

Summary of NZ Flying Rule Changes since 1 Dec 1998 issue of Rule Books

Section5 - Soaring/Electric

NZ CLASSES		Para
Class A	6 minute Thermal Duration	3.1
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Class C	Premier Thermal Duration	3.3
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Class I	Hand Launch Glider	3.8
Class J	Thermal 2,4,6,8,10	3.9

10.5.1 FAI CLASSES flown in NZ (see FAI Sporting Code)

Class F3B	FAI Thermal Multi-task
Class F3J	FAI Thermal Duration
Class F5A	FAI Electric Aerobatics
Class F5B	FAI Electric Multi-task (including handicap)
Class F5B/600	FAI 10-cell Electric Multi-task
Class F5D	FAI Electric Pylon

3.3 CLASS C : PREMIER THERMAL DURATION.

A 10 minute flight during an 11 minute working time. This class offers thermal duration flying in a group using a common working time. This enables the scoring to be done on a 'group scoring' basis.

3.3.3 Scoring

- (a) One point will be awarded for each full second from the time the towline is released until the model first touches down (Rule 2.3) up to a maximum of 600 points (ie. 10 minutes maximum).
- (b) One point will be deducted for each full second flown in excess of 600 seconds.

3.5.1 CLASS E : THERMAL ELECTRIC 7X7

The object is to fly three 7 minutes flights over 3 rounds on a single charge, with a bonus for landing in the marked circle.

- 3.5.1.1 There are no restrictions on motor, plane, motor control or cell size. No more than 7 x 1.2 volt nicad cells are permitted.
- 3.5.1.2 The battery SHALL NOT BE RE-CHARGED between flights and the same battery must be used for all three flights.
- 3.5.1.3 Flights will be scored one point for each second flown up to 7 minutes (i.e. 420 points) then one point lost for each second flown over this time.
- 3.5.1.4 A landing bonus of 50 points will be awarded if the whole of the model stops inside a 30 metre diameter circle; 25 points if any part of the model touches the circle; zero points if outside the circle.
- 3.5.1.5 Timing of flight is to commence at the end of the motor run. There is no limit to the length of motor run. Time keeping starts when the timekeeper sees the transmitter operated to stop the motor.

- 3.5.1.6 The motor may not be restarted during the flight. Should the motor be restarted for any reason, the timekeeper will stop the watch immediately and landing points will be lost. No re-flights are permitted.
- 3.5.1.7 Contestants are advised to have a backup watch (or timekeeper)
- 3.5.1.8 Each round counts. The final score is the total of all points over three rounds.
- 3.5.1.9 The duration of each round will be decided by the CD taking into account the number of competitors, the weather conditions, and any other pertinent factors.

3.5.2 CLASS E2 : THERMAL ELECTRIC PRECISION

The object is to fly exactly 60 minutes on 5 minutes total motor run, with bonuses for landing in a marked circle.

- 10.5.1.1 Apart from the specifications defined in NZMAA General Competition Rules, Section 1, there are no restrictions on motor, plane, motor control or cell size.
- 10.5.1.1 One flight only. As many competitors as frequencies, safety and organisation allows should fly at the same time. No re-flights are permitted. Each pilot is allowed one helper / caller who may also be the timekeeper. Contestants are advised to have a backup watch (or timekeeper).
- 10.5.1.1 Flights will be scored one point for each second flown up to 60 minutes (i.e. 3600 points) then one point deducted for each second flown over this time.
- 10.5.1.1 The motor may be restarted as often as desired during the flight. The total motor run time is to be timed on a separate stopwatch and this time (in seconds) is deducted from the flight score. In addition, a penalty of 20 points per second will be deducted for motor run time of over 5 minutes.
- 10.5.1.1 Before launch the pilot will demonstrate to the timekeeper how the motor is turned on and off.
- 10.5.1.1 Timing commences when the model leaves the hand or ground. Timing ceases when the model or part of it touches the ground
- 10.5.1.1 A landing bonus of 30 points will be awarded if the nose of the model stops within 5 metres from the landing spot; 20 points if the nose stops between 5 and 10 metres from the spot; and 5 points if the nose stops between 10 and 15 metres from the spot.

