F5 Sc Technical Meeting
on 16th MARCH 2025

Section 4 Volume F5 – Electrics

a) 5.5.11.12. Scoring – rule change **Bulgaria**

Modify timing start

5.5.11.12. Scoring

a) The attempt must be timed from the moment of ~~release from the hand of the competitor or his helper to either~~: **motor ON (motor ON signal for electronic timekeeping):**

Reason:

Allow proper start of AMRT automated timekeeping.

Data:

More and more AMRT devices support timekeeping and motor ON command is the best point for start timing.

E-mail vote by F5 Subcommittee **For 6 / Against 3 / Abstain 0**

b) m) 5.5.11.1.3. Characteristics of Radio Controlled Gliders with electric motor and altimeter/motor run timer (AMRT). – rule change **HUNGARY**

Instruction: *Add subpart iv) at the end of paragraph h)*

h) **……..**

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 start height in the altimeter does not match the start height recorded on the scorecard (for any 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 start height onto the scorecard and the switch-of the receiver and transmitter by the competitor, there is no additional control possibility (for checking the start height) described in the rule for the organizers and jury members in case of any accidental error or deliberate cheating.

In one F5J FAI World Cup competition one competitor had 88 m starting height result, marked on the result table.

One team didn't believe it and looked at the altimeter in the subject competitor's model, which showed 182 m. Result table was modified.

Based on the modified results, it was also suspected that another competitor's starting height of 111 m was not real as well. Competitor was asking to show the starting height on computer after the completed following start. He didn't contribute that.

A protest was submitted on the subject, asking to show the staring height on the computer. That was accepted by the jury, but the competitor, despite the jury's request, did not show his altimeter result on the computer. There was not any further action in connection with this case and 111 m starting height remained valid at the competitor.

The present proposal is identical to the proposal submitted in November 2021, which was declared questionably invalid by the Technical Secretary, with the following:

Technical Secretary Note 2: (Apr. 2022) This proposal is ruled invalid for the moment, since 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
From Lex Manfred: (Feb. 22, 2023, to Kevin Dodd**):** I as EDIC chairman have no rights in this matter within CIAM. EDIC WG is acting as advisor and is only executing tasks on electronic devices assigned by the rules stated in volume EDIC. Changing these require consent with the involved subcom.

Supporting data for the proposed technical amendments in the space below:

The F5 Subcommittee F5J Working Group discussed the original (2021) proposal in October-November 2019 and the following representatives accepted it.
Joe Wurts (NZL) Lenny Keer (USA) Jure Pecar (SLO) Laszlo Marko (HUN) Marko Gala (SVK) Massimo Verardi (ITA)
Nick Wu (CHN) Palo Lishak (SVK) Peter Deivel (GER) Shuzo Koyama (JPN) Vladimir Gavrilko (UKR)
Overall Votes Cast: 12, For: 11, Against: 1, Abstain: 0

The F5 Subcommittee voted about the 2021 proposal in March 2022. with the following result:
Overall Votes Cast: 10, For: 8, Against: 2, Abstain: 0

Arguments against the proposal:
1. Not all altimeters store retrievable data.
2. Current EDIC accepted altimeters do not have timestamp.
3. It is difficult to identify which files of which altimeter of which model is relevant for the flight in question after the competitor has left the landing spot.

Arguments in favour of the proposal.
1. The majority of the current EDIC accepted altimeters store much more than 3 flight data, so few competitors are forced to incur additional costs.
2. At the request of the contest director or the jury, a competitor can easily retrieve the relevant flight data from the altimeter memory without a timestamp using the following procedure:
- The competitor or the organizer downloads the altimeter data in question to a computer
- By using the recorded flight time data on the scorecard and recalling the competition history, the competitor identifies which file applies to the start in question.
- If the flight time is the same, on the scorecard and in the record of the altimeter the diagram shows the start height in question.
- The engine test in the pit does not contain reasonably start height and flight time to be evaluated, so it can be easily excluded
- During the competition, except the lunch break, test flights may only be made with the permission of the contest director and the frequency of this is rare and will be remembered by the contest director within a day.
- Also, the number of flights during the lunch break is limited (usually not 10 minutes flight time) and there is little chance that the time of the test flight will match the time of the flight in question. The competitor remembers these.
3. This moment we cannot see the followings:
- When an altimeter with a timestamp (possibly with GPS system) will be available?

