

## 14.1 Volume CIAM General Rules, Section 4C (General Rules for International Events)

### a) C.11 Identification Marks

Sweden

*Amend sub-paragraph C.11.1 b) by deleting text as shown below:*

- b) A model aircraft must not carry a national identification mark, an FAI ~~licence~~ **Unique ID** number **or** an FAI sticker ~~or any other reference~~ which relates to any person other than the competitor. At the processing of the model aircraft, the organiser must mark each FAI sticker (if required).

Reason: The main reason for deleting 'or any other reference' is that now, with the new Airspace regulations in many countries, this part of the rule forbids juniors to compete in a legal way. In Sweden a junior up to age 18 MUST have a senior's drone ID on the model to fly in a legal way, and the present text makes it illegal for a junior to compete in the eyes of the Sporting Code. It is also quite open for interpretation. Is it legal to fly a model with the factory name or model name on it? That's for sure also a reference to someone other than the pilot. And we frequently see pilots competing with models that have factory names or commercial model names on them.

**Proposal was amended by the F1 S/C meeting and as amended it is unanimously recommended by the CGR volume session meeting.**

### b) A.13 CIAM AWARDS

Bureau

The current CIAM awards are:

- Aeromodelling Gold Medal
- Alphonse Penaud Diploma
- Antonov Diploma
- Andrei Tupolev Medal
- Andrei Tupolev Diploma
- Frank Ehling Diploma
- **CIAM Legends**

The characteristics of each CIAM award are defined in FAI By-Laws (7.7). Submissions of nominations for CIAM awards must be received on the standard forms by the FAI Office no later than 15th November.

#### **Addition for the FAI By-laws**

THE CIAM LEGENDS MEDAL

History. This Medal was established in 2022 and first awarded in 2023.

Eligibility: The medal is reserved for those who have in the past obtained at least three (3) times the title of FAI World Champion in any Aeromodelling or Space Models class. The World Champion title may be gained in different classes. This medal is for individuals only.

Proposals may cover any period of time up to 31st of December of the preceding year.

Frequency and Number. No restrictions other than no athlete shall not be awarded with this medal more than once.

Nomination and Approval Process. Nominations, giving full information about the candidate's achievements up to 31st December of the preceding year, must be submitted on standard forms, available from the FAI Secretariat, and must arrive at the FAI Secretariat by 15th November of each year. In other respects, procedures shall be as described in Chapter 9 of the Statutes. The award is automatic. A vote from the Plenary will not be required as the nominations will be based on World Championships results.

**Proposal was amended during the meeting and as amended is unanimously recommended**

## 14.2 Volume CIAM Records

a) **4.2.1 Control Line Open Records**

**F2 Subcommittee**

*Amend the table and 4.2.1.2 (after sub-class F135) to include a **new open sub-class F138** as shown below:*

4.2.1.2 Control Line Open Records - Measurement of Speed

**Sub-class F138: Electric Motors – maximum weight of battery (or batteries) 200 g (incl. battery cables and connectors) ..... R = 17.69 m (9 laps = 1 km).**

*Amended table shown below:*

**Proposed New Open Subclass in Control Line Speed**

F2	Open	Aeroplane	Piston Motor	SPEED			
				SWEPT VOLUME cm <sup>3</sup>			
				0,00 to 1,00	1,01 to 2,50	2,51 to 5,00	5,01 to 10,00
				F130	F131	F132	F133
<b>CONTROL LINE CIRCULAR FLIGHT</b>	F2A			Speed in Competition			
	Open			F134*			
	Open		Reaction Motor	F135			
	Open		Electric Motor	F138			
				TEAM RACE (Race Time)			
	F2C		Piston Motor	100 laps - F136*		200 laps - F137*	

\* Only in World Championships & Continental Championships  
Reference paragraph 2.1.4.

Reason: Electrically power control line speed is becoming established and it is now time to have at least one open speed record for electric powered speed models.

**Proposal is unanimously recommended**

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

## 14.3 Section 4 Volume F1 - Free Flight

### a) F1.1.4 Additional Flights in Open Internationals

Serbia

*Modify the second paragraph and sub-paragraph a) as shown below:*

At Open Internationals the organisers sometimes have a problem completing this regular procedure. For exceptional reasons of strong winds, poor visibility, ~~inadequate field space~~, or unavailability of the field for continuation on the following day, Open Internationals may use a non-standard additional flight procedure for all outdoor F1 classes except F1E with the following conditions:

- a) A non-standard procedure must be used ONLY for these exceptional reasons of strong winds **(stronger than 6 m/s)**, poor visibility **(horizontal not more than 500m and vertical not more than 150m)**, ~~inadequate field space~~, or unavailability of the field for continuation on the following day.

Reason: It is necessary to quantitatively define meaning of the terms “strong wind” and “poor visibility” to avoid any ambiguities and different interpretation. This proposal clarifies these ambiguities. Also the term “inadequate field space” is deleted because the official events in the FAI CIAM Contest Calendar may not be flown at “inadequate field space”. The flying field must correspond to the required CIAM standards.

**F1 Technical Meeting opinion: Refer Back to the S/C**

### b) F1.1.4 Additional Flights in Open Internationals

F1 Subcommittee

*Modify F1.1.4 item (b) as shown below.*

*New items are added as (iii), (v), and (ix). Other items have been modified and renumbered to fit with the newly-added items.*

- b) An “altitude fly-off” may be specified when F1 altimeters have been approved by CIAM EDIC **and at least one of the following conditions are met:**
- 1) altimeters are available for competitors to purchase from at least one supplier.**
  - 2) all competitors in the fly-off have their model equipped with an approved altimeter.**
- i) The procedures for a regular additional flight for the class are followed.
  - ii) A maximum flight time is defined which should be at least two minutes.
  - iii) **Before the flight the competitor shows his altimeter to the timekeeper for the timekeeper to record the serial number marked on the altimeter and to confirm that it shows the empty memory indication.**
  - iv)** The flight is timed up to the maximum time.
  - v)** **Competitors must present their altimeters and altitude read out no later than 45 60 minutes after the end of the fly-off.**
  - vi)** For all competitors attaining the maximum flight time, the altitude of the model at the maximum flight time is read from the altimeter **referenced to a**

**zero altitude defined by the altitude during the 10 seconds before launch of the model (for F1A before the helper releases the model from the ground and for F1C before starting the motor).** For scoring purposes this value **the altitude** is rounded to the nearest metre.

- vii)** The individual placings are determined by the highest altitudes for all flights attaining the maximum, followed by time order. **Competitors with a recorded altitude are placed before competitors not returning an altitude, even if the recorded altitude is negative.**
- viii)** Equal altitudes are considered to be a tie, which may be resolved by another additional flight.
- ix)** **The proper operation of the altimeter is the responsibility of the competitor.**

Reason: Refinements as a result of experience gained through the use of Altitude fly-offs in 2021. Availability of altimeters is essential to the fair application of the procedure and while availability is limited the altitude fly-off can be used if all fly-off competitors do have approved altimeters.

iii) It is necessary for the timekeeper to record the serial number of the altimeter, which is required by EDIC to uniquely identify each individual altimeter.

v) For the smooth running of the contest, there must be a time limit for presenting the altitude data.

vi) It is necessary to define the reference against which the altitude is measured and this is proposed to be on the start line just before launch.

vii) The landing area may be below the starting line and thus a negative altitude at the time of the maximum flight time is a valid altimeter reading and should take precedence over competitors with no recorded altitude.

ix) The competitor is responsible for correct operation of the altimeter. This is comparable to the way in which the competitor is responsible for the functioning of radio control DT or motor stop.

