CIAM RC PYLON RACING Technical Meeting 2021

e-Meeting on Saturday April 10th 2021 at 21.30 hours (CEST)

Procedure

- The Subcommittee (S/C) chairmen together with the members of each S/C have evaluated the proposals and made a vote. This vote will be used as an advice for the plenary meeting on May 8th 2021.
- This meeting is to discuss and vote the proposals with delegates, SC members and observers. There will be 1 vote per country representative. Comments made by the SC members on the proposals will be discussed and may be used for future proposals.
- Amendments to the proposals can be made, e.g. for clarification or improved language, but cannot change the proposals significantly from what is published in the Agenda.
- In case a proposal needs essential modifications to get sufficient support, the country that submitted it may be asked to withdraw the proposal or it can be referred back to the Sub Committee for modification. In both cases a new proposal can be submitted for the next plenary where pylon can make rule changes according to the rule freeze cycle (plenary 2023)
- After the end of this Technical Meeting sessions the SC Chairman will publish the minutes through FAI as soon as possible to be available for the delegates before the plenary meeting.

14.8 Section 4C Volume F3 - RC Pylon Proposals F3D

a) 5.2.14 Radio Equipment F3 Pylon Racing Subcommittee

Amend sub-paragraph a), then delete b) and c) as shown below:
a) For transmitter ~~and frequency~~ checks see *CIAM General Rules* C.16.2. ~~Spread spectrum (2.4 GHz) technology may be used and if it is, then 5.2.14 b) & c) may not apply~~. **Only radio systems with "spread spectrum" technology are allowed.**
~~b)Heats shall be arranged in accordance with the radio frequencies in use to permit simultaneous flights, taking into account that frequency will not follow frequency.~~
~~c)Each competitor has to supply two different frequencies, separated by a minimum of 20 kHz, which he must be able to use on all his model aircraft entered in the competition.~~

Consequential change: renumber par. 5.2.14. d) to 5.2.14. b).
Consequential change: change reference in 5.2.11. d) from 5.2.14. d) to 5.2.14. b).
Reason: Use of old FM systems is considered to give not maximum safety in pylon racing now.
Use of spread spectrum gives more freedom for draw of races.
Currently FM systems are not in use anymore in pylon racing.

SC voting: for 15 against 0 abstain 1
Comment: TE : does the wording "spread spectrum" leave sufficient room for future system?

14.8 Section 4C Volume F3 - RC Pylon Proposals F3D

b) 5.2.18 Timekeeping and Judging **F3 Pylon Racing Subcommittee**

Add a sentence at the end of sub-paragraph d) as shown below.

d) The judges' signals will be off as the aircraft reach midcourse between No. 3 and No. 1 pylons, or earlier. At the instant the model aircraft draws level with the No. 1 pylon the pylon judge will switch his signal on. When the model aircraft draws level with the No.1 pylon on the way back the signal is switched off. When a pylon cut has been made the signal will flash on and off five (5) times or another signal will be activated to inform the competitor about the pylon cut.

This system of signalling is the preferred one, but alternative systems with a fixed light duration and a separate pylon cut indication are allowed.

Reason: To allow current systems, which are in use without major problems.

SC voting: for 14 against 1 abstain 1

Comments: TC: add a sentence that the CD informs the competitors about the type of system.

GJ: Take care that the light will be off between 2/3

14.8 Section 4C Volume F3 - RC Pylon Proposals F3D

c) 5.2.20 Scoring and Classification **F3 Pylon Racing Subcommittee**

Add text to sub-paragraph e) as shown below.

e) Points shall be awarded after each race as follows: The competitor's score shall be his corrected time in seconds and hundredths of a second, **rounded to the next upper 0.1 second**. If the competitor fails to complete his flight or is disqualified his score shall be 200.

Reason*:* To bring the scores better in line with the real timing accuracy.

