CIAM F3- Soaring e-Technical Meeting

Saturday, Aprill 17, 2021

F3 Soaring e-Technical Meeting

Saturday, April 17, 2021

- **According the CIAM General Rule A.5.2:**
  - A technical Meeting is hold by the Subcommittee Chairman prior to the CIAM Plenary Meeting
  - The meeting '*shall consider items in the Agenda for the purpose of discussion and briefing of all those present and shall, through the Subcommittee Chairman, make their recommendations*' to the Plenary Meeting
  - Eligible to attend: Subcommittee members, voting Delegates, Alternates and any others approved by their NAC.
  - Only one person per country may vote.

FAI AEROMODELLING COMMISSION

CIAM Plenary Meeting Agenda

14.10 Section 4C Volume

F3 - Soaring

F3 – Soaring Proposals

	Item		Pro-posed by	Short description of the change	yes	no	Conclusion
F3B							
a)	5.3.1.3 Characteristics of R/C Gliders F3B	c)	GER	Updating transmitter frequencies	9	1	Recommended by vast majority
b)	5.3.1.3 Characteristics of R/C Gliders F3B	e)	GER	Marking of canopy and joiners	3	5	Not recommended, split opinion
c)	5.3.2.2 Launching	d)	GER	Battery specification deleted	9	1	Recommended by vast majority
d)	5.3.2.2 Launching	h)	GER	"winch" ->"winch equipment"	10	0	Recommended unanimously
e)	5.3.2.2 Launching	p)	GER	Penalty for winch -1000 points and flight=0	8	2	Recommended by majority
f)	5.6.4 Re-flights	d)	GER	Information for timekeepers on landing	7	2	Recommended by majority
F3G							
g)	5.G.2.6 Partial Scores	a)	GER	Grammar improvment	10	0	Recommended unanimously
F3L							
h)	F3RES – 2-Axis Thermal Gliders		GER	New class for youth and beginners	8	1	Recommended by vast majority

F3B – Multi-Task Gliders

a) 5.3.1.3 Characteristics of R/C Gliders F3B **Germany**

Delete sub-paragraph c), and insert a replacement as shown:

~~c) The radio shall be able to operate simultaneously with other equipment at 10 kHz spacing below 50 MHz and 20 kHz spacing above 50 MHz.~~

c) Each competitor not using a Spread Spectrum Technology transmitter must provide at least two frequencies on which his model glider may be operated, and the organiser may assign any of these frequencies for the duration of the complete contest.

Reason: The rules should be actual; therefore we should adapt the rules to the existing technology. Today most of the competitors use radios with Spread Spectrum Technology. At the other side some competitors use still old radios; these radios should be also allowed; but not especially specified.

b) 5.3.1.3 Characteristics of R/C Gliders F3B **Germany**

In sub-paragraph e), add two words in the second line:

e) The competitor may use a maximum of three (3) model aircraft in the contest. All exchangeable parts (wing, fuselage, **canopy**, tail planes, **joiner(s)**) must be marked uniquely and in a way that does not allow replication of this mark on additional parts.

Reason: The construction of the fuselage has changed in the past. Most constructions use a separate deductible canopy, therefore it must be marked. Often joiners with different angels are used for the different tasks to adjust the flight characteristic of the model. With this action the geometry the projected wing area is changed; in paragraph 5.3.1.1 is stated that "Any variation of geometry or area must be actuated at distance"; therefore this is mandatory especially for the joiners with different angles.

c) 5.3.2.2 Launching **Germany**

In sub-paragraph d), delete the battery specification:

d) The power source shall be a 12 volt lead/acid battery.