**Proposal was amended by the F1 S/C meeting and as amended it is unanimously recommended.**

**c) F1.1.4 Additional Flights in Open Internationals Austria**

*Modify F1.1.4 item (b) as shown below.*

*Sub-paragraph (iii) has additional text. (vi) moves to (vii) and a new (vi) is inserted.*

b) An "altitude fly-off" may be specified when F1 altimeters have been approved by CIAM EDIC.

iii) The flight is timed up to the maximum time **and controlled by the timekeeper with a regular stopwatch.**

**(vi) A tie is defined for all competitors which are inside the tolerances given by EDIC For Free Flight V1.2, EF1.2 d). The tolerance is specified with +/- 1 metres. Exact wording: ...within 2 metres.**

**e.g.: competitor A: ha = 41 m +/- 1m => [40 - 42] m**

**competitor B: hb = 40 m +/- 1m => [39 - 41] m**

**=> situation for a tie is given**

- (vii)** Equal altitudes are considered to be a tie, which may be resolved by another additional flight.

Reason: In altitude, fly-off height is the main parameter to determine the winner. The tolerance for the correct measurement of altitude is defined in:

#### EF1.2 Altimeter Specification

d) The accuracy of the altitude measurement should be within 2 metres or 0.5% of altitude, whichever is the greater. This should be maintained over a temperature range of -10°C to +50°C with a working range of at least 1000 metres from sites at up to 2000 metres altitude.

Using the smaller and absolute value, “within 2 meters”  $\Leftrightarrow$  +/- 1m, is a useful compromise to get a result.

Using the value read from the altimeter rounded to the next metre is equivalent to accepting a measurement mistake which is well known.

All technical measurements are subject to measurement errors which are well known from the certification procedures of the devices. A good example is Speed measurement in road traffic by police. To punish the traffic offender the measurement result minus the tolerance is taken.

We are ignoring a well-known measurement mistake to create a champion. That is not fair and useful to our sport!

**Discussed by the meeting and concluded refer back to EDIC and F1SC for review of accuracy.**

#### **d) F1.1.4 Additional Flights in Open Internationals Austria**

*Modify F1.1.4 by completely deleting section (b) as shown below.*

*This proposal is intended to apply to F1A, F1B and F1C classes. Since it refers to the general rule at the beginning of the F1 Volume, it has only been included once in the Agenda. Similarly the reason and supporting data have only been included once.*

- a) A non-standard procedure must be used ONLY for these exceptional reasons of strong winds, poor visibility, inadequate field space, or unavailability of the field for continuation on the following day.
- ~~b) An “altitude flyoff” may be specified when F1 altimeters have been approved by CIAM EDIC:~~
- ~~i) The procedures for a regular additional flight for the class are followed~~
  - ~~ii) A maximum flight time is defined which should be at least two minutes.~~
  - ~~iii) The flight is timed up to the maximum time~~
  - ~~iv) For all competitors attaining the maximum flight time, the altitude of the model at the maximum flight time is read from the altimeter and for scoring purposes this value is rounded to the nearest metre.~~
  - ~~v) The individual placings are determined by the highest altitudes for all flights attaining the maximum, followed by time order.~~
  - ~~vi) Equal altitudes are considered to be a tie, which may be resolved by another additional flight.~~

Reason:

### 1. Beginning of a flight

No altimeter can one-to-one and onto determine the beginning of an official contest-flight of an F1A glider. Altimeters can determine a peak in altitude which is not inevitable the “the release of the model from the launching cable”.

Beginning of timing is defined in 3.1.9 Timing (for F1A).

a) See F1.2.

b) The timing of flights is limited to the maximum durations specified in 3.1.7 and 3.1.8 and relevant sections for F1B and F1C. The total flight time is taken from the release of the model from the launching cable to the end of the flight.

Additionally, “F1.1.4 Additional Flights in Open Internationals” is in collision with this rule!

### 2. Mistake in measurement

“F1.1.4 Additional Flights in Open Internationals” is not defining any applicable certifying procedure which includes:

- measurement error: e.g.: +/- 0,5m
- quality standard: 1<sup>st</sup> test: 20 pieces  
yearly anonymized test of min. 10 pieces

### 3. Incomplete rule/procedure to use altimeters

“F1.1.4 Additional Flights in Open Internationals” is not defining any complete procedure to use certified altimeters. Because no measurement error is defined a tie is a lottery. Timekeepers were instructed by the manufacturer of “ALL-TEE” to a procedure which is not regulated in “SECTION 4C – MODEL AIRCRAFT – F1 – FREE FLIGHT”.

*Technical Secretary Note: There is further supporting data which can be found in **Annex 7a**.*

## **Withdrawn by Austria**

### **e) F1.2.6 Time recorded**

**F1 Subcommittee**

*Modify F1.2.6 as shown below:*

The ~~time~~ **duration of the flight** recorded is the mean of the times registered by the timekeepers, rounded to the nearest whole number of seconds to the resulting mean time (0.5 second rounded up to the second above) unless the difference between the times registered shows evidence of an error in the timing, in which case the organiser will determine, with the FAI Jury, which time will be registered as the official time or what action should be taken.

Reason: To clarify that this definition relates to the time of a flight and not the time of motor runs which are defined in the class specifications.

**Proposal is unanimously recommended**

### **f) F1.2.7 Electronic evidence of flight time**

**F1 Subcommittee**

*Modify F1.2.7 as shown below. Note also the changed paragraph structure:*

In Fly-offs, electronic time and altitude recording devices may be used mounted in or on a model. Such devices must be commercially available with an altitude

measuring frequency of at least 2 Hz and display equipment like a computer, tablet or smart phone equipped with graphing software must be available to produce a time-altitude graph of the recorded flight. The responsibility of the use and correct functioning of such devices rests with the competitor.

The use of an altimeter is voluntary.

**If the competitor is using an EDIC-approved altimeter then this must be shown to the timekeeper before the flight for the timekeeper to record the serial number marked on the altimeter and to confirm that for the first additional flight it shows the empty memory indication.**

**Competitors using altimeters which are not EDIC-approved must follow the following procedure.** Prior to each fly off, participants with (reserve) models equipped with such recording devices being switched on, should position their model(s) at ground level no more than 5 metres from their assigned starting pole. Upon instruction of the contest director, the participant will have to lift the model(s) from the ground and hold the model(s) elevated a number of times, the number and duration of these movements is decided by the contest director thereby generating a unique altitude-time signature.

In case of a flight-time related dispute, the competitor automatically may proceed to the following fly off round. Any dispute must be marked on the competitor's scorecard for that fly off round. After the last fly off but no later than ~~30~~ **60** minutes from the end of the last fly off, the jury will ask the competitor who filed the dispute to read out the altimeter data and present the altitude versus time graph. The jury will check the signature in the graph and determine the flown time for the fly off round for which a dispute has been filed. If the moment of launch, landing and flight time can be clearly established and the correct signature is present, the flight time will be recorded for the final result. If any one of these conditions is not met, the timekeeper's time of the disputed fly off round will be used as the score for that fly off round. If this time is less than the maximum flight time set for that particular fly off round, any subsequently flown fly off rounds will be cancelled for that competitor. In case of a protest related to the altimeter generated flight time, the altitude graphs must be made available to the jury. Failure to do so will result in the time keeper's recorded flight time being the official score.