SC voting: for 7 against 7 abstain 2
Several Comments: rounding off gives no advantages and increases the number of ties.
Proposal SC chairman: withdraw proposal.

14.8 Section 4C Volume F3 - RC Pylon Proposals F3E

d) 5.3.2.7 Augmented stability systems and similar **France**

Delete the text and replace with the alternate text as shown below, which is the text from the F3D section regarding Radio Equipment 5.2.14 d):

~~Augmented stability systems are allowed. Any other airborne device or function that uses sensors to actuate any control surface is prohibited (CGR par. B.1.1.e).~~)

The radio equipment shall be of the open loop type (i.e. no automated electronic feedback to the control surfaces either internally or from the model aircraft to the ground).
Systems or components which can move control surfaces of the aircraft or which can move masses in the aircraft based on input other than pilot input from their transmitter are not allowed to be installed in the aircraft.
Permitted:
1. Control rate devices that are manually switched by the pilot.
2. Any type of transmitter button or lever, switch, or dial control that is initiated or activated and terminated by the competitor.
3. Manually operated switches or programmable options to couple and mix control functions.
4. Devices for position tracking solely for the purpose of an automated tracking and scoring system for the competition event.
cont/...
Not permitted:
Any system that can move the control surfaces without direct pilot input in response to other inputs, like:
1. Pre-programming devices to automatically perform a series of commands.
2. Auto-pilots or gyros for automatic stabilisation of the model aircraft, whether separate devices or integrated into the radio receiver or servos.
3.Automatic flight path guidance.
4. Any type of learning function involving manoeuvre to manoeuvre or flight to flight analysis.
5. Terrestial reference systems like GPS, which can notify the pilot through telemetry when their plane reaches a specified distance away.

Reason: No change of this paragraph will:
- disregard pilots' skills to benefit the industrial technology.
- sideline the pilots who don't want (or can't) use any type of "augmented stability" systems
- increase again the cost of this class
- reinforce again the elitist aspect of this class
- split F3E class to the pylon racing spirit (which run counter to the pylon subcommitee's work in progress - i.e F5D to F3E).

SC voting: for 11 against 5 abstain 0
Comments: SN/MA : too late stabilization is common in many radio systems, it will demotivate younger pilots.

14.8 Section 4C Volume F3 - RC Pylon Proposals F3E

e) 5.3.3 Power source **The Netherlands**

Replace sub-paragraph a) with the text shown below; no change to b); modify c) with the deletion and addition shown below:

a) ~~The power source shall consist of any kind of rechargeable batteries (or secondary cells), the maximum no load voltage must not exceed 21Volts (max. tolerance +0.2 Volts).~~

The maximum no load voltage must not exceed 21 Volts (max. tolerance +0.2 Volts). The minimum no load voltage shall be at least 18 Volts (max. tolerance -0.2 Volts).

b) In case the voltage is measured, this shall be done at the moment the preparation time for the pilot starts. After the measurement has been taken, the pilot is allowed 5 minutes preparation time before he is called to the start.

c) ~~If the model aircraft carries more than the allowed number of cells as power source for the motor or the voltage exceeds this voltage~~**, If the model aircraft power source for the motor exceeds this voltage range,** the competitor is disqualified from that heat.

Reason*:* Energy limiters work most accurately and reproducible when the operating boundaries of voltage and current are the smallest. A defacto standard has become operation with 5s Lipo battery packs. The proposal is to limit the no load voltage between certain boundaries so that way we can always be sure about best energy limiter precision, since limiters are designed to work best in a certain voltage and current range.

SC voting: for 10 against 4 abstain 2

Comment DR: 4S should be allowed, so make the lower voltage less.

14.8 Section 4C Volume F3 - RC Pylon Proposals F3E

f) 5.3.3 Power Source **F3 Pylon Racing Subcommittee**

In sub-paragraph d) 'Battery type', change the max battery weight as shown below.

iii) Maximum weight of battery pack: ~~400~~ **300** g.

