

RC Soaring Technical Meeting Minutes

27th April 2018

Report by: Tomas Bartovsky, SC Chairman

Present:

Name	Country	Title
Tomas Bartovsky	CZE	RC-Soaring Subcommittee chairman, CIAM delegate
Ernest Mattiussi	LUX	RC-Soaring Subcommittee member, CIAM delegate
Rudi Schaub	SUI	RC-Soaring Subcommittee member, CIAM delegate
Erik Dahl Christensen	DEN	RC-Soaring Subcommittee member, CIAM delegate
Andreas Fricke	FRA	RC-Soaring Subcommittee member
Stephan Lämmlein	GER	Technical Expert
Ralf Decker	GER	RC-Soaring Subcommittee member
Carles Aymat	ESP	CIAM Delegate
Jakub Drmla	SVK	CIAM Delegate
Robert Herzog	BEL	CIAM Delegate
Petr Cejnar	CZE	Alternate CIAM Delegate
Rick Ruijsink	NED	Observer
Paulette Halleux	BEL	Observer

MINUTES – PROPOSALS

Page 47	Class: F3F																		
a)	<table border="1"> <tr> <td>5.8 Class F3F Radio Control Slope Soaring</td> <td>Submitted by:</td> <td>GER</td> </tr> <tr> <td colspan="3">Amended at the Technical Meeting? No -</td> </tr> <tr> <td>S-C Voting (prior to the Technical Meeting):</td> <td>For: 10</td> <td>Against: 1</td> </tr> <tr> <td>Technical Meeting Voting:</td> <td>For: 8</td> <td>Against: 0</td> </tr> <tr> <td></td> <td></td> <td>Abstain: 1</td> </tr> <tr> <td colspan="3">Comments : Unanimously recommended</td> </tr> </table>	5.8 Class F3F Radio Control Slope Soaring	Submitted by:	GER	Amended at the Technical Meeting? No -			S-C Voting (prior to the Technical Meeting):	For: 10	Against: 1	Technical Meeting Voting:	For: 8	Against: 0			Abstain: 1	Comments : Unanimously recommended		
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b)	<table border="1"> <tr> <td>5.8.2. Characteristics of Radio Controlled Slope Gliders</td> <td>Submitted by:</td> <td>GER</td> </tr> <tr> <td colspan="3">Amended at the Technical Meeting? No -</td> </tr> <tr> <td>S-C Voting (prior to the Technical Meeting):</td> <td>For: 9</td> <td>Against: 2</td> </tr> <tr> <td>Technical Meeting Voting:</td> <td>For: 7</td> <td>Against: 0</td> </tr> <tr> <td></td> <td></td> <td>Abstain: 2</td> </tr> <tr> <td colspan="3">Comments : Recommended</td> </tr> </table>	5.8.2. Characteristics of Radio Controlled Slope Gliders	Submitted by:	GER	Amended at the Technical Meeting? No -			S-C Voting (prior to the Technical Meeting):	For: 9	Against: 2	Technical Meeting Voting:	For: 7	Against: 0			Abstain: 2	Comments : Recommended		
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<p>competitor is not to blame on that account;</p> <p>c) the flight was not judged by the fault of the judges</p> <p>d) the any part of the model (i.e. the fuselage nose) fails to pass above a horizontal plane, level with the starting area, within five (5) seconds of exiting the course, due to circumstances beyond the control of the competitor, duly witnessed by the official judges.</p> <p>The repeated flight (“re-flight”) shall must shall happen as soon as possible considering the local conditions and the radio frequencies. If possible, the model aircraft can stay airborne and has to be brought to launching height, launching speed and launching position before the new 30 second period is started by the judge.</p>
<p>S-C Voting (<i>prior to the Technical Meeting</i>): For: 11 Against: 0</p> <p>Technical Meeting Voting: For: 8 Against: 0 Abstain: 1</p> <p>Comments : Unanimously recommended as amended</p>