~~The cold cranking capability of the winch battery must be specified according to one of the following standards:~~

~~300 amperes max. according to DIN 43539 02 (30s/9V at –18OC)~~

~~355 amperes max. according to IEC/CEI 95 1 (60s/8,4V at –18OC)~~

~~500 amperes max. according to SAE J537, 30s Test (30s/7,2V at 0 OF)~~

~~510 amperes max. according to EN 60095 1 (10s/7.5V at –18OC)~~

~~Other standards are acceptable if evidence is provided that these standards are equivalent to one of the above stated standards.~~

Reason: The specification of the cold cranking capability which is a measure of the internal resistance of the battery is no longer necessary because we measure the total resistance of the winch-equipment consisting of motor, battery, cables and switch.

d) 5.3.2.2 Launching **Germany**

In sub-paragraphs h), m), and n) add the word 'equipment'.:

h) The complete winch-**equipment** (battery, cables, switch and motor) must have a total resistance of at least 23.0 milliohms. The allowed resistance may be obtained

.....

m) At the test of the winch-**equipment** before the competition the voltage of the battery U300 must be greater or equal to 9V; this does not apply for testing during the competition.

n) The organiser must appoint at least two processing officials, who will process the winch~~es~~ **equipment** with a single measuring apparatus, or several measuring apparatus proven to produce reproducible results within a tolerance of 0.5 %.

Reason: We test not only the winch but the whole winch-equipment.

10 0

e) 5.3.2.2 Launching **Germany**

In sub-paragraph p), add words to the first sentence as shown below:

p) The **result of the** flight is **zero and additionally** penalised with 1000 points if the winch-**equipment** is not in accordance with the rules; this is valid for the flight before the test. 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: If the winch-equipment is not in accordance to the rule (total resistance ≤ 23 mOhm; this means a too high performance) a penalisation of 1000 points is not sufficient; additionally the result of the flight must be set to zero, because it was reached with a more powerful winch.

In the "Sporting Code 2008" there was introduced for the first time a penalty of 1000 points for an illegal winch-equipment, but we have forgotten to observe the zero-result from the "Sporting Code 2007".

"Sporting Code 2007"

5.3.2.2. Launching

8 2

f) **5.6.4 Re-flights** **Germany**

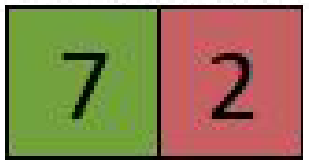
In sub-paragraph d), add additional text as shown below:

The competitor is entitled to a new working time if:

d) the attempt has not been judged by the official time-keeper**(s)**. **In Task A, the pilot and/or his helper has to inform the timekeeper(s) 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 was not (or not correctly) judged by the timekeeper(s).**

Reason: It´s not reasonable, not necessary and mostly impossible for the official time-keeper(s) to observe the model during the whole flight, especially if the model is extremely far away. For the time-keeper(s) it´s only necessary to watch the off-hooking and at the end of the flight, the rest of the model. If the model doesn´t reach the landing-spot it´s nearly impossible without additional information to stop the flight-time correctly.

At the WC F3B 2017 in Jesenik/CZE we had the situation that a pilot landed far away and simulated that the model is still flying by moving the steering sticks of his transmitter. The official time-keeper didn´t observe the landing but he was clever enough and stopped the flight-time when the pilot stopped moving the steering sticks. Therefore his time was longer than the real flight-time; out of this reason the pilot got first a re-flight which was annulled afterwards.



F3G – Multi-Task Gliders with Electric Motors

g) 5.G.2.6 Partial Scores **Germany**

*In sub-paragraph a), note the following additions (Technical Secretary Note: The (5.~~BE~~ **G**.2.3) issue has been fixed):*

a) Partial Score for Task A for each competitor is determined as follows:

Partial Score A = 1000 x P1/PW

P1 ≤ 250 m = Flight-**time** [s] – 0,5 x height-start altitude [m] **plus additional landing-points** (5.~~B E~~ **G**.2.3.)

P1 > 250 m = Flight-**time** [s] – ((250 [m] x 0,5) + (3 x (height-start altitude [m] - 250 [m])) **plus additional landing-points** (5.G.2.3)

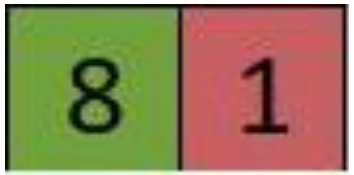
PW = points of the winner in the related group.

Reason: In the chapter "Partitional Scores" three transformations are wrong. In this case it`s helpful to draw attention to the landing-points.

