

2013 MAAC Free Flight Rule Book

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Outdoor Free Flight Regulations

Under authority of the Royal Canadian Flying Clubs Association, Canadian representative of the Federation Aeronautique Internationale, worldwide governing body of all sporting aviation, the following model aircraft classifications and regulations enacted by the Free Flight committee are hereby prescribed by the Model Aeronautics Association of Canada.

1. CONTEST PROCEDURES

Contests will be sanctioned by MAAC provided they meet the following requirements:

1.1 Sanction Applications

All contest sanction applications and applicable fees should be mailed to MAAC at least 30 days in advance of the competition.

1.2 Contest Report

Contest directors must report the results of a contest within seven days of the competition. This report shall contain the names and MAAC numbers of at least the first three competitors in each event. In National competitions, the first five competitors' names in each event must be reported.

The results of all record attempts, whether made during the normal course of the contest, or by specific request should also be listed.

Should the contest director find it necessary in the event of an ambiguity contained within the rules to define the "intent" of a rule, a full report must be made to the FF committee.

1.3 Contest Site

Contest directors must choose a flying area of reasonable terrain. In the case of Free Flight, this terrain must be fairly level, offering no additional advantage of height over the surrounding terrain.

1.4 Contest Equipment

Contest directors must take all necessary steps to have proper equipment available for the accurate processing and timing of entries. This equipment shall include stop watches, accurate weighing and measuring equipment, pull-test equipment etcetera, as may be required to ensure efficient conduct of all scheduled events of competition.

1.5 Contest Control - Contest Directors

must be in attendance at any competition over which they have jurisdiction.

The contest director shall appoint event directors as necessary to administer directly particular phases of competition under the CD's general authority.

Event directors are chosen, for their ability, at the discretion of the CD and are not necessarily required to possess a CD license.

1.6 Eligibility to Compete

Contest directors must verify that all competitors are members of MAAC or of any model organization affiliated either directly or indirectly with FAI which has a reciprocal agreement with MAAC.

Only licensed members may compete in sanctioned contests.

Contest directors may compete in all sanctioned competitions provided that another officially appointed CD has been named on the application form and is present to direct the contest.

~~**1.7 Builder of Model**~~

~~Contest directors shall assure themselves that any model in competition was built by the contestant himself, with the exception of FAI classes F1A, F1B and F1C.~~

1.8 Proxy Flyer

A proxy flyer may be designated by the builder only in those cases where the contest director is convinced of the physical inability of the builder to fly the model himself. The proxy flyer must be of the same age classification as the builder. Inexperience or absence shall not be considered physical inability within the meaning of this ruling. It shall be required, in cases where physical inability is not readily apparent, that the builder produces written evidence to this effect from a competent authority.

Proxy flying is specifically prohibited in: outdoor hand-launched glider and indoor hand-launched glider.

1.9 Disqualification

Exclusion - Contestants may be disqualified or excluded from any or all events if guilty of an infraction of contest rules, unsportsmanlike, dangerous or discourteous conduct, or conduct detrimental to the well-being of model aviation.

If, after entry in an event, a contestant is found ineligible to compete in that event, all of the contestant's flights in that event are to be cancelled and any awards won in that event returned. If judged guilty of willful misconduct, the contestant shall lose all claims to awards and shall be liable to expulsion from the contest site. Repeated or particularly vicious acts of willful misconduct may result in suspension or revocation of the model flyer's membership.

If action is taken to suspend or revoke a model flyer's membership, he shall have 14 days after notification in which to present, in writing, the reasons why such action should not be taken.

1.10 Protests

Any protests by a contestant at a meet must be presented to the contest director within an hour after the meet has ended. The protest, in writing, must describe the action and the people concerned. Appeals of the contest director's decision may be made to the Free Flight committee within three days.

1.11 Interpretation of Regulations

The Free Flight Committee of the Model Aeronautics Association of Canada shall be the final authority in the interpretation and execution of these Free Flight regulations.

2. CONTEST CLASSIFICATION

Sanctions are issued under the following classifications:

2.1 Record Trials

A record trial is a contest for the sole purpose of attempting to establish or surpass official records

There are no awards or entry fees at this class of meet.