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e)	<p>5.8.7. Organisation of Starts</p> <p>Amended at the Technical Meeting? No -</p> <p>S-C Voting (<i>prior to the Technical Meeting</i>): For: 11 Against: 1</p> <p>Technical Meeting Voting: For: 8 Against: 0 Abstain: 1</p> <p>Comments : Unanimously recommended</p>
Submitted by: GER	

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f)	<p>5.8.9. The Speed Course</p> <p>Amended at the Technical Meeting? Yes -</p> <p>5.8.9. The Speed Course: The speed course is laid out along the edge of the slope and is marked at both ends Base A and Base B with two (2) clearly visible flags. The organiser must ensure that the two (2) turning planes are mutually parallel and perpendicular to the slope.</p> <p>Depending on the circumstances, the two (2) planes are marked respectively Base A and Base B.</p> <p>Base A is the official starting plane. At Base A and Base B, an Official announces the passing of the model (i.e. any part of the complete intact model aircraft in flight) with a sound signal when the model is flying out of the speed course. Furthermore, in the case of Base A, a signal announces the first time the model is crossing Base A in the direction of Base B.</p>
Submitted by: GER	
<p>S-C Voting (<i>prior to the Technical Meeting</i>): For: 11 Against: 1</p> <p>Technical Meeting Voting: For: 8 Against: 0 Abstain: 1</p> <p>Comments : Unanimously recommended as amended</p>	

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g)	<p>5.8.10. Safety</p> <p>Amended at the Technical Meeting? Yes -</p> <p>5.8.10. Safety <u>The sighting device used for judging the turns must be placed in a safe position. The organiser must clearly mark a safety line representing a vertical plane which separates the speed course for the timed flight (from leaving the hand until completing the scored flight) from the area where judges, other officials, competitors and spectators stay. Crossing or multiple crossing the safety plane by any part of the intact model in direction to the safety area during the timed flight will be penalised by 100 points. The organiser must appoint one (1) judge to observe, using an optical sighting device, any crossing of the safety plane.</u></p>
Submitted by: GER	

<p><u>Additional the organiser must clearly mark the boundary between the landing area and the safety area assigned for other activities. After release of the model from the hand of the competitor or helper, any contact of the model with any object (earth, car, stick, plant, etc) within the safety area will be penalised by 100 points. Contact with a person within the safety area will be penalised by 1000 points. The number of contacts does not matter (maximum one penalty).</u></p> <p><u>If there was an additional penalty of 100 points because of crossing the safety plane only 1000 points will be deducted. The penalty will be a deduction of 100 or 1000 points from the competitor's final score and shall be listed on the score sheet of the round in which the penalty was applied.</u></p>			
S-C Voting (prior to the Technical Meeting):		For: 4	Against: 8
Technical Meeting Voting:		For: 8	Against: 0 Abstain: 1
Comments : Unanimously recommended as amended			

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h)	5.6.1.3. Characteristics of Radio Controlled Gliders	Submitted by:	SVK
Amended at the Technical Meeting? Yes -			
a) Maximum Surface Area150 dm ² Maximum Flying Mass 5 kg Loading 12 20 to 75 g/dm ² Minimum radius of fuselage nose 7.5 mm <u>Minimum Flying Mass.....1.7 kg</u>			
<u>Weight of models may be checked randomly immediately after the landing during the contest.</u>			
S-C Voting (prior to the Technical Meeting):		For: 4	Against: 5
Technical Meeting Voting:		For: 7	Against: 1 Abstain: 1
Comments : Recommended as amended			

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i)	5.6.3. Contest Flights	Submitted by:	SVK
Amended at the Technical Meeting? No -			
S-C Voting (prior to the Technical Meeting):		For: 1	Against: 8
Technical Meeting Voting:		For: 0	Against: 7 Abstain: 2
Comments : Not recommended			