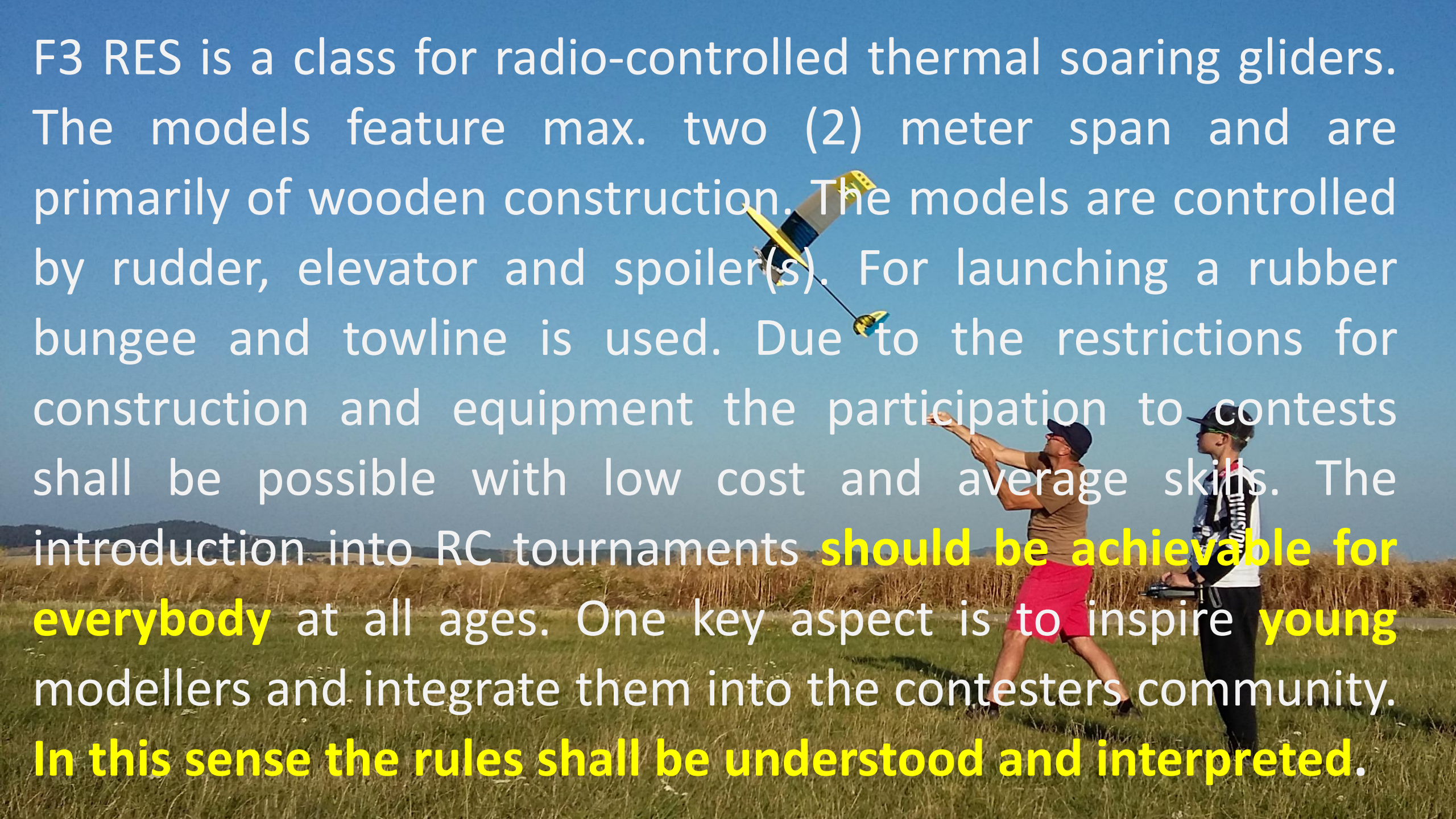
h) F3RES – 2-Axis Thermal Gliders **Germany**

*Add a new class, F3RES to the Sporting Code. Refer to **Annex 7f** for the detail:*

Reason: This glider class has been practiced successfully in Germany since 2011. In the meantime the rules have been optimized. Many other countries also organize F3RES competitions with similar rules. For example: Austria, Netherlands, Czech Republic, Belgium, USA, Turkey. International rules are a prerequisite for further positive development of this class.