2.2 National Contest

A national contest is a MAAC administered contest designed for application across the country as a whole.

A national contest may not necessarily be held in a centralized location and trophies or prizes may not necessarily be awarded e.g.: "Nationals" or FAI trials.

2.3 Regional contest (AAA)

A regional contest (AAA) is a major contest with at least eight (8) events, two (2) age classifications and prizes through third places.

NOTE: To ensure sufficient publicity, applications for a regional contest should be made three (3) months in advance.

2.4 Open Contest (AA)

An open contest is a contest run with unrestricted entry and with prizes through two (2) or more placings.

2.5 Closed Contest (A)

A closed contest may have restricted entry - such restrictions must be specified.

3. RECORDS

3.1 National Records

National records are recognized for all age classifications in all National record categories.

These records are open to any licensed MAAC member and once established, shall continue until exceeded or effectively cancelled by changes in the official regulations.

3.2 Record Application

Report of a record performance may be sent to MAAC by either the contest director or the contestant.

Applications for records must be made to MAAC within seven days of the meet.

3.3 Ratification

National records shall be ratified on production of all pertinent proof of performance and compliance with the regulations of MAAC as herein set out. Ratification of Canadian records is withheld until such time as receipt of the contest director's report officially confirms the record performance claimed.

3.4 Record Attempt In attempting to establish records at record trials, contestants shall be permitted as many flights in as many sequences as possible; under no circumstances will flights from sequence of three (or more, as specified) official flights be combined with those of another sequence. The foregoing shall also apply to any record performances claimed during the course of normal competition.

3.5 Record Attempts during the Course of Normal Competition

As any sanctioned competition allows recognition of record performance, contest directors are entrusted with the responsibility of officiating at any record attempts if so requested, provided the necessary equipment is available and insofar as such record attempts do not interfere with efficient running of the contest.

Subject to the limitations above, record attempts may be requested by any member in good standing of MAAC whether he is a contestant or not, and in any category whether scheduled or not, and no entry fee shall be necessary for such attempt.

4. GENERAL REQUIREMENTS OF COMPETITION IN NATIONAL CATEGORIES

The following regulations shall apply to all categories unless otherwise specifically stated:

4.1 Identification

All models entered in competition, excepting indoor and scale models, shall be identified by the contestant's MAAC number permanently affixed to the upper side of the wing.

Height of the numerals must be at least one inch, or one-third of the wing-root chord, whichever is less. Both stroke and width shall be such to enable ready recognition. (Example: Letter "O" should have a width of approximately half the height or wider and the other digits should be of the same proportion.)

4.2 Preparation For Flight

The flyer or proxy flyer must start and regulate the engine of free flight gas models, wind the motor of rubber models and operate the launching apparatus of gliders.

4.3 Number of Models

Unless otherwise specified, a maximum of two models per event may be allowed. Parts of these models may be interchanged, provided both models have been processed.

4.4 Change of Model Class

Models entered in one event may be entered into other events in the same contest at the contestant's option. The changing of one motor for that of another is permissible.

4.5 Multiple Event Participation

Contest directors are cautioned that, for purposes of competition, no single flight shall be registered as official in more than one event.

4.6 Forbidden Practices

The following practices are not permitted in sanctioned competition:

- a. The use of metal-bladed propellers
- b. the use of models in which gasses other than air at normal atmospheric pressure enter their internal combustion engines
- c. the use of the fuel additive known as tetra-nitromethane
- d. the use of liquid fuel jet engines

4.7 Maximum Weight No model shall have a flying weight of more than 11.023 pounds (5 kilograms).

4.8 National Categories

The following categories are officially recognized by MAAC for national competition:

MAAC

- Class 1 Gas
- Class 2 Gas
- Class 3 Gas
- Unlimited Rubber
- P30 Rubber
- Unlimited Towline Glider
- Hand Launch Glider
- Rocket Power
- Catapult Glider
- Flying Scale
- Rubber Flying Scale

FAI

- F1A - Nordic A-2
 - F1B - Wakefield
 - F1C - Power
 - F1G - Coupe d'hiver
 - F1H - A1 Glider
 - F1J - ½A Power
-

5. MAAC OUTDOOR GENERAL

5.1 General Requirements

The following regulations apply to all MAAC categories except where otherwise stated.

