



# **Control Line Competition Rules**

## **OFFICIAL REGULATIONS OF COMPETITION**

Under the authority of the Aero Club of Canada, Canadian representative of the Federation Aeronatique Internationale, world-wide governing body of all sporting aviation, the following model aircraft classifications and regulations first enacted by the 1965 MAAC Contest & Regulations Committee (acting in co-operation with, and on advice of officially recognized Interest Category members) are hereby proscribed by the Model Aeronautics Association of Canada.

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## **OFFICIAL REGULATIONS OF COMPETITION**

### **A. MEMBERSHIP BYLAWS AND RELATED NOTES**

A.1 Members will renew their membership in the Model Aeronautics Association of Canada, henceforth known as M.A.A.C., on or after January 1<sup>st</sup> of each year. Application should be made as directed on FORM 101.

#### **A.2 SUMMARY FOR PURPOSES OF THESE REGULATIONS**

Members are classified into one of two age groups as follows:

Junior: under 18 years of age as of January 1<sup>st</sup>.

Open: 18 years and over as of January 1<sup>st</sup>.

#### **A.4 CONTEST DIRECTORS:**

A contest director must be a MAAC member in good standing who is capable of contest direction.

Application for appointment as a Contest Director is made through the Zone Director, using the appropriate form.

##### **A.4.1 RESPONSIBILITIES:**

M.A.A.C. C/D's who are lax in running contests without enforcing rules jeopardize their official standing and encourage criticism of the value of M.A.A.C. sanctioned competition. On local levels, there might well be much flexibility and stretching of rules possible, but where out-of-town contestants are involved, the entrants have a right to expect strict adherence to regulations. To ignore this is to invite protests and disqualifications of record performances.

When contest events are advertised as M.A.A.C. events, specifically or by implication, the entrants naturally assume that M.A.A.C. regulations apply – AND DEVIATION MUST THEREFORE BE CLEARLY SPELLED OUT IN ADVANCE, particularly in advertising meant to attract out of town entrants.

M.A.A.C. sanctions exist to promote national standards – thus each C/D should work to this goal by making every effort to enforce all applicable rules and regulations of the organization with fairness and impartiality.

### **B. CONTEST PROCEDURES**

Contests will be sanctioned by M.A.A.C. provided that they meet the following requirements:

#### B.1.1 SANCTION APPLICATIONS M.A.A.C. FORM 104

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

- B.1.2 Notice should be taken of the fact that Zone Directors' approval of applications is required prior to issue of all sanctions.

#### B.2 CONTEST REPORT M.A.A.C. FORM 106

Contest Directors must report the results of a contest within seven days of the competition. This report shall contain the names and license number of at least the first five competitors in each event. In National Competition (C.2) ALL 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 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 U/Control committee.

#### B.3 CONTEST SITE:

Contest Directors must choose a flying area of reasonable terrain. In the case of control – line, the area must be level to facilitate smooth take – off and landings.

#### B.4 CONTEST EQUIPMENT

Contest Directors must take all necessary steps to have proper equipment available for accurate processing and timing of entries. Equipment shall include stopwatches with at

least 1/5 second graduations, accurate weighting and measuring equipment, pull - test equipment, pylons and height – markers, etc., as may be required to ensure efficient conduct of all scheduled events of competition.

Note: In control line speed events, watches of a 1/10 second graduation are required.

#### B.5.1 CONTEST CONTROL:

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

- B.5.2 The Contest Director shall appoint EVENT DIRECTORS as necessary to administer directly particular phases of competition under the C/D's general authority. Event Directors are

chosen for their ability at the discretion of the C/D and are not necessarily required to possess a C/D license.

#### B.6.1 ELIGIBILITY TO COMPETE:

Contest Directors must verify that all competitors are licensed members of M.A.A.C. or of any model organization affiliated either directly or indirectly with F.A.I., which has a reciprocal agreement with M.A.A.C. Only Licensed members may compete in sanctioned contests.

#### B.6.2 C/Ds may compete in all sanctioned competitions provided another officially appointed C/D has been named on the application form, and is present to direct the contest.

#### B.7 BUILDER OF MODEL:

C/D's shall assure themselves that any model used in competition was built by the contestant himself. Partly prefabricated models are allowed but those requiring but a few minutes construction time shall not be permitted. (Some events do not require the enforcement of this regulation, and it is noted as such in the specific rules governing these.)

#### B.8.1 PROXY FLYER:

The builder may designate a proxy flyer only in those cases where the C/D 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 as a 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.

#### B.8.2 Proxy flying is specifically prohibited in the following events: Control Line Precision Aerobatics, Jim Walker, all Combat events, Balloon Bust and Pentathlon.

#### B.9.1 TEAM ENTRY:

Where two or more license holders enter competition as a team, each shall have taken active part from beginning to completion in the construction of the model(s). Construction of only minor components such as motor mounts, take – off gear etc., shall not constitute “taken an active part” within the meaning of this regulation.

(Since all license holders shall have taken active part from beginning to completion of the construction of a model, recovering, repainting and/or repairing does not constitute the “active part” required for team entry).