- Related to this, when the F5J rule change will take place, where the start of flight time is the engine start and not the release of the model and the end of flight time is the moment the model comes to rest and not the moment of contact with the ground or object in contact with the ground?
- When will the thousands of F5J modellers replace their existing altimeters (3-5 / competitor) with the time stamped version (at a cost of several 100 Euros)?
- When will all competition organisers have a system that can manage all the competitors' altimeters online?

4. The adoption of this proposal will allow the correction of accidental errors during the competition and reduce the risk of deliberate cheating
5. The adoption of the proposal will not hinder the introduction of new devices with timestamp and also facilitate the subsequent verification of flights data recorded with timestamp altimeter.

E-mail vote by F5 Subcommittee **For 8 / Against 1 / Abstain 0**

c) 5.5.10 F5K – Rule change — Netherlands

Changes:

Add at the end of the second bullit of task C:

Working time is 4:01 minutes, maximum flying time is 4:00 minutes.

Reason:

Maximum flight time in All Up is 4 minutes and not 3.59 minutes. It was unclear in previous versions.

This rule is also already implemented in Gliderscore.

E-mail vote by F5 Subcommittee **For 8 / Against 1 / Abstain 0**

d) 5.5.10.3 Nominal Launch Height (NLH) – rule change — Netherlands

The Nominal Launch Height is the reference launch altitude (NLH) in which there are no bonus or penalties applied and is set in a competitions software program (for example Gliderscore). The AMRT is fixed for all wind conditions: 60 mtr altitude and 7 seconds motor time. Pilots can……..

Reason:

It was not clear to pilots that the Motor time (7 sec) and Altitude (60 mtr) are fixed in the AMRT independent of the wind conditions.

The bonus and penalty table in Gliderscore can vary between NHL 60 and NLH 70

E-mail vote by F5 Subcommittee **For 9 / Against 0 / Abstain 0**

e) 5.5.10.6 – rule change **Netherlands**

c) or the model aircraft first touches any object in contact with the ground. The flight time stops when the model touches an object outside the Pilot Area. The location where the model lands determines whether the plane has landed inside or outside the Pilot Area (in case of touch and land)

Reason:

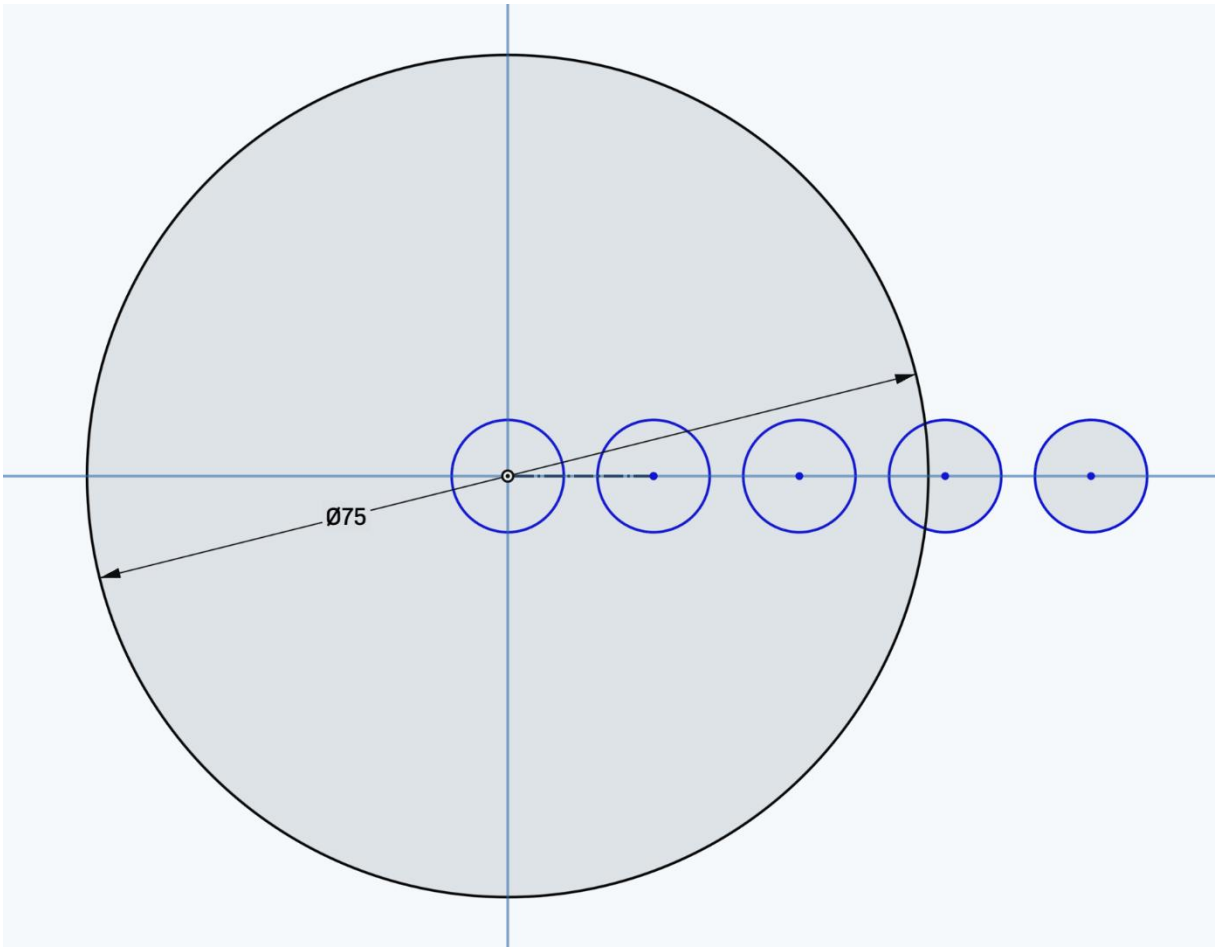
It is unclear what the impact is on flight time and landing in or out the Pilot Area in the event of a " touch and go" landing.