Note: The code designation "F3RES" does not comply with the CIAM standard. It could be, e.g. "F3L".



F3 RES is a class for radio-controlled thermal soaring gliders. The models feature max. two (2) meter span and are primarily of wooden construction. The models are controlled by rudder, elevator and spoiler(s). For launching a rubber bungee and towline is used. Due to the restrictions for construction and equipment the participation to contests shall be possible with low cost and average skills. The introduction into RC tournaments **should be achievable for everybody** at all ages. One key aspect is to inspire **young** modellers and integrate them into the contesters community. **In this sense the rules shall be understood and interpreted.**

F3 RES thermal gliders

1. General provisions

a) F3 RES is a class for radio-controlled thermal soaring gliders. The models feature max. two (2) meter span and are primarily of wooden construction. The models are controlled by rudder, elevator and spoiler(s). For launching a rubber bungee and towline is used. Due to the restrictions for construction and equipment the participation to contests shall be possible with low cost and average skills. The introduction into RC tournaments should be achievable for everybody at all ages. One key aspect is to inspire young modellers and integrate them into the contesters community. In this sense the rules shall be understood and interpreted.

b) Definition of a radio controlled glider:

A model aircraft which is not provided with a propulsion device and in which lift is generated by aerodynamic forces acting on surfaces remaining fixed. The model must be controlled by the competitor on the ground using radio control.

c) In competition at least four (4) qualifying rounds shall beflown. For each qualifying round, participants shall be divided into flight groups. The results of each flight group shall be normalized to arrive at comparable scores between the flight groups. The highest score within each flight group will be assigned 1000 points and the remaining scores within that group shall be proportional to each participant's raw flight score relative to the best raw flight score within that group. The group size in the "Fly-Off" shall be the same as the group size in the preliminary rounds. Participants flying with the highest total normalized scores from the preliminary pound will compete in a "fly-off" (minimum 2 rounds) to determine the final classification.

d) The competitor may use three (3) models in the contest. The competitor may change the models at any time, but within a round only if the model that was used at first is placed within a radius of 15 meters of the assigned landing spot.

e) The competitor may use up to three (3) helpers. These are to assist him in launching and retrieving the model, informing him of weather conditions and flight time and to manage the hi-start. At least one helper shall constantly ensure that the pilot's assigned hi-start does not interfere with anyone else's assigned hi-start. This requires that his pilot's hi-start be immediately returned to its assigned position.

f) In crosswind conditions the Contest Director may determine that the contestant who is farthest downwind begin with the start so that hi-starts do not interfere with each other during launching.

g) The organizer should have official scorekeeper / timekeeper available. If this is not the case, the pilot's helper will keep time, and the organizer will regularly sample the flight times. Deviations of more than three (3) Seconds in favor of the participant shall lead to a zero score flight.

h) The landing points shall always taken by an official scorekeeper.

2. Model specifications

A model normally consists of wings, fuselage and tail. Flying wing models that do not have a fuselage and rudder or vertical stabilizer, or none of these components are also allowed if they have only two (2) control surfaces. Each of these panels has to be actuated by only one servo. Otherwise, the construction rules for conventional models described herein are applicable.

2.1.

The model is build-on mainly with wooden parts. Following methods are permitted:

a) Wings build with ribs, open or covered by wood, „D-box", solid wood wings or a combination of solid wood and ribs.

b) All parts must be made from wood with exception of leading edge, spar(s) and connecting parts of the wing panels.

c) The surface of the wings may be covered by film, silk, paper or polyester-fabric.
Specifications a) to c) are applicable for the tailplanes too.

d) The space between the rear edge of the spoilers and the trailing edge must be at least 5 cm. The spoilers may be activated by one or two servos.

e) The fuselage must be made entirely from wood, or with a tail boom made from fibre glass/carbon (GRP/CFRP) or Kevlar tube or profile. The tube/profile must not extend the front half of the wing area.

f) The wooden surface of the fuselage may be covered with fibre glass/carbon (GRP/CFRP) or Kevlar, but not more than a maximum of 1/3rd of the total area. The surface may be protected with varnish or like desribed at c).

g) Hinges and control rods are exempted from the GRP/CFRP constraint.