#### B.9.2 One team member is designated to fly the model(s) but in the event the designee becomes physically unable, then the flying responsibility shall rest with the remainder of the team unless each is physically unable as provided above. In this case, a proxy flyer may be designated.

- B.9.3 Entry shall be in the age group of the oldest team member and in the name of the team, with its individual member's names listed, and awards given or records established must be made in the name of the team. No license holder shall be permitted to enter any class or event as a member of more than one team. An individual entering as a member of a team may enter other events as an individual. Team entries shall not be eligible for high point or championship awards. All members of a team shall be at the contest site when official flight of the team entry is attempted.
- B.9.4 The provisions of this section do not necessarily apply to entries in control line team racing or rat racing where the model may be constructed entirely by one member of the team. Points toward high point championships given in these exceptions shall go to the builder of the model. The intent of this rule is to permit the interchange of crew members as required, or allowed. It should be pointed out that "crew members" do not necessarily fall into the defined category of "team members".
- B.9.5 Team entries are not permitted in control line Precision Aerobatics, Jim Walker, all Combat events, Balloon Bust and Pentathlon events. (A model entered in the above events must be built according to regulation B.7 by one individual, who must also be the flyer.)

#### B.10.1 DISQUALIFICATION

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

- B.10.2 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 be liable to expulsion from the contest site. Repeated or particularly vicious acts of willful misconduct may result in suspension or revocation of the flyer's sporting license.
- B.10.3 If action is taken to suspend or revoke a model flyer's sporting license, he shall have fourteen days after notification in which to present in writing why such action should not be taken.

#### B.11 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 U/Control Committee within three days.

#### B.12.1 INTERPRETATION OF REGULATIONS:

The U/Control Committee of the Model Aeronautics Association of Canada shall be the final authority in the interpretation and execution of the Model Aircraft Classifications and Regulations.

## C. CONTEST CLASSIFICATIONS

SANCTIONS ARE ISSUED UNDER THE FOLLOWING CLASSIFICATIONS:

### C.1 RECORD TRIALS

A contest for the sole purpose of attempting to establish, or surpass, official records on speed or duration.

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

### C.2 NATIONAL CONTEST:

This is a M.A.A.C. administered contest designed for holding a competition across the country as a whole. A National Contest may not necessarily be held in a centralized location, and trophies and prizes may not necessarily be awarded. E.G.: "NATIONALS" or F.A.I. TRIALS.

### C.3 MAJOR CONTEST

A M.A.A.C. sanctioned contest with awards to at least third place in each event.

### C.4 MINOR CONTEST

A M.A.A.C. sanctioned contest with awards to first place in each event.

## D. RECORDS

### D.1 NATIONAL RECORDS:

Perpetual Canadian Model Aircraft records are recognized by the U-Control Committee of M.A.A.C. to provide a permanent record of outstanding National performance in timed events such as Speed, Endurance and Racing.

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

### D.2.1 RECORD CATEGORIES:



Only objectively timed speed and duration records for model aircraft are officially recognized. (See E.9 National categories.)

D.2.2 National records are recognized for all age classifications in all National record categories regardless of where record was accomplished.

D.3.1 RECORD APPLICATION

The application for a National record must be sent to the U/Control Committee Chairman by either the Contest Director, or the contestant, as noted in Regulation D.3.2. (See below.)

D.3.2 RECORD APPLICATION FORM

Applications for records must be made to the chairman of the U-Control Committee within seven days of the meet, on the appropriate form.

The application should be accompanied with 3 – view drawings of the model, or models unless the design is a kit, otherwise universally recognized, or published in a periodical, or book.

D.4 RATIFICATION:

National records shall be ratified upon the production of the pertinent proof of performance and compliance with the regulations of M.A.A.C. as herein set out.

The ratification of Canadian records will be withheld until the Contest Director's report (FORM 106) is received, which officially confirms the record performance claimed.

D.5.1 RECORD ATTEMPTS DURING THE COURSE OF A RECORD TRIALS

In attempting to establish records at record trials, contestants shall be permitted as many flights as possible in speed, and as many sequences of attempts as possible in duration.

In Speed competition there is no limitation on the number of attempts as only the fastest flight will count for a record in a particular event.

In Duration competition under no circumstances will an official flight from one sequence of attempts be combined with other official flights from other sequences in order to make a total time.

The foregoing shall also apply to any record performances claimed during the course of normal competition.

D.5.2 RECORD ATTEMPTS DURING THE COURSE OF NORMAL COMPETITION:

(a) As any sanctioned competition allows for the recognition of record performance, Contest Directors are entrusted with the responsibility of officiating at any record

attempt, if so requested, provided the necessary equipment is available, and insofar as such record attempts do not interfere with the efficient running of the contest.

- (b) Subject to the limitations shown, record attempts may be requested by any M.A.A.C. member in good standing, whether he is a contestant or not, and in any category whether it is scheduled or not. (No entry fee shall be necessary for such attempt.)

## E. GENERAL REQUIREMENTS OF COMPETITION IN NATIONAL CATEGORIES

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

### E.1 IDENTIFICATION:

All models entered in competition (excepting scale models) shall be identified by the contestant's M.A.A.C. license number permanently affixed to the upper side of the wing.