Reasons: To simplify the procedure for competitors using an EDIC approved altimeter by removing their need to create the altitude signature.

To increase the time limit for return of altimeters from a fly-off which might have been for a long flight.

**Proposal is unanimously recommended**

**g) F1.2.7 Electronic evidence of flight time**

**Serbia**

*Modify F1.2.7 as shown below:*

In Fly-offs, electronic time and altitude recording devices may be used mounted in or on a model. Such devices must be commercially available with an altitude measuring frequency of at least 2 Hz and display equipment like a computer, tablet or smart phone equipped with graphing software must be available to produce a time-altitude graph of the recorded flight **in accordance with the EDIC approval**



**for a particular device and software.** The responsibility of the use and correct functioning of such devices rests with the competitor.

The use of an **electronic** altimeter is voluntary. **All fly-off participants shall agree prior to the fly-off to use electronic evidence of the flight time. The event organiser shall provide at least one independent person, who is not a competitor, qualified to deal with electronic altimeters and to read and interpret required saved data.**

Prior to each fly off, participants with (reserve) models equipped with such recording devices being switched on, should position their model(s) at ground level no more than 5 metres from their assigned starting pole. Upon instruction of the contest director, the participant will have to lift the model(s) from the ground and hold the model(s) elevated a number of times, the number and duration of these movements is decided by the contest director thereby generating a unique altitude-time signature. ... *the remainder of this paragraph remains unchanged.*

**Electronic evidence of flight time as a non-standard method of fly-off shall not be used earlier than two hours before the official sunset.**

Reason: Original wording of this rule resulted in different understanding of its implementation in first Cat 2 contests where it was applied. This caused certain dissatisfaction of participants and loss of confidence in correctness of this method and used devices and software. It is necessary to clarify tasks and procedures of conduction of fly-off by use of electronic altimeters and make sure that the used devices are in accordance CIAM standards. Also they should be commercially easy available to secure equal participation of competitors from different countries.

**Withdrawn by Serbia**

**h) F1.2.7 Electronic evidence of flight time**

**Austria**

*Delete the heading and the entire section.*

*The deletion has not been shown below as the section has been reproduced in the two items above.*

Reason: No altimeter can one-to-one and onto determine the beginning of an official contest-flight of an F1A glider. Altimeters can determine a peak in altitude which is not inevitable the “the release of the model from the launching cable”.

Beginning of timing is defined in 3.1.9 Timing

a) See F1.2.

b) The timing of flights is limited to the maximum durations specified in 3.1.7 and 3.1.8. The total flight time is taken from the release of the model from the launching cable to the end of the flight.

And “F1.2.7 Electronic evidence of flight time” is in collision with this rule!

- standard models without zoom or bunt launch produce no peak in pressure at the moment of releasing the starting cable => the start point cannot be defined by altimeter
- damaged high-end models needs to be launched like standard Model => launch produces no peak in pressure at the moment of releasing the starting cable => the start point cannot be defined by altimeter
- this happened more than 1 time at WCH and ECH

- starting line breaks and model makes the launch and the flight as normal, but the line and flag are still connected to the hook => altimeter recognize a normal flight
- starting line falls off 10 s or even later after launch (this happens some time)

*Technical Secretary's Note: This proposal is intended to apply to F1A, F1B and F1C classes. Since it refers to the general rule at the beginning of the F1 Volume, it has only been included once in the Agenda. Similarly the reason (which refers to F1A) and supporting data have only been included once.*

### **Withdrawn by Austria**

#### **i) F1Q Electric Power: 3.8.8 Classification F1 Subcommittee**

*Modify 3.8.8 (c) as shown below:*

- c) The organiser will establish a ~~40~~7 minute period during which all fly-off competitors must launch their model. Within these ~~40~~7 minutes the competitors will have the right to a second attempt in the case of an unsuccessful first attempt for an additional flight according to 3.8.5. Starting positions will be decided by draw for each fly-off.

Reason: This brings F1Q into line with F1A, F1B, F1C and F1P in having a 7 minute period for the additional flights. The 7 minute change was made in 2017 for the other classes and the extension to F1Q was missed when F1Q became an official class in 2018.

#### **Proposal is unanimously recommended**

#### **j) F1S Small Electric Power 'E36': 3.S.1 Definition F1 Subcommittee**

*Modify 3.S.1 with the addition as shown below:*

Model aircraft which is powered by an electric motor(s) and in which lift is generated by aerodynamic forces acting on surfaces that remain fixed in flight except to dethermalise. **No control surface movements are allowed during flight.**

Reason: To clarify that the requirement for fixed surfaces also excludes control surfaces.

#### **Proposal is unanimously recommended**

#### **k) Annex 4 – Free Flight Ranking F1 Subcommittee**

*Modify **Section 4: Points from events** with the deletions and addition as shown below:*

For every event the competitors' scores will consist of two components:

- a) A results component. This consists of points awarded on the same basis as World Cup points for competitors finishing in the top half ~~or top 24~~ of the results list. Bonus points are given in accordance with the current World Cup bonus allocation.
- b) An event ranking position component. This measures how well the competitor has performed in an event compared to the result which would be expected from his current position in the ranking.

To calculate this all the competitors in the competition are placed in the order in which they appear in the current ranking. Any competitors not previously on the ranking list will be assumed to be equally placed at the bottom of the ranking list. Each competitor is allocated points according to the difference between their actual position in the competition and the position calculated according to the ranking list. ~~One point is~~ **Ten points are** awarded for every 3 places different, positive if placed better than ranking position, negative if below ranking position.

Reason: To bring the ranking definition into line with World Cup changes.

The change in (a) is for always awarding points to the top half of the results list.

The change in (b) is to increase the position points by a factor of 10 to correspond the upgrading of the World Cup results points (which changed from 50 to 500 for first place).

Both changes had been incorporated in the software calculating the ranking results at the time of the World Cup changes (2017) but the definition was not updated in the Sporting Code.

**Proposal is unanimously recommended**

*Volume F2 Control Line begins overleaf*

## 14.4 Section 4C Volume F2 – Control Line

### F2B – Control Line Aerobatics

#### a) 4.2.7 Contest Flights

F2 Subcommittee & Switzerland

*Clarification to a previous error in (g):*

g) If, when making his second attempt for the respective round, any of the following occurs:

- i) the competitor did not pass through the entrance to the contest flight circle within 2 3 minutes of being officially called;