5.2 Number of Flights

Each contestant shall be allowed two attempts to make each official flight, other than flyoff flights.

5.3 Official Flight

An official flight occurs when the model remains in flight for 40 seconds or more and when the engine run does not exceed the established maximum.

Flights of less than 40 seconds may be declared official at the option of the contestant, provided the engine run does not exceed the established maximum.

The contestant's decision is to be made immediately and cannot be reversed later.

5.4 Unofficial Flight

An unofficial flight occurs when the flight is of less than 40 seconds duration, if the contestant's option described in 5.3 is not exercised.

When the model collides with another model after flight timing begins, the contestant shall have the option of declaring the flight to be unofficial.

The contestant's decision is to be made immediately and cannot be reversed later.

The time of unofficial flights is not recorded.

Flights in which the engine run exceeds the established maximum are automatically unofficial, as are flights during which parts are dropped, or those in which the model is aided at takeoff or during flight by the flyer or by artificial means.

5.5 Model Damage

Damage to models or propellers caused by striking runway or other obstacles which results in a piece of the model or propeller being dropped, does not constitute reason for the flight to be declared unofficial.

5.6 Method of Launch

Unless specified otherwise, models shall be hand-launched. A model is hand-launched when it is released or thrown into flight directly from the hands of the contestant, without other assistance.

The model shall not be launched from a height greater than the contestant's normal reach above the ground.

5.7 Timing of Flights

Time starts the instant a model is released for flight and includes length of engine run.

Time ends when the model meets an obstruction which prevents further flight, passes from sight of the timer, or when flight time exceeds the specified maximum.

The timer may move in any direction no more than 200 feet from the takeoff point in order to keep the model in sight, so long as he remains on the ground. The use of binoculars as an aid to timekeeping is permissible.

5.8 Out of Sight Flights

Should the model pass from the timer's sight, the stop watch shall be permitted to run for an additional 10 seconds. Should the model reappear, timing is continued. Should it fail to reappear within the 10 seconds allotted, the watch shall be stopped, 10 seconds deducted from the time indicated and the results recorded as the flight time.

5.9 Scoring of Flights

Scoring time shall be the total elapsed time of the required number of official flights, plus any additional qualified flights required by the specific event.

Flight duration shall be scored to the last elapsed whole second.

5.10 Flyoffs

Tie-breaking flights shall take place as specified by specific class or category rules, but such do not preclude the contestant's option for flying for purposes of a record attempt at any time of his choosing.

6. GAS POWER

6.1 General

A free flight gas model is a model airplane powered by a reciprocating engine(s), which is flown without controlling or guide line. No restrictions are placed upon the design of such models other than the requirements listed in these regulations.

6.2 Classification

Free flight gas models are divided into the following categories according to piston displacement of engine(s):

- Class 1 — .000 to .050 cubic inches
- Class 2 — .051 to .20 cubic inches
- Class 3 — .21 to .65 cubic inches

6.3 Engine Run

Contests for classes 1,2 and 3 shall be categorized by the length of engine run and maximum flight time to be used, as detailed below.

Category A. — 10 seconds engine run, three minute maximum.

Category B. — 7 seconds engine run, two minutes maximum.

If three official flights total the maximum allowed for the category flown, the contestant may attempt additional flyoff flights to break a tie score or for record purposes. Flyoff engine runs and flight maximums are as follows:

	1st F/O flight	2nd F/O flight	3rd and succeeding
<u>Cat. A</u>			
Engine run	7 seconds	5 seconds	5 seconds
Maximum	3 minutes	3 minutes	3 minutes
<u>Cat. B</u>			

Engine run	5 seconds	5 seconds	4 seconds
Maximum	2 minutes	2 minutes	2½ minutes

6.4 Scoring of Flights.

Scoring time shall be the total elapsed time of three (3) official flights plus the total time of the qualified flyoff flights.