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j)	5.6.4. Reflights	Submitted by:	GER
Amended at the Technical Meeting? No -			
S-C Voting (prior to the Technical Meeting):		For: 8	Against: 1
Technical Meeting Voting:		For: 8	Against: 1 Abstain: 0
Comments : Recommended			

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k)	5.6.8. Launching	Submitted by:	SVK
Amended at the Technical Meeting? Yes -			
5.6.8.2. The launch of the model aircraft will be by hand held towline only . <u>or winch.</u>			
<u>a) All launching shall take place in an area as designated by the organiser with provisions made for launching into the wind. All launches will be made with an electrical powered winch approved by the organiser or Contest Director.</u>			
<u>b) Upwind turnaround devices, which must be used, shall be no more than 150 metres from the winch. The height of the axis of the turnaround pulley from the ground must not exceed 0.5 metre. Release of the model must occur within approximately 3 metres of the winch. An automatic means must be provided to prevent the line unwinding from the reel during launch.</u>			

- c) The winch shall be fitted with a single starter motor. The starter motor must come from serial production. It is allowed to fit the arbor of the rotor with ball or needle roller bearings at each end. The drum may be driven directly by the motor or by a gear with a constant and unchangeable transmission ratio. Any further change of the original motor will lead to disqualification according to paragraph B.18.1. The drum must have a fixed diameter.
- d) The power source shall be a 12 volt lead/acid battery.
- e) The battery must supply the winch motor with current through a magnetically or mechanically actuated switch. The use of any electronic device between the winch motor and the battery is forbidden. A competitor may interchange various parts as he wishes provided the resulting winch conforms to the rules.
- f) The battery must not be charged in the winches area. The motor must not be cooled, and the battery must not be heated.
- g) The purpose of this rule is to limit the power used for the launch. Therefore with the exception of the single winch battery, line stretch, and the small amount of energy in the rotating rotor and winch drum, no energy storage devices like flywheels, springs, weights, pneumatic devices or any similar devices is allowed.
- h) The complete winch (battery, cables, switch and motor) must have a total resistance of at least 23.0 milliohms. The allowed resistance may be obtained by adding a fixed resistor or resistors between the motor and battery. The design must not allow an easy change of the total resistance at the launch line (eg by shorting the resistor, or resistors) except opening and closing the circuit.
- i) The plus and minus pole of the battery must be readily accessible with alligator (crocodile) clips for voltage measurements. One of the cables from the battery (through which the total current flows) must be accessible for the clamp transducer (clamp meter) and the calibrated resistor.
- j) Measuring: The battery must stay unloaded for at least two minutes after the previous test or launch. The measuring of the circuit resistance consists of recording the battery voltage U_b immediately before closing the winch switch and of recording the current I_{300} and the voltage U_{300} 300 milliseconds (+30 ms) after the winch current starts to flow. Before the end of this 300 ms interval the rotor of the motor shall stop rotating.
- k) For the test a digital voltage-measuring instrument (accuracy less or equal to 1%) is used, which enables the measurement of the voltage of the battery and the output voltage from the I/U-transducer 300 ms (+30 ms) after the current to the winch is applied. The transducer for measuring the current may be a clamp transducer (range 0-600 or 0-1000A, accuracy less or equal to 2%) or a calibrated resistor (0.1 milliohm, accuracy less or equal to 0.5%) in the negative path of the circuit. The resistance is calculated with the formula: Measurement with clamp transducer $R_{tot} = 1000 \times U_b / I_{300}$ Measurement with shunt $R_{tot} = (1000 \times U_b / I_{300}) - 0.1$ (R_{tot} in milliohms, U_b in volts, I_{300} in amperes)
- l) A first measurement is taken in order to check the correct functioning of the measuring equipment and is discarded. Three subsequent measurements should be made with an interval of at least two minutes after the previous test or launch. The total resistance of the winch equipment is the average of these three (3) respective results. Voltage and current must be displayed to be able to calculate the total resistance by hand. If the total resistance is calculated automatically then it must be shown simultaneously with the voltage and current values. The winch equipment is declared as being in accordance with the rules if its total resistance is at least 23 mΩ.
- m) At the test of the winch before the competition the voltage of the battery U_{300} 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 winches with a single measuring apparatus, or several measuring apparatus proven to produce reproducible results within a tolerance of 0.5 %.
- o) There must be a quick release mechanism on the power lead to the battery in order to remove power from the motor in an emergency. (Connections to the battery must be removable without the need for tools). If slotted pole shoes are used then both of them have to be slotted.
- p) The flight is penalised with 1000 points if the winch 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.