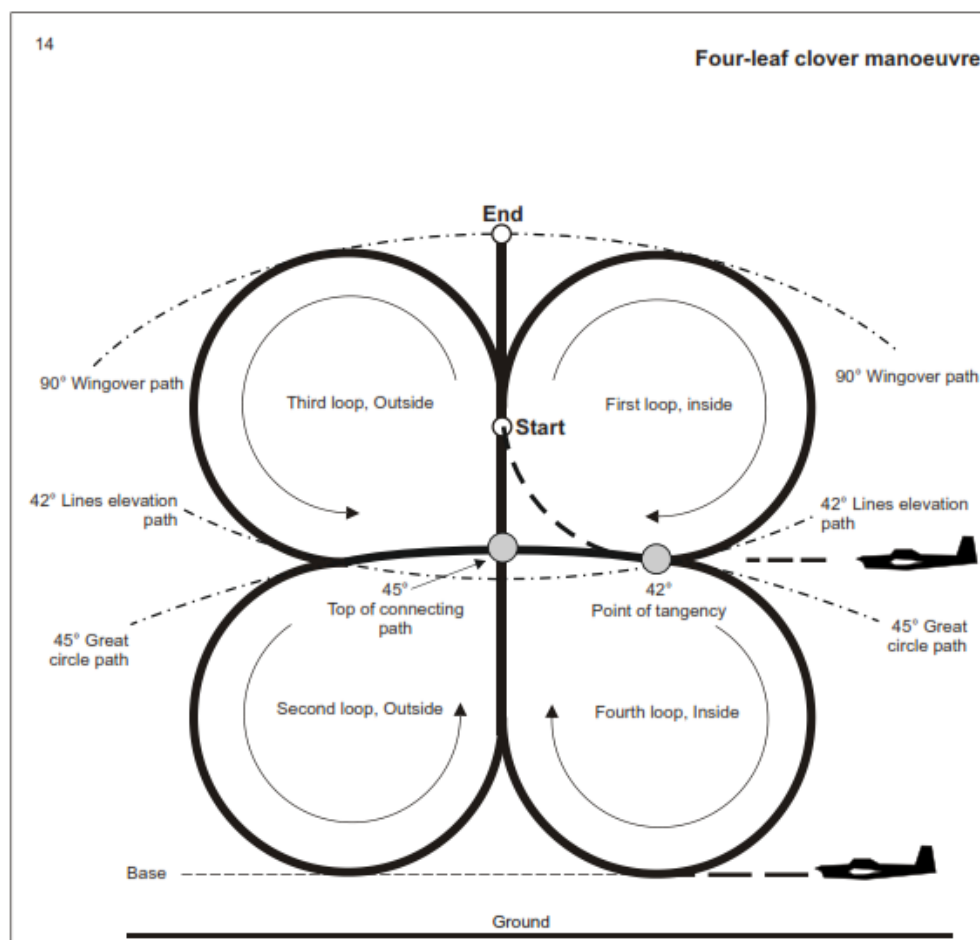
Reason: The 2 minutes time limit in 4.2.7 g) i) does not match the limit indicated in 4.2.7 d) i) and is contradictory to 4.2.13 a) Starting procedure.

**Proposal is unanimously recommended**

#### b) Annex 4J – F2B Manoeuvre Diagrams

F2 Subcommittee & Switzerland

*Replace 4.J.14 Four-leaf clover manoeuvre diagram (Rule 4.2.15.16):*



Reasons: Clarification with added dotted lines showing manoeuvre entry and horizontal segments flight tracks.

## Proposal is unanimously recommended

### F2C – Control Line Team Racing

#### c) 4.3.5 Organisation of Races

The Netherlands

~~Replace the entire section b) with the paragraphs as shown below:~~

**Delete the second paragraph, amend the third and final paragraph of b) and add new paragraphs.**

~~b) When a qualifying race does not contain three teams as per rule 4.3.5 a), the judges shall ask for volunteers (from different nations in case of World or Continental Championships) to allow the remaining race to start with three teams. will invite team(s) who already have an official result in the ongoing round, to fill the vacancies in order to allow the remaining race to start with three teams.~~

~~The teams that fill in the vacant spots in the heat, accept that the official result that they had achieved in the ongoing round, will be replaced by the result they achieve in the heat they enter. These teams are defined as vacancy filling teams.~~

~~Only teams that have an official time in the ongoing round or a number of laps flown, can opt for filling up the remaining heat in the ongoing round. Teams that have been disqualified in the ongoing round, or did not start in this round, cannot apply for filling in vacancies in the heat concerned.~~

~~All teams, originally drawn, granted a re-flight or accepted vacancy filling teams will be treated as all other teams that have flown in the ongoing round.~~

~~In the case of World or Continental championships, the vacancy filling team(s) must have a different nationality from other already accepted teams in the heat.~~

~~If there are more teams willing to opt for vacant places in the heat than available, the team that has achieved the best result in the ongoing round (fastest time or flown most laps) gets the right to fill in vacancies first. In the case where candidate teams achieved equal results in the ongoing round, the Judges shall conduct a blind draw amongst the candidates concerned.~~

~~If there are sufficient or more volunteers for a qualifying race, the Judges shall conduct a blind draw to start the race with three teams and shall conduct a separate draw teams for the segment choice order. The volunteer team(s) shall not be eligible to have a time registered or to be granted a re-flight from this race.~~

**b) i) When a qualifying race does not contain three teams per rule 4.3.5.a), the judges shall ask for volunteers (from different nations in the case of World or Continental Championships) to allow the remaining race to start with three teams.**

**( ii) Teams shall have a maximum of 10 minutes after the judges call for volunteers to register their interest.**

**( iii) Teams that were either disqualified or did not fly in the current round are not permitted to volunteer.**

- ( iv) Any volunteer team shall have its existing result in the current round cancelled and replaced by its later result.
- ( v) In order to fill the vacant places, the judges shall select the volunteer team(s) in descending order of their existing results in that round.
- ( vi) In the case where two or more volunteer teams have identical existing results then a blind draw shall take place to establish which volunteer team(s) fill the vacant places.
- ( vii) Volunteer and originally drawn teams shall be treated equally.
- ( viii) The Judges shall conduct a separate draw for the segment choice order.
- (...ix) If there are insufficient volunteers vacancy filling teams, the competing team(s) will be allowed to start the race with fewer than three teams to complete their qualifying or semi-final race.

Reason: The current ruling of asking for volunteers is not in conjunction with good sportsmanship. In a sport, the rules are organised in such a manner that whoever enters a race, does that with the intention to get the best ranking result for him or his team. In the case of asking for volunteers, the rules introduce teams in a race who have no interest in the result of their effort, other than preventing their fellow official opponents in the race to realize a good result. This problem is mentioned in par. 4.C.6.5 of the Judges guide, in which judges are called upon to not accept candidate volunteers who have an 'obvious interest' in blocking good results of their opponents.

This clearly demonstrates that the current construction in which only bad intentions can lead to bad flying should be replaced by the proposed system, where all teams that enter the last heat in a round, start with teams that have all the equal target, to achieve the best official result in the ongoing round. More teams will opt for an opportunity to improve their result from the round, this will lead to less races with less than three teams at the start, making the heats result more in line with the effort all other teams in a round had to do. Asking for teams to volunteer and risk their costly equipment with no benefit other than ruining another team's race is simply not fair.

***In case If this amendment is accepted by Plenary in the voting, rule 4.C.6.5 in Annex 4C (the F2C Judges Guide) will need to ~~can be~~ deleted.***

**Proposal was amended by the F2 Technical meeting and as amended it is unanimously recommended**

## **F2D – Control Line Combat**

### **d) 4.4.15 Individual and Team Classification F2 Subcommittee**

*Regarding Fly-offs, insert an additional sub-paragraph to h) as shown below:*

h) In the event of a tie for second or third place, the equal placed flyers shall take part in a fly off, during which they shall be allowed only one loss. In the event of a tie for third place after a fly-off for second place then there shall be a new fly-off for third place.

The pilots taking part in a fly-off are ~~to be~~ of equal status and must be treated ~~as all of equal status~~ as such, ~~and no consideration should be taken into account if they have met earlier in the competition or if they are of the same Nationality/Team.~~

It has no bearing in a fly-off if the pilots have met earlier in the competition or if they are of the same nationality or team.

Reasons: Clarification regarding a fly-off for second or third place.