2.2 Not allowed is the use of

a) positive or negative moulds for construction of the fuselage or wings or the surface treatment.

b) a fixed or retractable arresting device (i.e. bolt, saw tooth-like protuberance, etc.) to slow down the model on the ground during landing. The underside of the model must not have any protuberances other than the tow hook and surface control linkages. The tow hook must not be larger than 5 mm in frontal width and 15 mm frontal height. It may be adjustable, but not by the radio. The release must not be executed by radio too.

c) a fuselage nose with a radius less than 5 mm.

d) ballast which is not carried internally and fastened securely within the airframe.

e) any telemetry with the exception of radio signal strength, receiver temperature and battery voltage. No variometer permitted.

f) any telecommunication between competitor and helpers, including mobile phones or walkie-talkies.

3 The flying site

a) The competition must be held on a site having reasonably level terrain, which will minimise the possibility of slope and wave soaring.

b) The flying site must have a starting line which is perpendicular to the wind direction and has marked starting spots for each competitor that are at least eight (8) meters apart. At 150 meters upwind there must be a line were the hi-starts are fixed. (possible exceptions see 6). The attachment points for hi-starts have the same spacing as the starting spots.

c) The landing points are situated at least fifteen (15) meters downwind of every starting point.

d) The Landing points and starting points shall always be clearly marked. The distance between fuselage nose and landing point will be measured by a tape or string which may be fixed at the landing point.

e) The Contest Director shall determine the landing boundaries. Landing outside the boundary shall result in a zero score for that flight. (see also 8.2).

4 Contest flights

a) The competitor is entitled to at least four (4) official flights.

b) The competitor is entitled to an unlimited number of attempts during the working time.

c) An official attempt begins when the model leaves the hand of the competitor or his helper under the tension of the hi-start.

d) In case of multiple attempts, the result of the last flight will be the official score.

e) The contest director has the right to interrupt the competition and reset the launch line when the wind direction deviates too much or becomes a tailwind.

f) The contest shall be interrupted the contest director if the wind is continuously stronger than 8 m/s measured at two (2) metres above the ground at the starting line (flight line), for at least one minute

5. Re-flights

The competitor is entitled to a new working time if:

a) his model in flight or in the process of being launched collides with another model flying or being launched.

b) a towline (other than his own) was not removed after launch and is blocking (covering) his own towline.

c) When his flight is hindered or aborted by an event beyond his control.

To claim a re-flight considering the above mentioned conditions, the competitor has to make sure that the official timekeepers have noticed the hindering conditions and land his model as soon as possible after this event.

Note that in the case the competitor continues to launch or continues to fly after hindering conditions affected his flight or does re-launch after clearing of the hindering condition(s), he is deemed to have waived his right to a new working time.

6. Launching

a) Identical hi-starts shall be furnished and set up by the organizer.

b) The hi-starts consists of a rubber tube of 15 ± 0,2 meter length, a nylon towline of 100 ± 1 meter length with a minimum diameter of 0.7 mm and a pennant attached.

c) The pull strength of the rubber tube shall not exceed 4 kilogram if extended to a length of 45 meters. The variance of the pull strength of all rubber tubes used for the competition must be less than 0,4 kilogram. The minimum pull strength if pulled to 45 meters must not be less than 2,75 kilogram.

d) On flying sites that will not accommodate a total hi-start space of 150 meters, the organiser may shorten the towlines. A suitable reduction of the working time and flight time may be taken into account. Such changes should be included in the contest tender.

7. Landing

a) Before each flight each competitor will be assigned a landing spot that corresponds to his assigned starting spot. It shall be the responsibility of the competitor to use the correct assigned landing spot.

b) During the landing process only the pilot and his assistant are allowed in within 10 meters of the landing spot. Any other helpers and timekeepers shall remain at their assigned starting spot.

c) After landing, competitors may retrieve their model aircraft before the end of their working time providing they do not impede other competitors or model aircraft in their group. A model thus retrieved may be relaunched during the working time. No landing score may be recorded for a model that has been touched before scoring the landing.

d) After landing the nose of the model must not stick into the ground. The landing is considered not to be scored if the nose sticks into ground and the tail of the model is way above the ground.