Section 4 - Vintage Rule Changes

1. Delete rule 4.2 and replace as follows:
4.2 Model Use: No model shall be flown by more than one person in a given event.
(The effect of this change is to delete the Builder of the Model rule for all vintage events)
2. We have two rule 8.3.2. and no rule 8.3.4.
Renumber the second 8.3.2 to 8.3.3 and renumber the existing 8.3.3 to 8.3.4
3. Add the words ' with a rubber model' to the second sentence so that the renumbered rule 8.3.3) now reads:
8.3.3 ROG Bonus. 20 points per flight for an unassisted ROG with a rubber model. Designs not originally fitted with an undercarriage do not qualify for the ROG bonus.
(The effect of this change is to delete the ROG bonus for nos power models)
4. Renumbered 8.3.4. Change maximum engine runs so that the rule reads as follows.
 (Note that electric power is no longer permitted in Nostalgia FF Duration – it is, however, still permitted in RC events electric)
8.3.4 Maximum engine runs for Power models.

a.	Diesel	12 seconds
b.	Glow	10

Section 8. - INTERMEDIATE PYLON

10.5 Tuned pipe exhaust systems are prohibited. The engine must be equipped with a positive fuel shut off.

Section 10 - RC pattern: Sportsman Schedule

9. Rectangular Approach: The model flies into wind over the landing circle in straight and level flight and completes an approach for the landing consisting of four clearly defined 90 degree turns and four straight legs, the first two legs to be flown at constant altitude. During the third 90 degree turn (onto the base of the second crosswind leg) the model must commence a gradual descent which must remain constant throughout the rest of the approach. A landing must be off the approach or a zero will be given for any subsequent landing.

Downgrades

1. Turns not exactly 90 degrees.
2. Straight legs not well defined.
3. Changes in altitude prior to the third leg
4. Descent not constant

10. Landing: This is a continuation of the rectangular approach and is judged from a height of about two metres. The model flares smoothly to touch the ground in the landing zone with no bounces or changes in heading and rolls to a stop.

Downgrades

1. Descent not constant.
2. Model does not flare and touch down smoothly.
3. Landing not within the defined landing area.
4. Changes in heading during the descent or roll out.

RC pattern: Sportsman Schedule (Note that the FAI guidelines also apply)

4.1 Schedule

3. 1/2 Reverse Cuban Eight: Model pulls up 45 degrees, does a half roll, then completes a three-quarter inside loop.

Downgrades:

1. Model not at 45 degrees before and after half roll.
2. Changes in heading during half roll.
3. Half roll not on centre of 45 degree line.

5. 1/2 Square Loop With 1/2 Roll In Vertical: Model pulls vertical, executes a half roll then pushes to recover in level flight at a higher altitude than entry.

Downgrades:

1. Wings not level during 1/4 loops.
2. Flight path not vertical at start and finish of 1/2 roll.
3. Roll not exactly 180 degrees

7. 1/2 Square, 1/2 Roll Down: Model pushes vertical, executes a half roll then pulls to recover in level flight at a lower altitude than entry.

Downgrades:

- 10 Wings not level during 1/4 loops.
- 11 Flight path not vertical at start and finish of 1/2 roll.
- 12 Roll not exactly 180 degrees.

11. 1/2 Square, 1/2 Roll on Exit: Model executes a half inside square loop then half rolls to upright level flight.

Downgrades:

- 10 Wings not level during 1/4 loops.
- 11 Flight path not horizontal at start and finish of 1/2 roll.
- 12 Roll not exactly 180 degrees.

Section 6: Free Flight and Control Line Scale (to be read in conjunction with the NZMAA Flying Rules of 1 Dec 1998)

6.1.3 Competition Programme:

Part 6.1 (Static Judging) shall precede the flying programme, except when the entry exceeds 30 models, in which case the flying will commence on the first day of the competition. The CD will decide and announce when the static judging will take place in relation to flying.

6.1.4 Judges:

For International events, the organiser of flying scale competition shall appoint three scale judges who shall determine the degree of fidelity to scale and craftsmanship and a panel of at least three flight judges, who shall preferably each be of a different nationality, and shall be selected from a list submitted by their National Aero Club and approved by the CIAM.

6.1.5 Coefficient:

Where a K - factor (K) is noted, scoring shall be from 0 to 100. The score shall be divided by 10 and then multiplied by the K - factor (K).

6.1.6 Remarks:

- a) All models shall become airborne in the manner of their prototype. Hand launching will be permitted at a sacrifice of the total take-off points.
- c) No parts of a model may be added or removed between scale judging and flying.

ANNEX B

NZMAA JUDGES GUIDE FOR SCALE FREE FLIGHT FLYING SCHEDULE

Applicable to sections:

- 6.3 Indoor F/F Rubber Scale
- 6.4 Outdoor F/F Scale Rubber
- 6.5 Indoor F/F CO₂/Electric Scale
- 6.7 Outdoor F/F Power Scale
- 6.8 Outdoor F/F CO₂/Electric/Jetex Scale

General:

Models should at all times fly in the same manner as the prototype. The following notes describe an average aeroplane; judges should use their own personal judgement to decide on an appropriate flight style for the prototype submitted and mark the flight accordingly. Competitors may submit a description of the prototypes flight characteristics (originated by a competent authority), which should be used to judge the flight.

