

4.3 CONTROL LINE SPEED CLASSES

4.3.1. Model Characteristics

- a) No restrictions on areas or loadings.
- b) Model may R.O.G. or be hand-launched, except for Jets and Proto Speed which will be R.O.G. only
- c) Detachable undercarriages are permissible for R.O.G. except for Proto Speed
- d) For Class V: Models to be upright engine design with a wing not more than 1 inch difference between inboard or outboard wings. Single blade propellers not allowed.
- e) Proto Speed models must conform to the model size, engine size and relevant minimum line size specifications for the Class II team racer. They must have fixed undercarriage and be flown on dual control lines of minimum length 18.3 metres. Single strand lines are recommended. However, multi-strand lines may be used. Fuel and tanks are unrestricted. The model bellcrank, lines and handle shall be subject to a 35g pull test. The maximum flying height is five metres. The event is timed as a drag race of 1.6 km [14 laps] and for flight to be official a pylon must be used within 3 laps. A pylon must be used by the end of the first lap when a record is being attempted.

4.3.2. Fuel. Fuel is unrestricted, but see 2.4 [e].

- a) Sport Jet :- Allowable fuel to be a minimum of 80%; Shellite, White spirit, petrol or methanol, with no more than 20% additive of Propylene oxide, Nitro methane, MEK or similar.
Open Jet fuel is unrestricted.

4.3.3. Classes and Specifications

Table 4.3.3

Class	Max Engine Capacity	Exhaust System	Max Model Weight	
I	2.2	Open or mini-pipe #C	500	
II	5.0	Unrestricted	950	
III	10.0	Unrestricted	1300	
IV	6.6	Open or mini-pipe #C	1000	
V	3.5	Open or mini-pipe #C	800	
Proto (3.5cc)	3.5	Unrestricted	850	
Proto (5cc)	5.0	Unrestricted	950	
Open Jet	#A	#A	1300 (wet)	
Stock Jet	#B	#B	1300 (wet)	

#A Max. Engine Capacity for JET

80mm Maximum combustion chamber.
9.675 sq cm maximum internal cross section of tailpipe Engines to be used in Jet are to be either, O.S., Dyna, Bailey, Home-built or any commercially available jet to the above specifications.
The pulse jet is to be attached to the model and is not to be an integral part of the airframe.

#B Max Engine Capacity for Jet (Stock)

65 mm Maximum head length (valve face to air intake)

Engines to be used in Jet are to be either, O.S., Dyna, Bailey, Home-built or any commercially available jet to the above specifications.

The pulse jet is to be attached to the model and is not to be an integral part of the airframe.

#C Mini-pipes

A mini-pipe is a constant diameter pipe whose length, measured from the centre line of the piston to the end of the exhaust system, does not exceed 150mm

Note: The metric dimensions shown have been converted from imperial measurements.

Equivalentents are:-

15.92m = 52ft 3in 17.69m = 58ft 5in

18.3m = 60 ft, 19.8m = 64ft 11.5in 21.35 m = 70 ft.

0.30mm = 0.012 in. 0.406mm = 0.016 in

0.455mm = 0.018 in. 0.500mm = 0.020 in.

0.525mm = 0.021 in. 0.560mm = 0.022 in.

0.600mm = 0.024 in. 0.787mm = 0.031 in.

4.3.4. Control Lines

a) Lines are to be of good quality, high tensile, unplated steel and/or steel alloys.

Commercially graded wire diameters will be acceptable provided that they do not measure more than 0.01 mm (0.0004 in). under nominal size. Multi stranded type lines may not be used except for Proto

Table 4.3.4 Control Line Specifications

Class	Timed Laps	Timed Distance	Line Length in metres	Line Diameter (mm) Monoline	Line Diameter (mm) 2 lines	Pull Test G
I	10	1 km	15.92	N/A	0.40	40
II	7	½ mile	18.30	0.60	0.455	45
III	6	½ mile	21.35	0.787	0.60	50
IV	8	1 km	19.80	0.787	0.50	45
V	9	1 km	17.69	N/A	0.455	40
Proto (3.5cc)	14	1 mile	18.3	N/A	0.40	35
Proto (5cc)	14	1 mile	18.3	N/A	0.455	35
Open Jet	6	½ mile	21.35	0.787	0.60	45
Stock Jet	7	½ mile	18.30	N/A	0.525	45

b) All control lines on class 2 and class 3 models are to be attached at the model by the use of bobbins, as is standard practice in mono line classes. Bobbins are to be of steel or material of equal strength. Bobbins are to measure a minimum of the following formula based on the control line wire diameter [D] applicable to the class. The width of the bobbin groove is to be no less than the total of the wire diameters or greater than 0.010 in. clearance on the wire diameters. [See diagram, page 2 - 44]

c) All handle connections are to have a deformation strength greater than the control line used.

