



Control Line Special Events

2022-2023



RULES GOVERNING MODEL AVIATION COMPETITION IN THE UNITED STATES

Amendment Listing

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CONTROL LINE ENDURANCE FOR EVENT 332.

CL Endurance								
Class Engine Size (cubic inch)	Max. Model Weight	Minimum Line Length	Required Minimum Diameter of Each Line					Pull Test
			Single Strand			Multi Strand		
			1 Line	2 Lines	3 Lines	2 Lines	3 Lines	
.0900 - .3661	4 lbs	52'6" – 70"	.016"	.014"		.018"		10G

1. Applicability.

All pertinent AMA regulations (see sections titled Sanctioned Competition, Records, Selection of Champions, and General) and the General Control Line rules shall apply, except as specified below.

2. Objective.

To fly a Control Line model airplane powered by internal combustion reciprocating engine(s) so that it remains in the air for the greatest period of time. CDs should take note of this objective and be prepared with sufficient flight circles and judges for the prolonged periods involved.

3. Engines.

Engine(s) shall be of the reciprocating internal combustion type with total piston displacement from .0900 to .3661 cubic inches. Sixty percent of the actual piston displacement of four-stroke cycle engines shall be taken for compliance with this regulation. Jet assist, catapult, or other launching device not permitted.

4. Fuel Capacity.

The maximum fuel capacity permitted is 30 cubic centimeters. This capacity is to be checked through the use of an accurate system by visual examination of the volume of fuel put into the tank(s) and fuel lines. All lubrication shall be contained in the fuel, and may not be recirculated. Capacity checks shall be made before the first attempts, and shall be verified after a winner or record is established.

5. Control Mechanism.

See chart for line specifications and pull test.

6. Type of Model

The model must be of the heavier-than-air type equipped with a permanently affixed gear for takeoff and landing. Fuel tanks must remain attached to the model throughout the entire flight. No gases, as for example helium, shall be employed.

7. Number of Flights.

Each contestant will be allowed three (3) attempts for completion of one (1) official flight. All official and unofficial flights described below are attempts.

8. Official Flight.

Any attempt during which the model becomes airborne before three (3) complete laps have been completed and flies for three (3) full laps shall be considered official.

9. Unofficial Flight.

An unofficial flight occurs when the model fails to become airborne within the first three (3) full laps from the point of release. If the model becomes airborne but does not fly three (3) full laps without touching the ground, this too, is considered an unofficial flight. Bouncing of the model due to terrain shall not be considered within the meaning of this ruling. In the case of an unofficial flight, the flier should make every reasonable effort to stop the forward progress of his model so that another attempt may be made. The Contest Director may, at his or her discretion, add further definitions because of local conditions, such as a time limit to start engines, so long as adequate notice is given to all contestants before competition begins.

10. Flight.

The model shall take off from the ground or runway under its own power and without outside assistance. In releasing the model, no portion of the launcher's body may move in the direction of the takeoff run. The engine(s) shall remain running during the entire flight except for at most five (5) minutes for landing. Only one (1) pilot is permitted during the entire duration of a flight. He must control his model from within a five (5) foot radius circle, and he must maintain the average flight altitude above the height of his controlling hand.

11. Timing.

Timing will commence the instant the model is released and will continue thereafter until the wheels next touch the ground. Two (2) timers are required, equipped with stopwatches. The official time will be the average of the two (2) watch readings to the nearest second. One (1) judge shall count laps so that the average speed and distance flown may be computed.

12. Contest Site.

Only outdoor flying sites shall be permitted. Spectators, if any, shall be kept a safe distance from the flying circle, that distance depending on the site and on the judgment of the Contest Director.

13. Acceptance of Records.

Endurance records may be set at any sanctioned contest or record trial which includes Control Line event(s), providing prior Contest Director concurrence has been obtained. A single contestant may make a record attempt if prior sanction is requested and granted.

CONTROL LINE DIVE BOMBING & STRAFING (SUPPLEMENTAL) FOR EVENT 333.

CL Dive Bombing and Strafing								
Engine Size (cubic inch)	Max. Model Weight	Required Line Length	Required Minimum Diameter of Each Line					Pull Test
			Single Strand			Multi-Strand		
			1 Line	2 Lines	3 Lines	2 Lines	3 Lines	
.1500-.4028	4 lbs	59'9" - 60'3"	.018"	.016"		.015"		10G
.4029-.4599	4 lbs	59'9" - 60'3"	.020"	.018"		.018"		10G

1. **Applicability.**

All pertinent AMA regulations (see sections titled Sanctioned Competition, Records, Selection of Champions, and General) and the General Control Line rules shall be applicable, except as specified below.

2. **Description.**

This event simulates the actions of a military combat aircraft on a tactical support mission. Emphasis is placed on the following:

- a. Maximum speed over target.
- b. Maneuverability (diving over the barrier and breaking the balloons).
- c. Pilot skill.