7. RUBBER POWERED UNLIMITED

7.1 General

A rubber powered model is a model airplane which is powered by the stored energy of deformed rubber. No restrictions are placed upon the design of such models other than the requirements listed in these regulations.

7.2 Propeller

The propeller(s) of rubber powered models are not exempt from rule 1.7 (builder of the model), other than commercially available freewheeling plastic propellers.

7.3 Maximum Flight Time

A three (3) minute maximum shall be applied to each of three flights. If the three official flights total the maximum time required, then a series of flyoff flights may be taken. The maximum duration for the fourth flight shall be four (4) minutes; each successive flyoff flight, thereafter, shall have the maximum flight time increased by one minute and such flights will continue until the contestant's model fails to reach the duration limit for that flight.

7.4 Scoring of Flights

Scoring time shall be the total elapsed time of three (3) flights plus the total time of the qualified flyoff flights.

8. P30 RUBBER

8.1 Specifications

Models shall conform to the following specifications;

- A. No dimension of the model shall exceed 30 inches when it is in assembled condition.
- B. The minimum weight of the model without rubber motor shall be 40 grams.
- C. The rubber motor shall not exceed 10 grams.

- D. The propeller shall be a commercially available plastic freewheeling propeller between 23 and 25 centimeters (9.05 and 9.84 inches) in diameter. Only the following changes will be allowed:
 - a. Flashing may be removed.
 - b. Balancing by the addition of weight to one blade will be allowed.
 - c. Enlarging the hole of the propeller hub will be allowed in order to accept a larger diameter shaft and/or a bushing cut from metal tubing.

8.2 Official Flight

A flight of more than 20 seconds shall be considered an official flight; there shall be no limit to the number of attempts allowed in order to record three (3) official flights.

8.3 Scoring of Flights

The maximum recorded duration for each flight shall be 120 seconds; if a tie exists after three (3) flights have been recorded, then each successive flight shall have a maximum duration of 30 seconds more than the previous flight.

9. TOWLINE GLIDER UNLIMITED

9.1 General

A towline glider is a non-powered model which is towed into the air by the contestant by means of an inextensible towline.

NOTE: Inextensible as herein applied may be taken to refer to such material as may be classed "nominally inextensible", and for simplicity should be applied to eliminate the use of lines so obviously elastic as to give an unfair advantage in their use, the ultimate purpose of the towline being to launch the aircraft from a maximum of 164 feet above the contestant.

No restrictions are placed on the design of such models other than the requirements listed in these regulations.

9.2 Towline Specifications

The towline length shall be 164 feet maximum (50 meters). To facilitate observation and timing, the towline must be fitted with a pennant having a minimum area of 38.75 square inches (2.5 square decimeters). This pennant shall be affixed in the proximity of the aircraft end of the towline.

9.3 Winches

For convenience, the towline may be wound on a winch or similar device. If this device is released by the contestant before the towline has released from the model, the flight shall be disqualified and scored as zero time.

9.4 Timing of Flights

Timing shall commence when the towline is released from the model.

9.5 Maximum Flight Time

A three (3) minute shall be applied to each of three flights. If the three official flights total the maximum time required, then a series of flyoff flights may be taken. The maximum duration for the fourth flight shall be four (4) minutes; each successive flyoff flight, thereafter, shall have the maximum flight time increased by one minute and such flight will continue until the contestant's model fails to reach the duration limit for that flight.

9.6 Scoring of Flights

Scoring time shall be the total elapsed time of three (3) flights plus the total time of the qualified flyoff flights.

10. HAND-LAUNCHED GLIDER

10.1 General

An outdoor hand-launched glider is a non-powered model aircraft relying only upon the energy imparted by the contestant at the time of launching for initial impetus.

No restrictions are placed on the design of such models other than requirements listed in these regulations.

10.2 Number of Models

Each contestant shall be allowed a maximum of three models in this event. He may use any or all to complete his flights.

10.3 Official Flight

All flights are official, regardless of duration.

Flights during which any part is dropped shall be declared an official attempt with no time recorded.

10.4 Flight Maximum

Two (2) minutes.