8. Scoring

8.1 Scoring of the flight time:

The attempt will be timed from moment of release from the launching device to either:

a) the model aircraft first touches the ground; or

b) completion of the group's working time.

The maximum flight time is six (6) minutes (360s) within nine (9) minutes (540s) working time. If the flight is longer than six (6) minutes (360s), the overflying time will be deducted from six (6) minutes (360s). The flight time will be recorded in full seconds. Each second of flight time will be scored two (2) points.
The highest score within each flight group will be assigned 1000 points and the remaining scores within that group shall be proportional to each participant's raw flight score relative to the best raw flight score within that group.

8.2 Scoring of the landing:

A landing bonus will be awarded in accordance with distance from the landing spot marked by the organisers according to the following tabulation:

Distance from spot up to m(meters)	points	Distance from spot up to m(meters)	points
0.2	100	5	80
0.4	99	6	75
0.6	98	7	70
0.8	97	8	65
1.0	96	9	60
1.2	95	10	55
1.4	94	11	50
1.6	93	12	45
1.8	92	13	40
2.0	91	14	35
3.0	90	15	30
4.0	85	over 15	0

Zero points for landing will be recorded for the competitor, if

a) the nose of the model sticks into ground after landing and the tail does not come to rest on the ground. (see 7 d)).

b) the model sheds any parts.

c) the model is not airworthy after landing.

d) the model is overflying the groups working time.

e) the model is touching by the competitor or helper during landing.

f) the model is touched by the competitor or helper before the official scorekeeper made the distance measuring.

Zero points for the entire task (flight and landing) are awarded if:

a) The model comes to rest outside a landing loundary specified by the originator. Within the working time the competitor may launch for another attempt.

b) the model is overflying the working time more than 30 seconds.

9. Final classification

The final ranking of the competition is determined for the competitiors qualified to the fly-of by the ranking at the fly-off, and by the ranking of the classification rounds for the other competitors.

10. Advice for contest notice

The contest notice will state any expected modifications in the total length of the histart and/or working time because of space limitations.

Amendments proposed by Wout Heijme (NED)

1. General provisions

c) In competition at least four (4) qualifying rounds shall be flown. For each qualifying round, participants shall be divided into flight groups. The results of each flight group shall be normalized to arrive at comparable scores between the flight groups. The highest score within each flight group will be assigned 1000 points and the remaining scores within that group shall be proportional to each participant's raw flight score relative to the best raw flight score within that group.
For international competitions:
The group size in the "Fly-Off" shall be the same as the group size in the preliminary rounds. Participants flying with the highest total normalized scores from the preliminary pound will compete in a "fly-off" (minimum 2 rounds) to determine the final classification.

9. Final classification

The final ranking of the competition is determined for the competitors qualified to the fly-off by the ranking at the fly-off~~, and~~ **at an international competition,** by the ranking of the classification rounds for the other competitors.

Amendments proposed by Wout Heijme (NED)

4 Contest flights

f) The contest shall be interrupted the contest director if the wind is continuously stronger than ~~8 m/s~~ **6 m/s** measured at ~~two (2) meters~~ **one (1) meter** above the ground at the starting line (flight line), for at least one minute

6. Launching

c) The pull strength of the rubber tube shall not exceed 4 kilogram if extended to a length of ~~45 meters~~ **35 (thirty five) meters.** The variance of the pull strength of all rubber tubes used for the competition must be less than 0,4 kilogram. The minimum pull strength if pulled to of ~~45 meters~~ **35 (thirty five) meters** must not be less than 2,75 kilogram.