Take-off:

The model should slowly accelerate from rest, leaving the ground after an appropriate ground run. The take-off run should be straight, and the transition to flight should be smooth.

Errors

The take-off should be penalised if: the ground run is too short, too long or assisted, the nose or tail wheel does not leave the ground before the main wheels, the wing drops or the run is curved. Note that a swing may occur as the tailwheel leaves the ground; this is normal and should not be penalised unless it is excessive.

Initial Climb:

The model should smoothly rotate to a climbing attitude, and commence a gentle straight or curved climb. The climb should be smooth and appropriate to the prototype.

Errors

The climb should be penalised if: too steep, too shallow, too highly banked, wing drop or wing rock occurs or nose attitude is too high or too low. Note that a high bank steep spiral climb is normal for a Pitts but that a Bleriot should hardly leave ground effect.

Realism in Flight:

The model should mirror the flight characteristics of the prototype in speed, flight attitude, stability and balance. The model may fly in a straight line or turn in either or both directions. Turns should display an appropriate amount of bank. The flight should be smooth and continuous, especially in the transitions between, take-off, climb, cruise, descent and landing approach. Due allowance must be made for the prevailing wind conditions.

Errors

Realism in flight should be penalised if: the model flies too slowly or too fast, the nose attitude is too high or too low, the model stalls, or shows fugoïdal flight path, has persistent wing drop or wing rock, flies an out of balance turn or pitches harshly on engine failure. A stall or wing drop may occur if the model hits turbulence or its own slipstream. If the recovery to stable flight is smooth, this should not be penalised. A grossly out of balance turn, left turn with right bank for instance, or a flat turn should be penalised.

Transition to descent:

The model's flight path should smoothly change between cruise and descent. The change may be abrupt, after an engine failure, or prolonged as the power slowly reduces. The direction of flight may or may not change.

Errors

The transition should be penalised if: the model stalls as the engine fails, wing drop or wing rock occurs or an excessive pitch change is apparent.

Descent and Landing Approach:

The descent should be smooth, continuous and stable. It may be straight or curved. The angle of descent should be consistent with that of the prototype, either engine on or engine off. Allowance must be made for prevailing wind conditions.

Errors

The descent and landing approach should be penalised if: the model stalls, drops or rocks the wings, shows too steep a glide or does not change to a landing attitude. Note that the glide angle may change significantly with engine on or engine off.

Quality of Landing (Indoor Only):

After adopting the landing attitude, the model should descend slowly to the floor, and touch down without bouncing. The ground run should be smooth and straight, with the model coming slowly to rest. Touch down may be on main wheels only, or on tail down three points.

Errors

The landing should be penalised if: the model bounces, the ground run is curved, the model does not stop, it ground loops or touches down too hard. Landings in a nose down attitude, or on the nose wheel, should be penalised.

Section 3 – Control Line

3. CONTROL LINE SPORTSMAN AEROBATICS

10.5.1 Each competitor is entitled to three official flights. The total of the two highest scoring flights will determine placings.

10.2 SPEED LIMITED (SLOW) COMBAT

10.2.5 Speed: No faster than 3.3 sec/lap towing a full streamer, timed for two laps at the start of the bout. No devices or tank arrangements are permitted that allow the motor to speed up markedly (+10%) after the timed laps.

PHANTOM RACING

10.5.1 Phantom Team Race is an unofficial event for models built according to the Keil Kraft Phantom kitset. Any version of the Phantom kitset plans may be used.

10.5.2 Undercarriage: Two wheels of 50mm minimum diameter, with undercarriage length as on the kitset plan.

10.5.3 Refuelling: By squeeze bottle only.

10.5.4 Tank: 10cc maximum

10.5.5 Props: Mass produced, readily available commercially.

10.5.6 Cut Outs: May be fitted but used in emergencies only. Disqualified if used otherwise. (An engine fry-up is an emergency.)

10.5.7 Motors: Must be plain bearing diesels of with a maximum capacity of 1.5cc.

10.5.8 Lines and Model Weight: Two line control only, pull test 20 times the weight of the model. Line length 10.67 m (tolerance minus zero, plus 5cm), Minimum diameter 0.25 mm.

10.5.9 Other Model Requirements:

10.5.9.1A spinner of 44mm minimum diameter.

10.5.9.2Dihedral as per kitset plan (typically 25mm).

10.5.9.3Wing thickness at root 6mm minimum.

10.5.9.4A canopy fitted according to the kitset plan.

10.5.10 Race Length: 100 lap heats, 200 lap finals. Up to three models per heat or final.

10.5.11 General: Race procedures and flying rules as per 1/2A and Class B Team Race rules.