The height of the numerals shall be at least one inch, or one third of the wing root chord, whichever is less. Both stroke and width shall be such as to enable ready recognition.

(Example: The letter "O" should have a width approximately half the height or wider, and the other digits should be of the same proportion.)

### E.2 PREPARATION FOR FLIGHT:

The motors of control line models may be started and regulated by an assistant.

### E.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.

### E.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 class of motor for that of another is permissible.

### E.5 MULTIPLE EVENT PARTICIPATION:

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

### E.6 FLYOFFS:

Tie breaking flights shall take place at the close of the day's competition in an effort to provide equal conditions for all contestants concerned. This shall not, however, preclude the contestant's option of flying for purposes of a record attempt at any time of his choosing.

#### E.7 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 gases other than air at normal atmospheric pressure enter their internal combustion engines;
- (c) The use of the fuel additive known as tetra-nitro methane;
- (d) The use of any line grouping device, including the intentional twisting of the control lines;
- (e) The use of nitro benzene.

#### E.8 MAXIMUM WEIGHT:

No model shall have a flying weight of no more than 11.023 pounds (5 Kg).

### CONTROL LINE CATEGORIES

#### G.1 GENERAL REQUIREMENTS

The following regulations apply to all control – line categories except where otherwise noted.

##### G.1.1 POWER:

A control line model is a model airplane powered by internal combustion engine(s) or from the reaction caused by the gases of such engine(s).

##### G.1.2 CONTROL:

Flight is controlled by an inextensible line, or lines, attached to the model in such a manner as to afford manipulation of control surface(s), thereby enabling aerodynamic control of the model's elevation during flight.

Control may be by mechanical means, or by electrical impulses transmitted through one, or more of the lines.

Auxiliary devices, other than the control surfaces, ie: motor control, flaps, retractable landing gear etc. may also be operated by radio signals transmitted through the air on the 2.4 GHz band, using a FCC approved transmitter operating on this signal band.

##### G.1.3 DESIGN:

Unless otherwise specified, there are no wing loading, power loading or cross sectional requirements.

No model, other than those for the Scale and Stunt events, shall have a flying weight of more than four pounds.

#### G.1.4 CONTROL LINES:

- (a) Lines shall be of steel wire, free of rust and kinks. No swivels are permitted. Line length, except where otherwise specified, shall be measured from the centre line of the handle grip to the fore and aft centre line of the model.
- (b) Line terminations using the crimped tubing type of construction are not permitted in any class of control line racing. (Refer to Fig. 2 – Two-line construction in control line speed section.)

#### G.1.5 LINE SIZE:

Unless otherwise noted, the following control line diameters shall be used according to displacement of engine(s). (Note: In case of multiple engines, the displacement shall be the total of all engines.)

	LINE SIZE	
CLASS:	Minimum Diameter If one line used:	Minimum Diameter Of each line if 2 Or more lines used.
1/2A .000 - .050 cu. Inch piston displacement	.014"	.008"
A .051 - .1525 cu. Inch piston displacement	.020"	.012"
B .1526 - .300 cu. Inch piston displacement	.024"	.015"
D .301 - .650 cu. Inch piston displacement	.031"	.018"

#### G.1.6 PULL TEST:

The entire control mechanism from the handle to, and including the model, shall be strong enough to withstand a pull test of 12 times the weight of the model, unless otherwise specified.

#### G.1.7 CONTROL HANDLE:

- (a) The control handle shall not extend more than 6” beyond the hand of the flyer except where the control is accomplished by means of twisting a single line, and there the maximum extension shall be 30”.
- (b) Control handles that provide for easy adjustment of line length are permitted, providing that they are equipped with a positive security lock. Re-adjusting line length after official measurement shall disqualify the contestant. Lines must be measured before each official flight but may be stored between flights.

#### G.1.8 LAUNCHING:

Any method of launching may be used. Should a removable take – off gear be used which does not fall free of the model before it becomes airborne, including drop – off gear operated by delayed action, a safety line to prevent hazard to spectators shall be provided.

#### G.1.9 SAFETY RULES:

Any contestant releasing the controls during flight or before the model has come to a complete stop after an attempt, either accidentally or purposely, shall be barred from further competition in the meet and have all of his previous flights cancelled.

#### G.1.10 PROFILE FUSELAGE

##### PROFILE DEFINITION:

The fuselage of a profile model resembles that of a conventional airplane in the side (profile) view and appears as a thin flat sheet in the plan (top) view. The engine shall be completely exposed from the mounting lugs to the cylinder head and shall not have any type of fairing. Additional reinforcements such as plywood nose doublers and inboard cheek cowl are permitted.

##### PROFILE FUSELAGE WIDTH

Class / Event	Maximum Width including Plywood doublers	Maximum Cheek Cowl Width
½ A Proto	1 / 2 inch	3 / 8 inch

Scale Racing	5 / 8 inch	As per Scale Race rules
B Proto	3 / 4 inch	3 / 4 inch
Rat Racing	3 / 4 inch	3 / 4 inch
Carrier	3 / 4 inch	3 / 4 inch