FAI Aeromodelling Championships 2021

2021 FAI WCh	Organizing Country	Championship Dates	Contact Person	Preliminary Entry Form	Decision Date	Final Entry Form
F3B Model Gliders Sen & Jun	DEN	1 – 7 August	Erik Dahl Christensen	**Postponed to 2022**		
F3J Model Gliders Sen & Jun	SVK	1 – 6 August	Jan Littva	**Postponed to 2022**		
F3K Model Gliders Sen & Jun	SVK	8 – 14 August	Jakub Drmla	**Preliminary information:** Postponed to 2022		
F3F Model Gliders Sen & Jun	FRA	3 – 9 October	Andreas Fricke	1 June	1 July	15 July

2021···Status·of·Bid·Forms·and·Approvals¶

8·April·2021,·Issue·1·····Due·date·for·bids·form·delivery·was·23rd·of·March·2021¶

2021·FAI·World·Championships¤	Organiser·Country¤	Championship¶ Dates¤	Organiser·Contact¤	Due·dates·to·take·care¤		
				Preliminary·Entry·Form¤	Decision·date¤	Final·Entry·Form¤
Postponed·from·2020¤						
F3J·Model·Gliders·Sen·&·Jun¤	Slovakia¤	1·–·6·August¤	litteam7@gmail.com¶ Jan·Littva¤	1·April·¤	Canc.·or·postponed·to·2022¶ But·already·Slovakia¤	1·June¤
F3F·Model·Gliders·Sen·&·Jun¤	France¤	3·–·9·October¤	A.Fricke2@gmx.de¶ Andreas·Fricke¤	1·June¤	1·July¤	15·July¤
New·for·2021¤						
F3B·Model·Gliders·Sen·&·Jun¤	Denmark¤	1-7·August¤	erikdahlchristensen@gmail.com¶ erik·dahl·Christensen¤	1·March¤	Postponed·to·2022¤	1·May¤
F3K·Model·Gliders·Sen·&·Jun¤	Slovakia¤	8·–·14·August¤	jdrmla@gmail.com¶ Jakub·Drmla¤	30·April¤	Preliminary·inf.·postponed¶ Decision·on·31·May¤	30·June¤

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2022·World·Championships¶ awarded·in·2020¤	Subcommittee·Chairman¤	Organiser·Country¶ ¤	Remarks¤
F3B·Model·Gliders·Sen·&·Jun¤	Tomas·Bartovsky¤	DENMARK¤	Awarded·as·postponed·from·2021¤
F3F·Model·Gliders·Sen·&·Jun¤	Tomas·Bartovsky¤	DENMARK¤	Awarded·by·CIAM·Plenary·in·2020¤
F3J·Model·Gliders·Sen·&·Jun¤	Tomas·Bartovsky¤	SLOVAKIA¤	Awarded·t·by·CIAM·Plenary·in·2020¤

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2023·World·Championships¶ To·be·awarded·in·2021¤	Subcommittee·Chairman¤	Organiser·Country¤	Bids·Form¶ Delivered¤	Late¤	Assessment·Result¤	Remarks¤
F3B·Model·Gliders·Sen·&·Jun¤	Tomas·Bartovsky¤	Denmark·(firm)¤	¤	¤	¤	No·News¤
F3K·Soaring·-·Sen·&·Jun¤	Tomas·Bartovsky¤	Offers·invited¤	¤	¤	¤	¤

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2022·Continental·Championships¶ To·be·awarded·in·2021¤	Subcommittee·Chairman¤	Organiser·Country¤	Bids·Form¶ Delivered¤	Late¤	Assessment·Result¤	Remarks¤
F3K·Soaring·Sen·&·Jun.¤	Tomas·Bartovsky¤	Awarded·to·**ROMANIA**·by·CIAM·Plenary·in·2020¤				

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2023·Continental·Championships¶ To·be·awarded·in·2021¤	Subcommittee·Chairman¤	Organiser·Country¤	Bids·Form¶ Delivered¤	Late¤	Assessment·Result¤	Remarks¤
F3F·Model·Gliders·Sen·&·Jun¤	Tomas·Bartovsky¤	Offers·invited¤	¤	¤	¤	¤
F3J·Model·Gliders·Sen·&·Jun¤	Tomas·Bartovsky¤	Offers·invited¤	¤	¤	¤	¤


Thanks for your participation