d) Where the two-line configuration is used on any class of speed model, no twisting

or linking together of the two lines is permitted.

e) A safety strap or similar device effectively connecting the pilot and the handle together must be used.

f) Class I, Class IV and Jet models using dual lines must use bobbins to the above formula. Double over locking type connectors or similar with a minimum strength of 20 kg [44 lbs] for Class I and 45 kg (100 lbs) for Jet and Class IV may be used with bobbins. The use of line connectors only is not permissible and centre type connectors are banned.

4.3.5. Line Length Measurement [Flight Radius]. Lines shall be measured from the grip edge of the handle grip - finger grip if torpedo type handle is used, or cross bar [if fitted to the handle] - to the axis of the propeller. Where two or more engines or propellers are employed, the axis of symmetry is taken as the reference for measurement.

4.3.6. Line Tests. Line tests shall be made prior to each flight.

a) The entire system of safety strap, handle, lines and model shall be subjected to a pull test as shown in Table 4.3.4

b) In addition to the load test, a visual examination is to be made by the Contest Director, FAI Observer or other appointed officer.

c) The Contest Director or other authorised person responsible for checking lines and equipment has the right to disallow any model, on points of safety, even if the requirements of the rules are fulfilled.

4.3.7. Number of Timekeepers and Judges

a) For an attempt to be recognised as an official flight, there must be present three [3] timekeepers who are known to be experienced and capable, each equipped with a 1/100th second stopwatch. In addition an optical electronic system with equal or better resolution and accuracy may be used.

b) A FAI Observer must be present as witness to the timekeepers, or be one of the timekeepers, and is to ensure that all aspects of the flight, timekeeping and processing of the model conform to the rules.

4.3.8. Starting of Timing. For timing to commence, the pilot must position the control handle in the pylon fork so that the point on the handle from which the line length was measured is not behind the pylon pivot.

4.3.9. Timing Procedure

a) Upon the pilot placing the handle correctly in the pylon fork, the timekeepers shall allow two full laps from opposite the timekeeping position before starting timing for the appropriate number of laps.

b) The time keepers , in unison, will count down and then up throughout the flight - that is, , 2-1-0-1-2-3-4-5-6-7-8-9 or 10.

c) The official time shall be the average of the three watches, if all the watches are within 1/10th of a second. If only two watches are within 1/10th of a second, then the average of the two will count; the third watch will be ignored.

d) In the event that none of the watches are within 1/10th of a second of each other, then the competitor may claim the longest time or request a repeat of his flight.

4.3.10. Cancellation of the Flight. A flight is cancelled:-

a) when any form of assistance is applied for the purpose of increasing the speed of the model, other than that provided by the engine, during the official part of the

flight;

- b) if, at any time during the timing procedure, the model exceeds a height of 4.5 metres [15 feet] (5 metres for Proto) for more than one lap;
- c) continuous contact is not maintained with the pylon fork during the timing procedure; or
- d) jettisoning of other than the take off dolly occurs.

4.3.11. Number of Flights and Attempts

- a) Each competitor is entitled to three official flights.
- b) Two attempts shall constitute an official flight.
- c) An attempt shall not be more than three minutes, or five minutes for Jet.
- d) A competitor may elect to call an attempt and use the pylon provided the Contest Director is notified beforehand.
- e) The flight is official whenever the competitor places his handle in the pylon fork during an attempt and when the timekeepers start the watches, except under rule 4.3.11.d).

4.3.12. All participants must be current affiliate members of the MAAA[Inc].

4.3.13. Records may be set at sanctioned contests without prior notice and at such times and places as outlined by Section 7 of Chapter 2 of the Rules Handbook.

4.3.14. All other record flights must be witnessed by an FAI Observer who shall ensure that all requirements of the rules are met.

4.3.15. Contest organisers may run the event combining all speed classes and award places on the achieved percentage of current speed records in the class contested. When there is a minimum of five entries in Jet Speed, it may be run concurrently with Combined speed although listed as a separate event.

A contestant can enter all classes and be listed in the results more than once if the event is organised in this fashion, but will be credited with (and receive any applicable trophy for) only their highest placing in the Jet Speed. For example, if a single contestant enters both Open Jet and Stock Jet classes, and achieves the fastest and second fastest Jet Speed times with these two entries, they will be credited with only the higher placing, and the next fastest Jet Speed contestant will be credited with the next Jet Speed placing (and so on down the Jet Speed results)