**Proposal was amended by the F2 Technical meeting and as amended it is unanimously recommended**

## Annex 4D – Class F2D Judges Guide

### e) 4.4.13 Penalties and Disqualification F2 Subcommittee

Add additional text at the end of section C, sub-paragraph t) as shown below:

#### Rule 4.4.13 Penalties and Disqualification

##### C. A competitor will be disqualified from the heat:

t) For example, any tampering with the streamer in any way, shape or form can result in a disqualification. This rule can also be used to disqualify a competitor for any other breach of the rules that is not covered in a separate paragraph.

~~If the mechanic picks up the opponent's model by mistake and then puts it back on the ground when they realise their mistake, no penalty shall be given unless it creates an unfair situation and affects the opponent in a negative way.~~

If the mechanic picks up an opponent's model by mistake and immediately puts it back on the ground then no penalty shall be given unless an unfair situation has been created that negatively affects the opponent.

Reasons: Clarification.

**Proposal was amended by the F2 Technical meeting and as amended it is unanimously recommended**

## Annex 4K – F2G Control Line Electric Speed

### f) 4.K.2 Characteristics of a Speed Model ... Electric Motor(s) F2 Subcommittee

Modify this section (sub-paragraphs d) and e)) with the deletions and addition of the text as shown. Consequential renumbering of the remaining sub-paragraphs:

- a) Maximum off-load voltage of power supply 42 V
- b) Maximum weight of battery (or batteries) 200 g (incl. battery cables and connectors)
- c) Minimum total projected area 5.0 dm<sup>2</sup>
- d) ~~Maximum total projected area 6.0 dm<sup>2</sup>~~ **Maximum model weight with battery 600 g.**
- e) ~~Maximum wing loading 100 g/dm<sup>2</sup>~~
- f) Maximum wingspan 100 cm

Reason: Removing the wing loading requirement make it possible use easily available F2A model parts. Reverting to a maximum weight of 600g simplifies the rules.

**Proposal is unanimously recommended**

**g) 4.K.2 Characteristics of a Speed Model ... Electric Motor(s) F2 Subcommittee**

*Amend the original sub-paragraph h) with the deletion and addition of the text as shown. If the previous item is accepted, renumber this sub-paragraph as g):*

h) For safety reasons a radio control system as defined by CIAM General Rules B.1.2.2 c) may be used to control the start of the motor, in-flight power and the shutdown of the motor. ~~A person other than the pilot may operate this system.~~ **The system may be operated by the pilot or assigned mechanics/helpers – an assigned mechanic/helper.**

Reasons: The change is required in order to **clarify** that in F2G the pilot may control in flight power and the shutdown of the motor using a 2.4Ghz radio control system. This is a safety issue; control of this function by the pilot does not give him any performance advantage.

**Proposal was amended by the F2 Technical meeting and as amended it is unanimously recommended**

**h) 4.K.3 Diameter of Control Lines F2 Subcommittee**

*Amend sub-paragraph a) as shown below:*

a) Only two-line control is allowed, minimum control line diameter is ~~0.40~~ **0.45** mm with a tolerance of minus 0.011 mm.

Reason: The speed achieved by F2G models has now reached the point where 0.4mm wire is insufficient size. The increase in diameter to 0.45mm ensures a suitable safety margin on wire strength.

**Proposal is unanimously recommended**

**Annex 4E – Control Line World Cup**

**i) 4.E.1 Classes F2 Subcommittee**

*Amend the paragraph as shown:*

4.E.1. Classes

The following separate classes are recognised for World Cup competition in Control Line: F2A (Speed), F2B (Aerobatics), F2C (Team Racing), F2F (Team Racing), ~~and~~ F2D (Combat) **and F2G. (Electric Speed)**

Reason: The performance of F2G has progressed rapidly over the past 4 years and making it into a World Cup class would raise its status and make it more attractive to competitors from more countries.



*Consequential changes if proposal accepted:*

#### **4.E.4. Points Allocation**

In each competition, points in a class will only be allocated if the competitors who have completed a flight in that class are from at least two different countries.

A competitor (team in F2C) has completed a flight if:

- he registers a speed not equal to zero (0) in F2A **and or F2G**.

In F2A **and F2G**, the points allocated to each competitor will be the same as the achieved speed result in km/h.

**Proposal was amended by the F2 TM meeting and as amended it is unanimously recommended.**

***Volume F3 Helicopter begins overleaf***

## 14.5 Section 4C Volume F3 - RC Helicopter

### Annex 5H – RC Model Helicopter World Cup Rules

#### a) 5H.3 Contests (F3C & F3N)

F3 Heli Subcommittee

*Amend sub-paragraph c) as shown below:*

Contests included in the World Cup must appear on the FAI Contest Calendar, and must be run according to the FAI Sporting Code. The contests eligible for a World Cup in a particular year, must be nominated before the CIAM Bureau Meeting at the end of the preceding year, and must be included in the FAI Contest Calendar. The selection of the contests should be according to the following guidelines:

- a) a maximum of two contests may be selected for any one country.
- b) each competitor may count only one competition from each country in Europe (taking the better score for any European country in which he has scored in two competitions).
- c) at least three (3) **judges and no more than five (5) judges** have to be appointed for each judges' panel. **If three judges are used, no scores will be deleted. By using four or five judges the highest and lowest scores of each manoeuvre will be deleted.**

**If only three (3) judges are used, all marks will be counted for the score of the round. By using four (4) or five (5) judges the highest and lowest mark of each manoeuvre will be discarded.**

Reason: Clarification is needed because it was not mentioned in the Sporting Code.

**Proposal was amended by the Bureau meeting and as amended it is unanimously recommended.**

### F3N – RC Freestyle Aerobatic Helicopters

#### b) 5.11.7 Scoring

F3 Heli Subcommittee

*Add a sentence at the end of the first paragraph in this section as shown below.*

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. **If three judges are used, no scores will be deleted. By using four or five judges the highest and lowest scores of each manoeuvre will be deleted.**

**If only three (3) judges are used, all marks will be counted for the score of the round. By using four (4) or five (5) judges the highest and lowest mark of each manoeuvre will be discarded.**

Reason: Clarification is needed because it was not mentioned in the Sporting Code.

**Proposal was amended by the Bureau meeting and as amended it is unanimously recommended.**

## 14.6 Section 4C Volume F3 - RC Soaring

### New Educational Beginners Class

a) Annex xx – TBA

The Netherlands

#### **Thermal Duration Gliders for Multi Task Competition (provisional title)**

Refer to Agenda **Annex 7b** for the proposed rules, which are yet to be formatted for inclusion in the Volume.

Reason: We have tried to convince beginners to fly competitions, but the response was not always positive. Costs, complexity, competitiveness, time and a few more reasonable arguments made us think about an easier way. Also, we did not want to offer a class that is competing with already existing classes. We hope to have proposed a class that helps existing classes to get more competing pilots. This way it could also be attractive to pilots who already fly competitions in a class and want to do something fun on the side.

New regulation: With models under 250 grams all up weight I think we tackle a lot of problems for organisations AND beginner pilots.

This class is meant as a fun educational RC glider class, open and easy to participate for everyone. Although serious competition is possible with this class, it really should be the easiest way for people to start competing in RC gliding. We want to end this proposal by requesting experienced pilots to participate for the fun of it of course, but mostly to share the knowledge, and teach the beginners our wonderful sport in a fun way.

Due new regulations, it is getting harder and harder for beginners to get registration, membership, licences etc. This whole process can be a bit demotivating for beginners. We are very happy this class will have none of those problems and beginners first can enjoy the fun of competing with nice people, before the hassle of the paperwork involved in our hobby.