Reason: According to current battery technology.

SC voting: for 9 against 3 abstain 4

Comments TC/SL/TvE : remove the rule on battery weight completely, it is unnecessary.

14.8 Section 4C Volume F3 - RC Pylon Proposals F3E

g) 5.3.9 Transmitter ~~and frequency~~ checks **F3 Pylon Racing Subcommittee**

Modify sub-paragraph a) with the deletions and addition as shown below; then delete b) and c).

a) For transmitter ~~and frequency checks~~ see CIAM General Rules C.16.2. ~~Spread spectrum (2.4 GHz) technology may be used and if it is, then 5.2.14 b) & c) may not apply.~~ **Only radio systems with "spread spectrum" technology are allowed.**

~~b) Heats shall be arranged in accordance with the radio frequencies in use to permit simultaneous flights, taking into account that frequency will not follow frequency.~~

~~c) Each competitor has to supply two different frequencies, separated by a minimum of 20 kHz, which he must be able to use on all his model aircraft entered in the competition.~~

Reason*:* Use of old FM systems is considered to give not maximum safety in pylon racing now.
Use of spread spectrum gives more freedom for draw of races.
Currently FM systems are not in use anymore in pylon racing.

SC voting: for 16 against 0 abstain 0

Comment TE, see item a.

14.8 Section 4C Volume F3 - RC Pylon Proposals F3E

h) 5.3.10 Race Course, Distance and Number of Rounds **F3 Pylon Racing Subcommittee**

Modify sub-paragraph a) as shown below.

ii) In case of **> 5m/s** tail wind the course direction should be changed~~, if possible~~.

~~iii) If this is not possible due to physical or time constraints and when there is a strong tail wind (>5 m/s) the starter can decide a 180° change of take-off direction at least ten (10) minutes before the first heat of a round. This direction of launch shall be continued for that complete round~~.

Reason:. There is a majority of the Sub Committee that want to delete the reverse start method.

Consequential change for F3E course lay-out by deletion of starting lanes for reverse start.

SC voting: for 14 against 1 abstain 1

Comment GC: Strong recommendation to leave the possibility of reverse start in the rules (as an escape?). At some flying sites turning the course is impossible, which would imply that the competition cannot take place in case of tailwind.

14.8 Section 4C Volume F3 - RC Pylon Proposals F3E

i) 5.3.14 F3 Pylon Racing Subcommittee

Change safety distance from 45 to 60 metres in 5.3.14 and the drawing of F3E course lay-out.

5.3.14 Timekeeping and Judging

Annex 5R describes the duties of timekeepers and judges.

a) All officials (timekeepers, lap counters and pylon judges) must stay at a minimum distance of ~~45~~ **60** m outside the course as drawn on the F3E course lay-out in 5.3.10.

Reason: 45 meters is considered to be a too small safety distance.

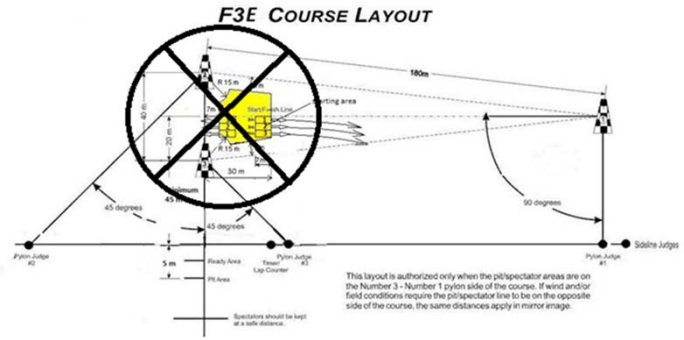
SC voting: for 14 against 1 abstain 1

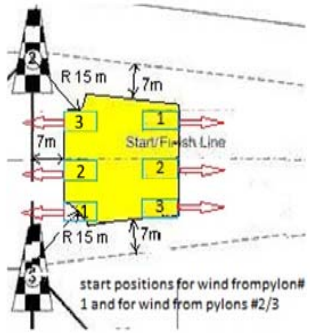
Comment TC: Consider stickers or similar to improve visibility at larger distances.