10.5 Number of Flights

Each contestant shall be allowed a total of six official flights; if a three flight total of six minutes has been achieved (whether or not all six flights have been made) a series of flyoff flights, having a maximum of two minutes, shall continue until the flier fails to achieve said two minute maximum duration limit.

10.6 Scoring of Flights

Scored time shall be the total elapsed time of the best three (3) of not more than six (6) official flights, plus that of qualified additional flights.

11. ROCKET POWER

11.1 General

An outdoor rocket-powered model is a model airplane propelled by a reaction engine.

11.2 Power Unit

Rocket engines shall be as manufactured by 'Jetex', 'Jet-X' or equivalent and shall use Jetex/Jet-X type fuel in equivalent amounts to that supplied for use in such engines.

11.3 Mounting

For safety, all units shall be firmly mounted and equipped with a metal tether to effectively prevent the power unit from separating from the model.

11.4 Official Flights

An official flight occurs when the model remains in the air for 40 seconds or more.

11.5 Number of Flights

Each contestant may make six (6) attempts to make three (3) official flights, to a maximum flight time of two minutes. If the contestant's three official flights total six minutes he shall then be allowed one attempt to make a fourth official flight of unlimited duration.

12. CATAPULT GLIDER

12.1 General

An Outdoor Catapult Glider is powered by the energy of stretched elastic bands as further defined below.

12.2 Characteristics.

The glider shall have a rigid wing. Auto surfaces, folders, sliders, Rogallo wings and the like are prohibited.

12.3 Launching. Launching shall be by means of a hand-held catapult, as described below. During launching, the contestant must hold the catapult in one hand and release the model from the other hand.

A hand-held catapult is composed of a dowel (or any rod shaped object) not exceeding six (6) inches in length and a two-strand loop of ¼ inch (or equivalent, i.e. four strands of 1/8") rubber (FAI, Pirelli, etc.) that has a finished length of nine (9) inches. One end of the rubber loop shall be attached to one end of the dowel. The hand-held catapult is to be provided by the contestant but is subject to approval by the Contest Director. More than one (1) hand-held catapult may be used in any given contest.

12.4 Number of Models

Each contestant shall be allowed a maximum of three models in this event. He may use any or all to complete his flights.

12.5 Official Flight

All flights are official, regardless of duration.

Flights during which any part is dropped shall be declared an official attempt with no time recorded.

12.6 Flight Maximum

Two (2) minutes.

12.7 Number of Flights

Each contestant shall be allowed a total of six official flights; if a three flight total of six minutes has been achieved (whether or not all six flights have been made) a series of flyoff flights, having a maximum of two minutes, shall continue until the flier fails to achieve said two minute maximum duration limit.

12.8 Scoring of Flights

Scored time shall be the total elapsed time of the best three (3) of not more than six (6) official flights, plus that of qualified additional flights.

13. FAI GENERAL

NOTE: The following FAI general rules are only partial rules. Exact rules are contained in the FAI Sporting Code. The Sporting Code shall apply for all FAI matters.

13.1 Number of Flights

Each competitor is entitled to seven official flights in F1A, F1B and F1C; five official flights in F1G, F1H and F1J.

13.2 Number of Attempts

In the case of an unsuccessful first attempt for an official flight, the competitor has the right to a second attempt.

13.3 Definition of an Attempt

There is an attempt when the model is launched, and:

- A. The total duration of the flight is less than 20 seconds after release of the model.
- B. The engine run exceeds 5 seconds, from the release of the model.
- C. The glider returns to the ground without release of the cable.
- D. The competitor runs so far away from the timekeepers that moment of release of the cable cannot properly be established.
- E. When a part of the model becomes detached during the launch or during the flight time.

13.4 Definition of Official Flight

- F. A first attempt equal to or greater than 20 seconds (with the engine run equal to 5 seconds or less).
- G. A second attempt, whatever the time achieved.

13.5 Classification

The total time of the required number of flights of each competitor is taken for the final classification.