**This proposal will refer to the Education S/C for further consideration and implementation.**

*Volume F4 Scale begins overleaf*

## 14.7 Section 4C Volume F4 - Scale

### a) F4 Scale Volume

F4 Subcommittee

*Updated and restructured Sporting Code for F4 Scale:*

Refer to **Annex 7c**.

There are no rule changes for Championship RC classes.

A small adjustment has been made in F4B to update that class.

There are new rules for F4K.

The free flight classes have been updated.

Reason: Updates and restructure was needed.

*Technical Secretary Note: Annex 7c has been produced from F4 Volume Edition 2020. It is strongly recommended that the proposed changes be transferred to the master 2022 Edition of the F4 Volume, despite the effort that will entail. Only new rules should be marked with double lines. If any of the following proposals are accepted, please provide instructions as to their placement in the restructured Volume.*

**F4 Subcommittee Voted 13 in favour of the proposal 1 abstained from voting**

**TM voted 13 in favour of the proposal and 1 abstained from voting.**

### b) F4C & F4H – 6.3.3 Official Flights

France

*In sub-paragraph a), insert additional text as shown below. Note: the flying schedule for F4H refers to this section, so this amendment is applicable for both F4C & F4H.*

- a) Each competitor will be called to fly three 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.

**For World Championships, at the end of the ranking resulting from these three flights, the first five competitors of the ranking are called to a fourth tie-breaking flight (fly-off) to establish the final ranking.**

**For this fourth flight, competitors will have to modify their flight program by replacing at least two manoeuvres or by modifying the sequence of at least two manoeuvres, compared to the flight program of previous flights.**

In the case of two flight lines (see 6.1.4) each competitor will fly four rounds, two in front of each panel of judges and two on each flight line and the lower score from each panel will be deleted.

Reason: Beyond the very low renewal of models in International competitions, we have seen during the most recent World Championships a status quo at the top of the ranking after the second flight. Since the ranking can be established with the static score and the average of two flights, the third flight doesn't bring any major change.

Reducing the number of qualifying flights from three to two for all competitors would be very restrictive for competitors not involved in this fly off sequence, especially considering the costs involved in participating in such competitions.

Moreover, we could also observe a kind of “routine” for flight programs, certainly optimized for the presentation of the models, but finally without risk-taking and scarcely attractive for the public at this level of competition.

During recent World Championships, for example at Meiringen 2018, the podium was fixed after the second flight. The third flight, with a program identical to the two previous ones, brought nothing in terms of attractiveness and competition.

**F4 Subcommittee voted 10 against and 4 in favour of the proposal.  
TM voted 6 against and 8 in favour of the proposal.**

**c) F4C – 6.3.10 Final Scoring France**

*After the first paragraph in this section, add new text as shown below:*

For each competitor, add the normalised static score earned in 6.1.10. to the average of the normalised scores of the two best flights under 6.3.9. If the competitor has achieved only one flight, the normalised score awarded for that flight will be divided by two.

**For competitors participating in the fourth flight (fly-off), the final score is the sum of the normalised static score earned in 6.1.10; and the average of the normalised score of the fourth flight (fly-off) and the best of the other previous flights.**

Reason: Consequence of the amendment proposed above to 6.3.3 (Item b).

**F4 Subcommittee voted 10 against and 4 in favour of the proposal.  
TM voted 6 against and 8 in favour of the proposal.**

**d) F4H – 6.9.8 Final Scoring France**

*After the first paragraph in this section, add new text as shown below:*

For each competitor, add the normalised static score earned in 6.9.5. to the average of the normalised scores of the two best flights under 6.9.7. If the competitor has achieved only one flight, the normalised score awarded for that flight will be divided by two.

**For competitors participating in the fourth flight (fly-off), the final score is the sum of the normalised static score earned in 6.9.5; and the average of the normalised score of the fourth flight (fly-off) and the best of the other previous flights.**

Reason: Consequence of the amendment proposed above to 6.3.3 (Item b).

**F4 Subcommittee voted 10 against and 4 in favour of the proposal.  
TM voted 6 against and 8 in favour of the proposal.**

**e) F4K RC Scale Helicopters – 6.G.2.4 Optional Manoeuvres Spain**

*Following M – ‘Figure Backward’, add the additional optional manoeuvres from N to AG, as shown in the ANNEX 7c, including their descriptions and manoeuvre diagrams. The proposer should provide a Word document to facilitate entry into the Volume:*

Refer to **Annex 7d** for the details of this proposal.

Reason: The F4K working group has proposed these optional manoeuvres be included in the current rules for F4K.

**Withdrawn by Spain**

***Volume F5 Electric begins overleaf***

## 14.8 Section 4C Volume F5 – Electric

### F5B – RC Electric Powered Multi Task Gliders

#### a) 5.5.4.6 Duration and Landing Task

F5 Subcommittee

*Modify a) and b) as shown below. The intention is to remove the double penalty:*

a) This task must be completed within 600 seconds from the moment the audio signal is given **at the conclusion of the distance task.**

b) The competitor ~~has to decide how much and how often he will switch on the motor.~~ **can run the motor as often or as long as necessary to complete the duration task. Energy consumption limits/penalties will apply as outlined in 5.5.4.1**

*Technical Secretary's Note: The proposal I received did not have the words deleted in b). I have deleted them, as it seems sensible, but surely the Technical Meeting can amend this proposal to what was originally intended.*

Reason: To simplify the duration scoring and to remove the “double penalty”.

5.5.4.1.g) already applies a penalty for excess energy usage. Applying an additional penalty for the time the motor is run encourages pilots to do high power and high altitude climbs at the end of the distance task in an attempt to get a “zero motor run” duration to avoid the double penalty. By removing the motor run penalty pilots will be encouraged to make more energy efficient climbs in duration.

This change does not require any changes to the logging/telemetry devices.

By removing the advantage to climb to very high altitudes the overall safety is improved. (might be used to implement as a “safety” change).

**Note 1: The writers request early implementation of this proposal if successful.**

*Technical Secretary's Note 2: There is an additional F5B proposal at the end (Item 'I'). This was inserted after the formatting of the Agenda and was placed at the end to avoid amending Annex 7e.*

**Refer back to the S/C for further consideration.**

### F5F – RC 6 Cell Electric Powered Motor Gliders

#### b) 5.5.8.1 Model Aircraft Specifications

The Netherlands

*Amend paragraph 5.5.8.1 as follows:*

Minimum weight (ready to fly) 1500g

**Minimum weight without battery 1000 g**

Reason: Better aligned with F5B class. Also to be considered in conjunction with the proposal to allow models with >26,66 dm<sup>2</sup> wing surface area into the class. Refer to Item d).

**Withdrawn by The Netherlands**

c) **5.5.8.1 Model Aircraft Specifications**

The Netherlands

*Amend paragraph 5.5.8.1 by deleting text as follows:*

~~Maximum surface loading 75 g/dm<sup>2</sup>~~

Reason: The maximum surface loading is specified in 5.5.1.3 and does not need to be repeated. See below:

5.5.1.3 General Characteristics of RC Electric Powered Motor Gliders F5

Maximum total area 150 dm<sup>2</sup>

Maximum weight 5 kg

Loading 12 to 75 g/dm<sup>2</sup>

**Proposal is unanimously recommended**

d) **5.5.8.1 Model Aircraft Specifications**

The Netherlands

*Amend paragraph 5.5.8.1 as follows:*

Minimum surface area ~~36 dm<sup>2</sup>~~ **26.66 dm<sup>2</sup>**.