E-mail vote by F5 Subcommittee **For 8 / Against 0 / Abstain 1**

f) 5.5.10.11 Launch and Landing area (Pilots Area) – rule change **Netherlands**

Flying field:

Ideally, the flying field should have an area for each Pilot Area that is the size of a "circle with a diameter of 75 meters". See picture below. The competition director may decide to define a smaller flying area if the environment warrants it.



E-mail vote by F5 Subcommittee **For 8 / Against 0 / Abstain 1**

g) ANNEX – clarification
Netherlands

Change:

Delete the "ANNEX of F5K ...."

Reason:

A local rule does not belong to the international rule.

E-mail vote by F5 Subcommittee **For 9 / Against 0 / Abstain 0**

h) 5.5.12.3.1 Model Specifications for Radio Controlled Thermal Gliders F5L CZE
- Rule change

5.5.12.3.1 The model is built mainly with wooden parts. The following methods are permitted:

a) Wings built 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 except for the leading edge, spar(s) and connecting parts of the wing panels and the motor mount frame.

c) The surface of the wings may be covered by film, silk, paper or polyester fabric.

Specifications a) to c) are applicable to the tail planes too.

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

e) The fuselage must be made entirely from wood or with a tail boom made from fiberglass/carbon (GRP/CFRP), 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 fiberglass/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 described in c).

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

h) The selection of the electric motor is free.

i) The selection of battery is free.
j) The minimum wing loading is not limited.

Reason:

The F5L category originated as a motorized version of the F3L category. The F3L models have no limitation on area loading in the rules. The F5L is less stressed in powered flight than the F3L when launched by rubber catapult. The addition of the proposed rule change will align the design rules for the F5L models with the F3L category, which we believe is a desirable goal.

Supporting data

During 2024, an interpretation of the rules emerged, pointing out that F5L models are not legal if they have a surface load lower than 12g/dm2. The promoter of this view argued under 5.5.1.3 General Characteristics of RC Electric Powered Motor Gliders F5
Maximum total area 150 dm2
Maximum weight 5 kg
Loading 12 to 75 g/dm2
Fine-tuning the alignment of the F3L and F5L rules is important for the development of the categories.

