives changes and comments appropriate to Open Internationals for classes F1A, F1B, F1C~~, F1P~~ and also F1G, F1H, F1J, F1Q, and F1S.

Annex 3.A2A.2……

~~Note that under World Cup rules (Volume F1 Annex 1 para1) F1P models may be flown alongside F1C in World Cup Open Internationals. The F1P models are flown to their class rules except that the maximum flight time must be the same as the F1C flights. The F1P results are included with the F1C results for F1C World Cup scoring and also count for F1P Junior World Cup for junior flyers.~~

Reason: Unification and clarification of regulations for juniors competing in the free-flying model class with an internal combustion engine drive. F1P is currently practiced by the juniors only.

The consequence of this proposal is running the first-class events for Free Flight for Juniors in the class F1C instead of F1P. Juniors could compete in more competitions for the Word Cup and develop their skills under the supervision of elders (just like in the other classes).

e) F1C: 3.3.2 Characteristics of Model Aircraft with Piston Motor(s) Poland

F1 Subcommittee opinion: Reject, 2 for, 8 against

Make the following addition to the section as shown below as a consequence of the acceptance of the previous proposal:

Maximum duration of motor run: …… 4 seconds from release of model

Additional requirements for models flown by Juniors:

Gearing between engine shaft and propeller is not allowed.

Variable geometry (e.g. folding wing) and/ or variable airfoil camber (e.g. flaps) is not allowed.

Fuel to a standard formula … etc.

Reasons:

1. Class F1P does not allow a smooth transition to F1C class (from junior to senior in fact).

2. Class F1P with its technical rules is an archaic one. Result - a small number of juniors compete in competitions especially in EChs and WChs - 16 juniors F1P only (6 countries) in 2018 FAI F1 Junior WChs for Free Flight Model Aircraft.

3. During the course of juniors there is no need to build from a scratch or to invest in other models (just replace an engine and readjust a model) - to increase a number of young players competing.

4. Currently, the clubs and F1C competitors have a large amount of good equipment (shorter tail booms, larger fins), built in the 90s, which is suitable for use by juniors.

f) F1D: 3.4.2 Characteristics of Indoor Model Aircraft France

F1 Subcommittee opinion: Accept, 7 for, 1 against

No changes are proposed to the existing section; however an addition at the end of the section is proposed to allow half motor in F1D Open Internationals for Cat1 and Cat 2. The addition is:

For Open Internationals (not Championships) in category 1 (less than 8m) and category 2 (from 8 to 15 m) sites, the organiser may specify that the rubber motor (0,4g) must be replaced by a rubber motor of 0,2g and a spacer (free length but minimum weight 0,2g). This must be announced in advance in the competition bulletin.

The reduced motor and the spacer are to be checked before or after the flight as in F.1.3.2.

Reason: This possibility is already used by all F1D participants for training at World Championships in order to make more test flights during training days.

This reduced motor gives the opportunity to run an FAI contest in one day if the number of participants is low and the flying area large enough (hand-ball gym).

Opportunity to fly FAI events in low ceiling where steering may be done by fishing poles.

The idea is to have many open international events in order to stimulate F1D activity, and later on start an F1D World CUP

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

F1 Subcommittee opinion: Accept, unanimous

Modify item (c) and (e) as shown below. All other items (a, b, c, d, f, g) in Paragraph 4 remain unchanged.

4. Points Allocation

c) The number of points awarded is 500 for the winner and linearly decreases to zero for the highest place competitor receiving no points. For the competitor in place P this is expressed by:

points = 500 * [1 - (P-1)/H]

The points calculated are rounded up to the nearest whole number of points. **Additional points are awarded for the top three places subject to the requirement (b) to be in the top half of the results. Place 1 receives 75 extra points, place 2 receives 50 points and place 3 receives 25 points.**

e) Each competitor awarded placing points is also eligible for one bonus point for each competitor they have beaten in the competition. The number of people beaten by someone in place P is (N-P). ~~The winner is awarded an additional 25% bonus points, that is he receives 1.25*(N-P) points, rounded up to the nearest whole number of points.~~

Reason: The new scoring system introduced evenly graduated points from first place down to half way down the results. In a large competition this results in only a few points difference between the top places. The proposal makes a clearer reward for people placing on the podium of any event.

