

# GLIDING NEW ZEALAND

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## PRELIMINARY REMARKS

- a) FAI Sporting Code Section 3 Annex A contains the rules for World and Continental Gliding Championships. This document describes an alternative method for scoring these competitions by replacing certain elements of Part 8 of Annex A. No other changes to Annex A are implied.
- b) On 8 March 2019 the IGC Plenary approved this alternative scoring system for trial. It is immediately available for testing by NACs, and it will be used in a Continental Gliding Championships in 2021. The system is subject to change, and NACs are invited to experiment with modifications before 2021. Permanent changes are subject to approval by IGC.
- c) At the New Zealand Contest Pilots Meeting in Wellington in June 2019 it was agreed that this scoring system would be adapted for use in New Zealand Sailplane Racing Committee sanctioned contests with effect from November 2020. This decision was confirmed at the Contest Pilots meeting in June 2020.
- d) In this document, fundamental changes to the definitions of scoring parameters or in the formulas contained in IGC Alternative Scoring formula are highlighted in red.
- e) The formulas for scoring Racing Tasks (RT) and Assigned Area Tasks (AAT) are the same, but this may change in the future.
- f) All questions or comments about this scoring system should be sent to:  

srcgnz@gmail.com
- g) Changes from previous versions will highlighted in the margins.

## PART 8 SCORING AND PENALTIES

*Note: Paragraphs 8.1 through 8.2.6 in this document are not different from the same paragraphs in Annex A unless highlighted in red. They are included here for completeness.*

**8.1 SCORING SYSTEM** The Championships shall be scored according to the **1000-Points Scoring System**: The Score is expressed in points (the maximum available Score for the day is 1000 points). Each class shall be scored separately.

**8.1.1 Team Cup**: This may be used concurrently for a secondary ranking, but not to select the individual Champions.

### 8.2 COMMON RULES

**8.2.1 Championship Day** In order for a Day to be counted as a Championship Day in any class:

- a. For each class, a launch opportunity shall have been given to each competitor in time for the competitor to carry out the task of the Day in question, and
- b. For each class, more than 25% of the competitors, who have had a competition launch on that Day, shall have flown a Marking Distance of at least Dm (after any handicapping is applied).

*Dm is defined in para. 8.3.1*

*In this Annex, "valid competition day" is synonymous with "Championship Day."*

**8.2.2 Daily Scores** Each competitor shall be given a daily Score based on his performance on each Championship Day. The Score given to each competitor shall be rounded to the nearest whole number, the value of 0.5 being rounded up.

**8.2.3 Finisher** A competitor is deemed to be a "finisher" if he crosses the finish line or enters the finish ring after completing the task.

**8.2.4 Handicaps** Handicapping shall be used in all classes as defined in New Zealand Contest Rules. The Organisers shall state in the Local Procedures if Handicapping is to be used in other classes or if unhandicapped class(es) will also be included in the contest.

- a. Handicaps shall be taken from the valid BGA Handicap list or any other list approved by the NZ Sailplane Racing Committee for the specific Championships.
- b. The Organisers shall publish a list of all competitors with their handicaps before the beginning of the Championships.
- c. Handicaps shall be applied according to 8.3.2.

**8.2.5 Penalties** Flights that have been disqualified shall be given a zero Score for the Day, but shall be counted in the scoring formula. Any penalties shall be deducted from the competitor's Score after it has been calculated, according to this Section.

If the penalty reduces a competitor's raw performance for the **day**, the penalty must be applied before the calculation of the Score. The appropriate penalty should be

applied each time an infringement occurs (eg exceeding the maximum permitted altitude is penalized for each infringement).

If the Day score after deduction of any penalties is less than zero, it shall be taken as zero, unless 8.6.4 applies.

8.2.6 **Cumulative Scores** Cumulative and Final Scores shall be calculated by adding the points obtained each Day.

### 8.3 DEFINITIONS OF SCORING PARAMETERS

In the following tables the abbreviations RT and AAT are used for Racing Task and Assigned Area Task, respectively.

#### 8.3.1 Championship Days

The parameters used for scoring each Championship Day are:

<b>D1</b>	Minimum Distance for 1000 points, depending on the class:	
	<b>Class</b>	<b>D1</b>
	Novice	80 km
	Open, Racing Club	200 km 200 km
<b>Dm</b>	Minimum Distance to validate the Day, depending on the class:	
	<b>Class</b>	<b>Dm</b>
	Novice	30 km
	Open, Racing Club	80 km 50 km
<b>n1</b>	Number of competitors who achieve a Handicapped Distance (Dh) of at least Dm	
<b>n3</b>	Number of finishers, regardless of speed	
<b>N</b>	Number of competitors having had a competition launch that Day	
<b>Ho</b>	Lowest Handicap (H) of all competitors	
<b>Do</b>	Highest Handicapped Distance (Dh) of the Day	
<b>Vo</b>	Highest finisher's Handicapped Speed (Vh) of the Day	
<b>To</b>	Marking Time (T) of the finisher whose Vh = Vo. In case of a tie, lowest T applies.	
<b>Pm</b>	Maximum available Score for the Day, before <b>F</b> and <b>F<sub>CR</sub></b> are applied.	
<b>F</b>	Day Factor	
<b>F<sub>CR</sub></b>	Completion Ratio Factor	
<b>S<sub>P0</sub></b>	Highest Provisional Score (S <sub>P</sub> ) of the Day	
<b>S<sub>Pm</sub></b>	<b>Median</b> Provisional Score (S <sub>P</sub> ) of the Day, excluding competitors with S <sub>P</sub> = 0. <i>Note: this is not the Mean Provisional Score.</i>	
<b>Day</b>	If the Day is not a Championship Day (see 8.2.1) then all Scores = 0, subject to the application of penalties defined in 8.2.5.	

### 8.3.2 Competitors

The parameters used for scoring each Competitor are:

<b>D</b>	Competitor's Marking Distance. (Defined in 6.3.1 for RT and in 6.3.2 for AAT)
<b>H</b>	Competitor's Handicap, if handicapping is being used; otherwise H=1
<b>Dh</b>	Competitor's Handicapped Distance. ( $D_h = D \times H_o / H$ )
<b>T</b>	Finisher's Marking Time. (Defined in 6.3.1 for RT and in 6.3.2 for AAT)
<b>Pd</b>	Competitor's Distance Points
<b>Vh</b>	Finisher's Handicapped Speed. ( $V_h = D / T \times H_o / H$ )
<b>Pv</b>	Competitor's Speed points
<b>Sp</b>	Competitor's Provisional Score
<b>S</b>	Competitor's Score for the Day

## 8.4 CALCULATION OF SCORES

### 8.4.1 Racing Task

a. Day Parameters:

$$P_m = \min(1000, 1250 \times (D_o/D_1) - 250, (600 \times T_o) - 200)$$

$$F = P_m/1000$$

$$F_{CR} = \min(1, 1.2 \times (n_3/n_1) + 0.6)$$

Note: Calculation of  $P_m$  enforces a minimum task time of 2 hours for a 1000 point day.

b. Competitor's Score:

(i) For any finisher:0

$$P_v = 1000 \times (V_h/V_o)$$

$$P_d = 750 \times (D_h/D_o)$$

(ii) For any non-finisher:

$$P_v = 0$$

$$P_d = 750 \times (D_h/D_o)$$

(iii)  $S_p = F \times F_{CR} \times \max(P_v, P_d)$

$$S = S_p \times \min(1, 200/(S_{PO} - S_{PM}))$$

### 8.4.2 Assigned Area Task

same as 8.4.1