In order to decide individual placing when there is a tie, additional deciding flights shall be made immediately after the last flight of the event has been completed. The maximum for the first deciding flight shall be 5 minutes and the maximum shall be increased by 2 minutes for each subsequent flight. For meteorological reasons, poor visibility, or model recovery problems, a flyoff may be postponed to be flown as early as possible on the following morning before thermal activity; the maximum duration of the flight will be a minimum of 10 minutes.

13.6 Timing

The timing of flights is limited to a maximum of three minutes. The total flight time is taken from the release of the model (from the launching cable for F1A) to the end of the flight. The time of the engine run for F1C is considered ended when the propeller stops. The timekeepers must familiarize themselves with the colour and shape of the model in order to recognize it during the flight.

The flight is considered ended when the model touches the surface of the earth, encounters an obstacle which is definitely terminating its flight or when it definitely disappears from the timekeepers' sight. If the model disappears behind some obstacle or in clouds, the timekeepers are to wait for 10 seconds; should the model not reappear, timing will cease and 10 seconds will be subtracted from the flight time.

The flight must be timed by two timekeepers with stop watches, at least one timekeeper in each group must be equipped with binoculars. The timekeepers must remain within a circle of 10 meter radius during flights. The time recorded is the mean of the two times registered by the timekeepers, but reduced to the nearest whole number of seconds below the resulting mean time.

If the model goes out of sight of the timekeeper without binoculars, he shall not stop his watch, but wait until the other timekeeper gives him the "stop" signal. The same procedure shall be

followed by the timekeeper with binoculars if the model goes out of the field of the binoculars and he is not able to retrieve it again while the other still sees it.

13.7 Number of Helpers

The competitor is entitled to have one helper.

14. F1A - NORDIC A/2

14.1 Definition

Model airplane which is not provided with a propulsion device and in which lift is generated by aerodynamic forces acting on surfaces remaining fixed (i.e. not rotating or ornithopter type surfaces). Models with variable geometry or area must comply with the specifications when the surfaces are in minimum and maximum extended mode.

14.2 Characteristics

Surface area 32 to 34 square decimeters (496 to 527 square inches). Minimum weight, 410 grams (14.46 ounces). Maximum loading, 50 grams per square decimeter (16.43 ounces per square foot). Maximum length of launching cable loaded by 5 kilograms (11.02 pounds), 50 metres (164 feet).

14.3 Launching Devices

The glider must be launched by means of a cable made of a single homogenous material and its length, including the ring and the launching device, shall not exceed 50 metres (164 feet) when subjected to a tensile load of 5 kilograms (11.02 pounds). This tensile load shall be applied by means of an appropriate apparatus before each flight, except when the cable and launching device is impounded by the timekeepers immediately after towing.

Launching of the glider by means of this cable may be carried out with the help of various devices such as winches, single or multiple pulley trains, or by running, etc. These devices, except the launching cable, must not be thrown by the competitor, under penalty of cancellation of the flight.

To facilitate observation and timing, the cable must be equipped with a pennant having a minimum area of 2.5 square decimeters (38.75 square inches).

All types of auxiliary stabilizing devices on the cable are forbidden. A parachute may be substituted for the pennant provided it is not attached to the model and remains packed and inactive until the release of the cable.

15. F1B - WAKEFIELD

15.1 Definition

Model airplane which is powered by an extensible motor and in which lift is generated by the aerodynamic forces acting on surfaces remaining fixed (i.e. not rotating or ornithopter type surfaces). Models with variable geometry or area must comply with the specifications when the surfaces are in minimum and maximum extended area mode.

15.2 Characteristics

Surface area 17 to 19 square decimeters (263.5 to 294.5 square inches). Minimum weight of model less motor(s), 200 grams (6.99 ounces). Maximum loading, 50 grams per square decimeter (16.43 ounces per square foot). Maximum weight of motor(s) lubricated, 30 grams (1.048 ounces).

15.3 Launching

Launching is by hand, the competitor being on the ground (jumping allowed). Each competitor must wind his motor and launch the model himself.

16. F1C - POWER

16.1 Definition

Model airplane in which the energy is provided by a piston type engine and in which lift is generated by the aerodynamic forces acting on surfaces remaining fixed (i.e. not rotating or ornithopter type surfaces). Models with variable geometry or area must comply with the specifications when the surfaces are in minimum and maximum extended mode.