14.8 Section 4C Volume F3 - RC Pylon Proposals F3E

j) 5.3.10 F3E Course Layout **The Netherlands**

Change course layout. Replace the indicated detail.





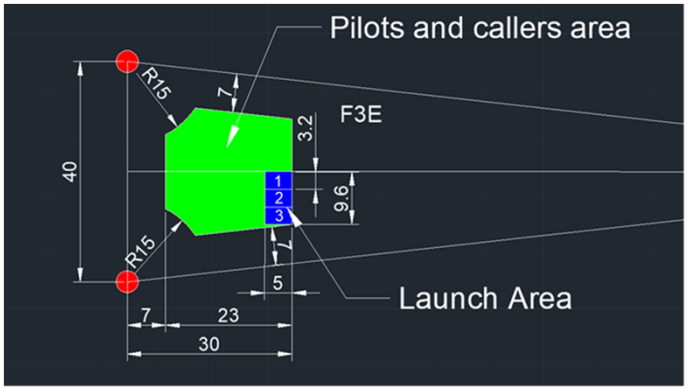
Reason: Use the full width of the start line to position helper and models of lanes 1, 2 and 3. This enhances safety, and the space is there, so why not use it.

SC voting: for 7 against 5 abstain 4
Comments, see next slide.

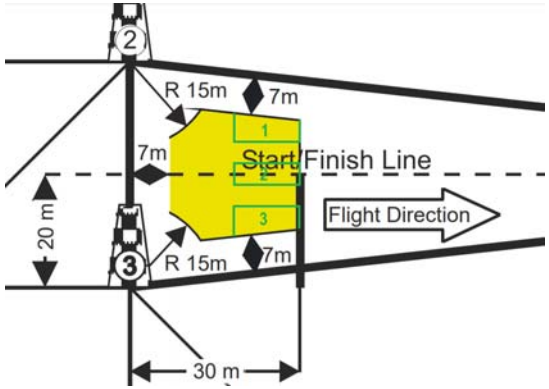
14.8 Section 4C Volume F3 - RC Pylon Proposals F3E

j) Comments:

Proposed by BdC:



proposed by Tomas Ciniburk



14.8 Section 4C Volume F3 - RC Pylon Proposals F3E

k) 5.3.14 Timekeeping and judging **F3 Pylon Racing Subcommittee**

Add text to sub-paragraph d) as shown below.

d) The judges' signals will be off as the aircraft reach midcourse between No. 3 and No. 1 pylons, or earlier. At the instant the model aircraft draws level with the No. 1 pylon the pylon judge will switch his signal on. When the model aircraft draws level with the No.1 pylon on the way back the signal is switched off. When a pylon cut has been made the signal will flash on and off five (5) times or another signal will be activated to inform the competitor about the pylon cut.

This system of signalling is the preferred one, but alternative systems with a fixed light duration and a separate pylon cut indication are allowed.

Reason: To allow current systems, which are in use without major problems.

SC voting: for 14 against 1 abstain 0

Comments; See under item a.

14.8 Section 4C Volume F3 - RC Pylon Proposals F3E

I) 5.3.16 Scoring and Classification **F3 Pylon Racing Subcommittee**

Add text to sub-paragraph e) as shown below.

e) Points shall be awarded after each race as follows: The competitor's score shall be his corrected time in seconds and hundredths of a second, **rounded to the next upper 0.1 second**. If the competitor fails to complete his flight or is disqualified his score shall be 200.

Reason*:* To bring the scores better in line with the real timing accuracy.

SC voting: for 7 against 7 abstain 2

Comments: see under item b
SC chairman proposes to withdraw the proposal.

More?

Thank you for your attention