Limitation of energy by an electronic limiter that stops the motor max 1300 watt-min (**>36dm<sup>2</sup>**) or 1000 watt-min ( **26.66 <> 36dm<sup>2</sup>**).

The limiter is checked by the organiser during the contest.

If a logger is used, the data shall be retrieved during or immediately after the flight.

With the logger, 1 (one) point is deducted for every 3 (three) watt-min used over the limit.

**For model aircraft between 26.99 dm<sup>2</sup> and 36dm<sup>2</sup> 300 watt-min shall be added to the energy used.**

Reason: The F5F used to be an entry class for F5B. Due to the model differences and hence additional cost, F5F pilots do not easily promote to F5B.

Also allowing models with F5B specification in the F5F class will both promote the F5F class and allow for more pilots to step up to F5B.

The 300watt-min addition for models to F5B specification allows for a level playing field between existing F5F models (>36dm<sup>2</sup>) and F5B models (26.66dm<sup>2</sup> <> 36dm<sup>2</sup>). Whilst still allowing to use the existing scoring system without changes.

**Withdrawn by The Netherlands**

**F5J – RC Electric Powered Thermal Duration Gliders**

e) **5.5.11.1.1 Definition of a Radio Controlled Glider with Electric Motor** Hungary

*Modify the text at the end of the paragraph and include additional text as shown:*

A model aircraft which is equipped with an electric motor to provide propulsion only for the purposes of launching, and ... by radio control. ~~Any airborne device that uses airborne sensors to actuate any control surface are prohibited. Stability systems as allowed in the F5 General Rules 5.5.1.3.e are prohibited.~~



Any technological device used to aid in supplying data of the air's condition or direct feedback of the model's flight status is prohibited during the flight. These devices include any transmission or receiving devices not used to directly control the model aircraft (telephones, walkie-talkies, telemetry of airspeed, altitude and vertical speed etc), temperature detecting devices (thermal imaging cameras, thermometers etc), optical aids (such as binoculars, telescopes etc), and distance/altitude measuring devices (GPS, laser range finders etc). Telemetry of signal strength at the aircraft receiver and state of the receiver battery is permitted. Use of corrective eyeglasses, lenses and sunglasses are permitted.

Except for the approved AMRT, the installation and use of following electronic equipment is not allowed:

- Gyroscopic Systems, including receivers with build in gyroscopic systems
- Devices that measure altitude, speed and vertical speed, including receivers with that function build in
- GPS Equipment, including receivers with built in GPS

Any data, information or remark about GPS, gyroscope and variometer in the actual transmitter model program is prohibited. On request of the contest director the pilot has to provide a complete list of all electronic equipment (except servos, motor and motor controller) installed in his aircraft and has to make his aircraft and transmitter available for inspection. If an infringement of this rule occurs, the pilot will be disqualified from the contest.

Reason: Similar proposal was withdrawn by NAC representative of Germany in April 2019 but it is still actual. The amendment accepted on the Plenary 2019 is not clear whether the use or installation of devices are prohibited. That suggestion does not contain the requirement about the information of the transmitter and the sanction.

The F5 SC F5J Working Group discussed the proposal in October-November 2019 and ten representatives accepted it without any negative vote from other WG members (*names withheld for privacy reasons*).

*Technical Secretary Note: This proposal is ruled invalid since the General Rule B.1.1 e) exists for all disciplines and classes, except where there are exceptions which may be stated in the applicable Volume.*

**Ruled invalid.**

f) **5.5.11.1.3 Characteristics**

**Hungary**

*In sub-paragraph h), add text to iii) as shown below:*

- To restrict the operation of the motor by the competitor to a single an initial continuous run not exceeding 30 seconds.
- To reset the start height displayed to "---" if the motor is restarted at any time during the flight. **In this case (start height displayed to "---"), the result of the flight is 0 and the 0 result cannot be dropped from total score.**

This rule can be used as a local rule at FAI World Cup and Open International events, but not at Category One events.

Reason: Result of the flight was not defined.

The F5 Subcommittee F5J Working Group discussed the proposal in October-November 2019 and eleven representatives accepted it. None against. None abstained.

### **Proposal is unanimously recommended**

#### **g) 5.5.11.1.3 Characteristics**

**Hungary**

*In sub-paragraph h), add a new subpart iv) after iii) as shown below:*

**iv) The competitor must use an altimeter (AMRT) and firmware in which the last 3 contest flights data of one competition day are stored in the memory. The competitor is obliged to hand out his AMRT for checking or computer download of the data of last 3 contest flight of the actual day when so requested by the CD. In the event that the competitor's starting height in the altimeter does not match the starting height recorded on the scorecard (for any start of the last 3 start of the competition) or does not display the altimeter data, the result of the subjected flight is 0.**

Reason: After the recording of the starting height onto the scorecard by the timekeeper, there is no additional control possibility described in the rule.

*Technical Secretary's Comment: The proposer supplied anecdotal evidence of alleged cheating at the F5J 2019 World Cup competition. I have chosen not to reproduce this as it was dealt with by the Jury at the time.*

In our opinion this case is a clarification for improving result control and not a rule change. This will not cause any action or problem for the competitors and organisers only improves the trust during the competition. Altimeters can handle this requirement easily without any modification. The F5 Subcommittee F5J Working Group discussed the proposal in October-November 2019 and eleven representatives accepted it. One was against.

*Technical Secretary Note 2: This proposal is ruled invalid for the moment, since the General Rule A.10.1 f) states: Proposals which introduce new electronic devices for use in competition or which make amendments to the operation or specifications of existing electronic devices must be reviewed by the EDIC Working Group. The review by the EDIC WG Chairman must be sent to CIAM Bureau, S/C Chairman concerned and NAC delegates in writing prior to the Technical Meeting and Plenary Meeting.*

**Ruled invalid.**

#### **h) 5.5.11.3.1 The Flying Site**

**Hungary**

*Add a new subpart f) at the end of the section as shown below:*

e) The access corridor is provided to define the area of the flying site that is to be used by competitors, helpers and team managers to move to and from the launch/landing spots and to provide a defined area for the movement of other people associated with the administration of the contest. It must remain clear of unnecessary obstructions.

**f) A competitor or his helper can use 1 piece of simple tape wind indicator. The tape dimension must be max. 20mm x 2m, mounted on a rod of diameter**

**max. 10mm and length max. 1m.**

**Any other indicators, testers (for temperature, pressure, wind test etc.)**

**passive or active in the competition (starting, landing and safety corridor) area are not allowed.**

**Explosive indicators are not allowed.**

Reason: In our opinion this question is a clarification and a safety case. If thermometers or any other devices are allowed in the safety corridor (and starting or landing points) more and more will be used up to 3 m in height. These are not visible from the landing points with a distance of 15-31 m. So the thermometer can cause accidents when somebody flies through the safety corridor because of low altitude, what could happen and is a general procedure in F3J.

The F5 Subcommittee F5J Working Group discussed the proposal in October-November 2019 and ten representatives accepted it. One was against.

### **Proposal is unanimously recommended**

#### **i) 5.5.11.6 Re-flights**

**Hungary**

*In sub-paragraph a), subpart iii), add text at the end as shown below:*

- a) The competitor is entitled to a re-flight if:
- iii) the attempt has not been judged by the timekeeper, provided that the helper or the competitor has informed the timekeeper about the position of the model a reasonable time before landing; if this is not done, the competitor is not entitled to a re-flight if his attempt has not been judged by the timekeeper, **and the result of the flight is zero.**;

Reason: The result of the flight was not defined in case the helper or the competitor has not informed the timekeeper about the position of the model a reasonable time before landing and his attempt has not been judged by the timekeeper. This is a clarification.