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

F1 Subcommittee opinion: Accept, unanimous

Modify item (a) and (e) as shown below. All other items (b, c, d, f, g) in Paragraph 4 remain unchanged.

a) The only competitors considered for the calculation of World Cup points are those who ~~completed a flight in the first round of~~ **have recorded a time on at least one official flight during** the competition. The number of these competitors is denoted by N and the place of an individual in this list is denoted by P.

e) Each competitor awarded placing points is also eligible for one bonus point for each competitor they have beaten in the competition**, but counting only the competitors with a flight time in round one of the competition**. The number of people beaten by someone in place P is (N-P). The winner is awarded an additional 25% bonus points, that is he receives 1.25*(N-P) points, rounded up to the nearest whole number of points.

Reason: Originally a limitation was introduced to calculate bonus points counting only the competitors who had flown in the first round. This was to prevent any additional bonus points being accrued if extra competitors were introduced during

the competition. The rules were later simplified to count only the competitors who had flown in the first round for the basic points as well as the bonus points.

Using this current system can be considered to penalise competitors who had made no flight in the first round compared to those with a zero score later in the competition. It is proposed to return to the consideration of the score in the first round only for the award of bonus points.

i) Annex 1 – Rules for Free Flight World Cup **France**

F1 Subcommittee opinion: Accept, unanimous

Additions are proposed for Paragraph 1 and 2.

Technical Secretary Note: The proposal has been changed to include F1Q Junior which was added in January 2021.

1. Classes

   The following separate classes are recognised for World Cup competition: F1A, F1B, F1C, **F1D**, F1E, F1Q, F1A Junior, F1B Junior, **F1D Junior**, F1P Junior, F1Q Junior and F1E Junior.

2. Competitors

   All competitors in the specified open international contests are eligible for the World Cup. Only Junior competitors are eligible for the F1A Junior, F1B Junior, **F1D Junior**, F1E Junior, F1Q Junior and F1P Junior World Cup.

Reason: This proposition suggests creating an F1D and F1D junior world cup based on the same principle as outdoor free flight classes. An indoor free flight world cup could revitalise the category. Not only will the competitors have more occasions to train but they could also challenge foreign flyers. Moreover, it will allow national competitors (not flying in the national team) to take part in an international event and ranking. For instance in France, only half of the F1D flyers take part in the world championships. Such a proposition could motivate them to compete on a worldwide scale.

j) Annex 2 – A Guide for the Organisers of FAI Contests in the Outdoor Free Flight Classes **France**

F1 Subcommittee opinion: Reject, 4 for, 9 against

An additional section is proposed for this Annex; however the Technical Secretary will require guidance on its exact placement, should the proposal be accepted.

Self-timing

The organisers of international competitions counting for the World Cup may use self-timing under the following conditions:

The timing mode must be announced on the entry form.

The organiser must provide an official supervisor for four poles.

The organiser will respect the general rules of organisation in the articles above.

Role and power of the supervisor

The identifiable supervisor must be present at the start line at all times.

His mission will be to supervise the proper conduct of the self-timing of his four poles.

He can time the competitor of his choice unexpectedly and control false starts.

He will have the same powers as the timekeeper cited in the above article.

Reason: This proposal suggests to formalize and frame the self-timing already widely practiced in international competitions counting for the World Cup. Today the majority of international competition organizers can no longer mobilize a sufficient number of timekeepers; they resort to this type of timekeeping. But there is too much disparity between each competition and it would be good to standardize the practices.