g) After release of the model aircraft from the towline, the towline must be rewound without delay by operating the winch, until the parachute arrives at the turnaround device. During this procedure the towline should be guided by a helper to avoid damage to other competitors' towlines. The towline must be provided with a measure eg a stopper or a metal ring, to prevent it being drawn down through the towline pulley. Then, the towline(s) must be retrieved by hand to the winch. A winch must not be operated when the towline is lying on the ground and across other towlines or strikes another towline during launching

r) The towline (which must be of non-metallic material except for linkages) must be equipped with a pennant having a minimum area of 5 dm² . A parachute (5 dm² minimum area) may be substituted for the pennant provided it is not attached to the model aircraft and remains inactive until the release of the cable. During complete rewinding of the line on to the winch, the parachute, if used, must be removed and inactivated.

s) In the case of Continental and World Championships, a maximum of six (6) winches and six (6) batteries may be used at any time on the winches line(s) by any working team. Interchanging among winches and batteries while keeping compliance with the minimum resistance rule is totally under the responsibility of the competitor.

S-C Voting (prior to the Technical Meeting): For: 8 Against: 3

Technical Meeting Voting: For: 5 Against: 3 Abstain: 1

Comments : **Recommended**

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l) 5.6.8. Launching Submitted by: GER

Amended at the Technical Meeting? Yes -

b) Immediately after release of the model aircraft from the launching cable, without delay the towline helpers must either recover the towline on a hand reel (hand winch) or, when a pulley is used, they must continue to pull the towline until it is completely removed from the towing area in order to avoid crosscutting with other lines which are still in a state of towing or will be used for towing.

This is not applicable if a line break occurs. In this case only the residual line attached to the ground or used by the towing helpers has to be removed from the launching area. A designated judge (launch line-manager) has to overview and control and, if necessary, - call on towline helpers to remove their lines from the launching area after the model aircraft is released. If his demand is refused, then the pilot, whose towline helpers refused, shall be penalised by 100 points. The pilot, whose towline helpers do not remove the tow line within 30 seconds after release of the pilot's model, must shell be penalised by 100 points.

The penalty of 100 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 penalty was applied.

S-C Voting (prior to the Technical Meeting): For: 9 Against: 2

Technical Meeting Voting: For: 8 Against: 0 Abstain: 1

Comments : **Recommended**

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m) 5.6.8.7. Towlines Submitted by: SVK

Amended at the Technical Meeting? No -

S-C Voting (prior to the Technical Meeting): For: 7 Against: 4

Technical Meeting Voting: For: 5 Against: 3 Abstain: 1

Comments : **Connected with the proposal item k)**

n)	5.6.11.4. Final Classification	Submitted by:	AUS
	Amended at the Technical Meeting? No -		
	S-C Voting (<i>prior to the Technical Meeting</i>):	For: 8	Against: 2
	Technical Meeting Voting:	For: 9	Against: 0 Abstain: 0
	Comments : Unanimously recommended		

F3B-e

Facing the reduction number of participants in F3B competitions and Championships, a working group under the leadership of Ralf Decker prepared a set of rules for F3B models powered by electromotors. The proposed rules were discussed and accepted by the Technical Meeting, for as much as possible experimentation during the international F3B competitions 2018.