16.2 Characteristics

Maximum swept volume of engine(s), 2.5 cubic centimetres (.1526 cubic inches). No extensions whatever are allowed to the exhaust opening(s) of the engine. Minimum total weight, 300 grams per cubic centimetre swept volume of engine(s) (10.58 ounces per cubic centimetre or 173.4 ounces per cubic inch). Minimum loading, 20 grams per square decimeter (6.55 ounces per square foot). Maximum loading, 50 grams per square decimeter (16.43 ounces per square foot). Maximum duration of engine run, 5 seconds from release of model.

Fuel to a standard formula for glow plug and spark ignition engines will be supplied by the organizers. The composition shall be as follows: 80% methanol, 20% lubricant (castor oil or synthetic equivalent). Fuel for compression ignition engines is not restricted. Before each attempt for an official flight, the fuel tank must be rinsed (washed out) with standard formula fuel.

16.3 Launching

Launching is by hand, the competitor being on the ground (jumping allowed). Each competitor must start and regulate the engine or engines and launch the model himself.

17. F1G COUPE d'HIVER

17.1 Models shall conform to the following specifications:

- a. Maximum weight of lubricated motor - 10 grams (.35 ounces).
- b. Minimum model weight (without rubber) - 70 grams i.e. 70 grams for model, 10 grams rubber.

17.2 Two attempts shall be permitted for each official flight.

17.3 Each competitor is allowed three models to complete five official flights, launching by hand.

17.4 The maximum recorded duration for each flight is two minutes (120 seconds).

17.5 An unofficial flight (unsuccessful attempt) is one which:

- c. Has a duration of less than 10 seconds.
- d. Detaches a component in flight.

17.6 The total of five flights is taken for the final classification.

17.7 The total time of the required number of flights of each competitor is taken for the final classification.

In order to decide individual placing when there is a tie, additional deciding flights shall be made immediately after the last flight of the event has been completed. The maximum for the first deciding flight shall be 3 minutes and the maximum shall be increased by 2 minutes for each subsequent flight.

18. F1H A1 GLIDER

18.1 Models shall conform to the following specifications:

- a. Total area of flying surfaces shall not exceed 18 square decimeters (279 square inches).
- b. Minimum weight 220 grams (7.76 ounces).

18.2 Launching

Launching is by means of an inextensible towline not exceeding 50 metres (164 feet) under a tensile load of 2 kilograms (4 pounds 6.5 ounces).

18.3 Two attempts shall be permitted for each official flight.

18.4 Each competitor is allowed three models to complete five official flights.

18.5 The maximum recorded duration for each flight is two minutes.

18.6 An unofficial flight (unsuccessful attempt) is one which:

3. Has a duration of less than 20 seconds

4. Detaches a component in flight.

18.7 The total time of the required number of flights of each competitor is taken for the final classification.

In order to decide individual placing when there is a tie, additional deciding flights shall be made immediately after the last flight of the event has been completed. The maximum for the first deciding flight shall be 3 minutes and the maximum shall be increased by 2 minutes for each subsequent flight.

19. F1J POWER

19.1 Models are to be powered with piston engines with a swept volume not exceeding 1 cubic centimetre (.061 cubic inches). Minimum total weight 160 gram (5.64 ounces). Maximum duration of engine run, 5 seconds from release of model.

There are no restrictions on fuels or minimum/maximum total surface areas.

19.2 Two attempts shall be permitted for each official flight.

19.3 Each competitor is allowed three models to complete five official flights.

19.4 The maximum recorded duration for each flight is two minutes.

19.5 An unofficial flight (unsuccessful attempt) is one which:

- a. Has a duration of less than 20 seconds.
- b. Detaches a component in flight.

19.6 The total time of the required number of flights of each competitor is taken for the final classification.

In order to decide individual placing when there is a tie, additional deciding flights shall be made immediately after the last flight of the event has been completed. The maximum for the first deciding flight shall be 3 minutes and the maximum shall be increased by 2 minutes for each subsequent flight.