E-mail vote by F5 Subcommittee **For 7 / Against 2 / Abstain 0**

~~i) 5.5.12.3.2 Model Specifications for Radio Controlled Thermal Gliders F5L – clarification~~
~~Spain~~

~~*Add a new append to 5.5.12.3 Model Specifications for Radio Controlled Thermal Gliders F5L after the paragraph 5.5.12.3.2*~~

~~5.5.12.3.2 Definition of the Model Glider~~

~~a) Minimum loading, <12 g/dm2. Planes with lower loading are also allowed~~

~~Reason:~~

~~Many commercial F5L models have a wing loading of less than 12 g/dm², even without efforts to make the plane as light as possible. This often necessitates adding ballast to meet the minimum loading requirement of 12 g/dm².~~

~~Additionally, this class is aimed at young pilots and encourages hands-on experience in building and setting up their planes. Introducing this rule simplifies the knowledge, techniques, and setup required for builders to comply with regulations.~~

~~In summary, striving for the lowest possible loading does not provide a competitive advantage, as these planes typically weigh around 350-500 grams and are highly sensitive to air disturbances that may arise during competition.~~

~~Data:~~

~~Some examples of the current models present in the airfields in Spain~~

~~Model Name~~	~~Manufacturer~~	~~FAI (dm2)~~	~~Weight~~	~~Loading~~
~~Viruta~~	~~tecnoepoxy~~	~~38,7~~	~~393~~	~~10,2~~
~~Wiki~~	~~HPmodel~~	~~37,01~~	~~390~~	~~10,5~~
~~Magic2~~	~~Salahi Tezel~~	~~39,45~~	~~385~~	~~9,8~~
~~Magic2~~	~~Salahi Tezel~~	~~39,45~~	~~440~~	~~11,2~~
~~Ideal~~	~~Perform+ (A.Gallet)~~	~~42~~	~~383~~	~~9,1~~
~~X-Dream~~	~~SETA Modelltechnik~~	~~36,0~~	~~420~~	~~11,6~~

Withdraw by ESP NAC

j) 5.5.12.3.2 Not allowed is the use of - rule change **CZE**

5.5.12.3.2 Not allowed is the use of

a) positive or negative molds for construction of the fuselage or wings or the surface treatment.
b) a fixed or retractable arresting device (i.e. bolt, sawtooth-like protuberance, etc.) to slow down the model on the ground during landing. ~~The underside of the model must not have any protuberances.~~
c) a fuselage nose with a radius less than 5 mm.

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

e) any telemetry except for radio signal strength, receiver temperature and battery voltage. No variometer is permitted.

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

Reason:

We completely understand the intent of the rule maker to explain that braking devices on the underside of the hull are prohibited. This requirement remains in the rules. But a sentence about the underside of the model, in practice, has the unintended and unwanted effect. The same request to modify the rules was made for F3L and it is important that these categories are basically the same.

Data:

Some modelers and organizers interpret it in their own way. Examples: no part of the vertical tailplane may protrude below the underside of the fuselage, and no horizontal tailplane may be glued to the underside of the fuselage. We consider this interpretation to be incorrect. It limits the possible concepts for the arrangement of the tail surfaces of the models, and limits the fun of the category, which consists in inventing your own designs and concepts. We believe that removing this sentence from the rules will prevent misleading interpretation of this rule point.

E-mail vote by F5 Subcommittee **For 9 / Against 0 / Abstain 0**

k) 5.5.12.11.2 Scoring of the Landing – rule change CZE

5.5.12.11.2 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 model loses any part.

~~b) the model is not airworthy after landing. If there is any doubt about this, the airworthiness must be demonstrated.~~

bc) the model is overflying the group's working time.

cd) the model touched the competitor or helper during the landing.

de) the competitor or helper touched the model before the official scorekeeper made the distance measuring.

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

a) The model rests outside a landing area as defined by the organizer. Within the working time, the competitor may launch for another attempt.

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

Reason:

We believe that the requirement of "model airworthiness" after landing is very difficult to control and enforce. There is no clear interpretation of the term "airworthy model" and this leads to endless discussions. The aim of the modification is to remove the point of contention. The same request to modify the rules was made for F3L and it is important that these categories are basically the same.

Data:

Based on the experience gained from the competitors and organizers, we confirmed the difference in perspective on model airworthiness and especially on proving airworthiness. A broken model can be considered airworthy if it is thrown hard enough. Another problem is the hidden inability to fly after landing. The model looks fine after a hard landing. The timekeeper considers the flight correct, writes down the result. The flight is over. The contestant takes the model off the runway and finds serious structural damage to the model that was not obvious enough. He could not be penalized because the damage to the model could not be detected until a closer inspection of the model.

E-mail vote by F5 Subcommittee **For 9 / Against 0 / Abstain 0**