Note: The airplane does not fire any weapons, but through contact with the target balloon(s) the breaking of balloons is accomplished.

3. **Field Layout**

Will consist of one (1) 60-foot radius circle, on the downwind side of which the target area shall be placed. The circle is set for counterclockwise direction of flight. Note: See field-layout diagram.

4. **Aircraft Requirements.**

Any model, be it full bodied or profile, having a fixed landing gear of no less than two wheels is permitted. Bonus points will be awarded for military-type aircraft of any country; bonus points will be awarded to these types of models on the basis of realism of the aircraft and workmanship. See "scoring" paragraph for the points possible in this regard and the qualification necessary. Balloon-breaking devices made of wood and non-pointed which represent the actual armament used on copied aircraft, are permitted. Such devices shall be permanently affixed to the model. Proof of armament rests with the flier.

5. Engine(s)

Shall be of the reciprocating internal combustion type with piston displacement of from .1500 through .4599 permitted. Sixty percent of the actual piston displacement of four-stroke cycle engines shall be taken for compliance with this regulation. Jet assist, catapult, or other launching device is not permitted.

6. Duration of Flight.

Total elapsed flight time from takeoff to and including landing shall not exceed seven (7) minutes.

7. Control Line Requirements.

Sizes and pull test as per chart.

8. Flight.

The airplane must rise off ground and fly seven (7) laps at maximum altitude of 15 feet for speed timing. The airplane shall be timed from the instant of release to the instant the airplane passes the release point the seventh time, then the pilot must approach the targets in upright position flying level, dive over the barrier, and knock out targets. Maximum altitude before dive is approximately 20 feet. Pilots are allowed five (5) passes to knock out targets. The pilot must signal when the airplane is over the target area prior to each scoring pass by raising an arm overhead. All balloons broken in any pass will count; however, they must be broken by the airplane itself. Balloons knocked over (except by prevailing winds) will not be replaced during flight. Pilots must not:

- a. Use two-speed control.
- b. Whip or lead model during the seven (7) lap speed timing.
- c. Stunt or engage in aerobatic flying except the diving and climbing necessary to engage the targets.
- d. Crash.
- e. Use more than one (1) airplane.

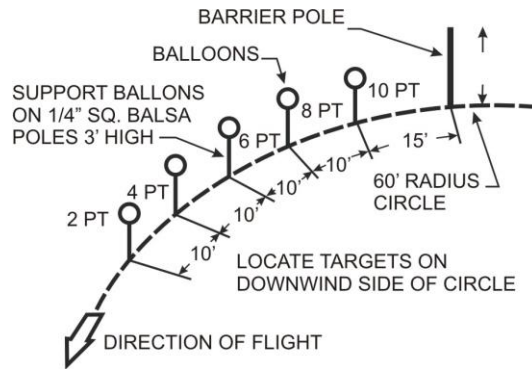
9. Official Flight.

Three (3) attempts will be permitted toward two (2) official flights. An official flight is charged if the airplane has completed seven (7) laps and the pilot signals for a scoring pass. Note: Once the pilot has signaled for a scoring pass he or she will be charged with it the next time the airplane passes over the target area, whether or not he dive and attacks the targets.

An attempt will be charged if the pilot fails to start the engine in three (3) minutes time from the signal from the judge. Two (2) additional minutes will be allowed for each additional engine. An attempt will also be charged if the pilot waves off flight before signaling for a scoring pass.

10. Scoring.

The target balloon nearest the barrier pole is worth 10 points, the next is worth eight (8) points, then six (6), four (4), and (2). *Note: See field layout diagram.*



10.1.

To qualify for bonus points airplanes must:

- a. Represent a combat-type military airplane of some country and have appropriate military markings.
- b. Break at least one (1) target balloon according to the rules and comply with the rules of the “flight” paragraph.

10.2.

Bonus points are to be awarded on the basis of realism of the airplane and workmanship displayed by the builder.

10.3.

Multiengine airplanes will receive five (5) additional bonus points for each additional engine. No points to be awarded for the first engine. All engines of a multiengine airplane must be running until the completion of the scoring passes. No passes will be permitted unless all engines are running. Pilots are not required to make all five (5) scoring passes. *Note: Semi-scale includes full-bodied and profile types.*

Bonus Breakdown: Poor Good Excellent

Airplane Scale	50	75	100
Airplane Semi-scale	10	20	30

10.4.

The final score equals the speed in mph times the sum of balloons broken plus bonus. Example: 40 mph x 12 (6.4 and 2 balloons) plus 20 = 500 points. Note: Bonus points are tentatively awarded before flight; if the flight qualifies then they

are awarded. A crash or failure to break any balloons would result in a zero (0) score.