The F5 Subcommittee F5J Working Group discussed the proposal in October-November 2019 and seven representatives accepted it. Three abstained.

### **Proposal is unanimously recommended**

#### **j) 5.5.11.11 Flight (new section)**

**Austria**

*Following 5.5.11.10 'Launching' insert a new section 5.5.11.11 'Flight' as shown below and consequentially renumber the following sections:*

##### **5.5.11.11. Flight**

**Throughout the whole flight, the pilot and his helper(s) must be in a 10 metre wide rectangular area from the starting line to 10 metres behind the landing point, the centre of which is formed by a straight line between starting point and landing point. A penalty of 100 points will be applied for any breach of this rule.**

Reason: The proposed rule change is designed to:

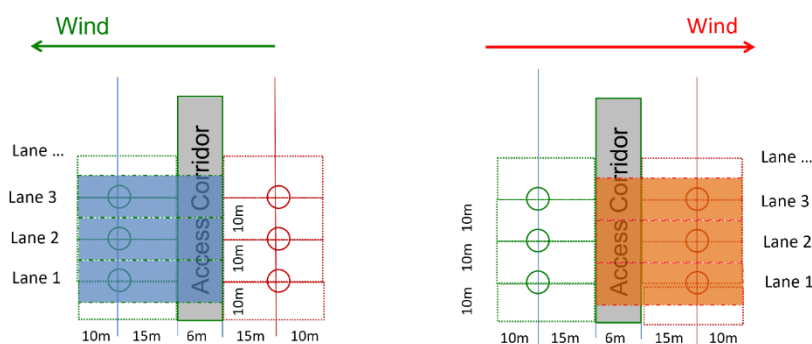
- Enhance safety. As

- o a pilot being far away from the landing spot cannot be approached by CD or Timekeeper.
- o Pilots trying to hit the landing spot from far away put people (other Pilots, Helpers, Timekeepers) in proximity to the landing spots in danger.
- o Pilots on their way back to the landing zone late in the working time (fast pace running) are at risk of impeding other pilots
- o Pilots on their way back to the landing zone late in the working time (fast pace running) are at risk of losing control over their model in case of stumbling or falling.

As well as

- Limit the possibility for pilots to execute dynamic soaring (e.g. WC 2019 in Trnava)
- Stop pilots and models getting out of sight during flight (as observed in Gubasevo in 2021)
- Help pilots to stay within an area less than 500 meters away from the reference point (part of European rules for a model airfield).

Sketch of pilot's area during flight:



*Technical Secretary's Note 3: There is an additional F5J proposal at the end (Item 'm'). This was inserted after the formatting of the Agenda and was placed at the end.*

**Proposal is unanimously recommended**

## k) **F5L – New Class: 2-Axis Thermal Gliders with Electric Motor & AMRT Austria**

Refer to **Annex 7e** for the complete rules.

Reason: Soon after the introduction of the nowadays very popular class “RES” (F3L from 2022 on) the rubber bungee and towline used for starting the model were replaced by an electric motor with limited runtime and/or stop at a given height by a logger.

So this new class “E-RES” soon gained popularity in Germany, Austria, Netherlands and other European countries as well as in Australia and USA.

There is a thoroughly developed set of rules which is used successfully in various European countries since a lot of years.

Most of the manufacturers of F3L-models also offer fuselages for electric motors so there is quite a good number of kits to choose from.

The requirements for the size of the airfield are simple as there are no towlines to be handled and it is far easier to cope with the wind directions.

The low-cost models and the easy handling provide interesting competitions for pilots of all ages.

**Proposal is unanimously recommended.**

## F5B – RC Electric Powered Multi Task Gliders

### I) 5.5.4.1 Definition

Germany

*Add a new subpart j) at the end of the section as shown below:*

#### **j) In addition to rule 5.5.1.3 d) the following electronic systems are allowed:**

- Any kind of telemetry that is not prohibited by rule 5.5.1.3 e)**
- Systems that log the energy used during climbs**
- Variometer**

Reason: In 2019 the rule B.1.1.e has been added to the “SC4 Vol. CIAM General Rules” that apply to all FAI-classes. It says:

“B.1.1 e)

*Unless specifically allowed in the class rules, any airborne device or function that uses sensors to actuate any control surface is prohibited and must not be installed. Receivers that transmit information back to the pilot-operated transmitter, are not considered to be prohibited devices, provided that the information that is transmitted is only for the battery, voltage or signal strength of the model aircraft, including model rocket gliders.*

*Regulations applicable to air law, air traffic and control in the respective countries take precedence.”*

The proposed rule re-establishes the ruleset that has been used for F5B in the last years.

Many of the modern receivers are transmitting back more information than what is mentioned in rule B.1.1.e, and would therefore be illegal.

The use of telemetry and variometer is not easily controllable during the contest. Variometers are often integrated in the receivers and also in some of the used logging devices. As everyone can use telemetry there is no advantage to any pilot.

Checking the used energy after the distance task is a tactical element of F5B that is taken into account for the duration task. This would not be possible without permitting the use of telemetry.

The point “Systems that log the energy used during climbs” is added because rule 5.5.1.3.d) only allows “Systems that limit the energy used during climbs”. Actually loggers are used in F5B to control the used energy. So that point makes clear that loggers are allowed, even if this is common sense.

### **Proposal is unanimously recommended**

## F5J – RC Electric Powered Thermal Duration Gliders

### m) 5.5.11.12

CIAM Bureau

*Add a new sentence at the end of the paragraph (n) as shown below:*

- n) Penalties shall be listed on the score sheet of the round in which the infringement(s) occurred. All penalties are cumulative and will be deducted from the competitor’s total score at the end of the preliminary rounds. Penalties earned in the preliminary rounds are not carried forward into the fly-off rounds. **In case the total score after deduction of the penalties is negative, a zero (0)**

**score will be recorded. The same total score will be used for individuals and team classifications.**

Reason: Recently in a second category event the penalty points exceeded the total score for a competitor. This is not reasonable to happen and this new sentence is a clarification. The scoring programs need to be updated. Since this class is very popular and competitions are organized all over the world, CIAM Bureau is proposing for an early implementation date, if approved by the Plenary. End of May 2022.

**Proposal is unanimously recommended. Early implementation date requested.**

***Volume F9 Drone Sport begins overleaf***

## 14.9 Section 4C Volume F9 – Drone Sport

### F9A – Drone Soccer

#### a) B.1.1. Weight and Size (Subclass F9A-B)

Germany

*Modify section b) Subclass F9A-B by deleting text and replacing it as shown below:*

#### **B.1.1. Weight and size**

##### **b) Subclass F9A-B**

The total weight of the drone ball including all equipment necessary for flight (including outer frame and batteries) shall not exceed ~~300 g~~ **400 g**.

The diameter of the frame must be ~~20 cm ± 2 cm~~ **22 cm ± 2 cm**.

Reason: Droneballs in the previous dimensions are very difficult to make yourself. Since last year there have been very inexpensive balls that can be used excellently for this class and that can be bought worldwide. Unfortunately, these balls have a diameter of 230mm and a take-off weight of approx. 350g.

The use of these balls represents an opportunity to promote class F9A in youth work.

**Refer back to the S/C for further consideration.**