

# **Control Line Competition Rules**

G4                   80 MPH (SPEED LIMIT) COMBAT  
                      FAST COMBAT  
                      SLOW COMBAT  
                      ½ A COMBAT (PROVISIONAL)  
                      F2D (FAI) COMBAT – see FAI/CIAM website

## Canadian 80 MPH Combat rules

### **Models, equipment, field**

- Minimum wing area 300 Sq.In.
- Engine must be tethered to bellcrank with min..021" steel cable / wire. No sharp edges allowed for "snagging " of streamers.
- Streamer attachment must be on model centerline ( +/- 1/2") Maximum engine size .40 .
- No electric starters.
- Lines: 60' x .018" stranded cable, 6" plus or minus allowed for length.
- Pull test 35 #. Wrist straps required, also 35# pull test .
- Helmets must be worn by all persons in the combat area, pilots may not have sharp edges, peaks, or protrusions on helmet that can snag lines. Center circle shall be 2 meters.The outside pitting line will be 75'.
- Streamers shall conform to F2D standard dimensions.
- Safety / sun glasses and hearing protection recommended

### **Match procedure**

1. The match will start with a one minute to combat announcement by the centre marshal. The models can be launched at any time, airspeed may be checked at this time. No manouevers will be allowed until combat starts. Airtime points will start after 1 min.,1 point per second .The match will last for another 4 min.
2. Airspeed will be a maximum of 80 MPH.,this is 6.43 sec. for two laps.
3. The centre marshall shall indicate the start of the 4 min match time. When both models are separated by at least 90 degrees for two laps the marshall will then verbally announce to start combat.
4. Cuts shall be 60 points ,the string if the knot is still visible will count.
5. Midairs will not stop the match. Launching an uncontrollable / unsafe model will be a DQ.
6. When both knots are gone, pilots will fly level as per the centre marshalls instructions.

### **Penalties, DQ's, Reflys**

- The centre marshall will watch for "rough and /or unsportsmanlike" conduct. He will warn you, if it persists you will be DQed.
- Stepping out with one foot will be a warning the first time, the second time a 40 point penalty will be assessed.
- Any attempt to fly while standing entirely outside the centre will be a DQ. This will include whipping a model that is not running.
- If both pilots wander out together the centre marshal will stop combat, when the pilots return to the centre, combat will resume.
- Agressive pulling, sawing or jerking on the lines in a line tangle will result in DQ.
- Failing to assist in untangling will result in a DQ.This will be enforced whether both models are in the air (flying upwind, wrapping up),one model is airborne or if both models are or grounded.
- Pitmen are not allowed in the circle if the lines are tangled and a model is still flying .Entering at this time will result in a DQ.
- Letting go of the handle will result in a DQ only if the wrist strap fails.
- If you launch and the streamer is deformed, unfurled or defective a refly will be awarded. If the streamer is damaged by the pit crew you will receive no air time points and a 1 cut penalty will be assessed. Before re-launching a new streamer must be attached.
- If during the match a streamer becomes lodged over the wing of its plane a refly will result.
- If in a tangle / midair a model cuts its own streamer, a refly will result.

## G. 4 FAST COMBAT

4.1 Engines. Engines shall be limited to a maximum piston displacement of .360 cu. in. There shall be no restrictions on fuel.

4.2 Lines. Models shall be controlled by means of two stainless steel lines, each with a minimum diameter of .018 INCHES (braided or stranded) and of such length that the distance from the centre of the control handle to the centre of the model is 60' plus or minus 6". All line connectors shall be approved for a minimum pull test of 75 lbs. No self-contained storage type handles are allowed.

Models: A model shall have no sharp protuberances or devices for the purpose of cutting streamers. It shall be checked by the judges prior to each flight to ensure that it is in a safe and airworthy condition, i.e. the motor securely mounted, control surfaces operating freely, etc. There shall be no restrictions as to the size or the design of the model. Models shall be equipped with a functional engine shutoff. (In the event of a flyaway, if the shutoff fails to work, the contestant shall be disqualified.)

4.3 Number of Models. A contestant may enter any number of models. All models shall be processed at time of entry and must be identified as per Section G.5(3). Only one model may be used in any one flight. Pilots do not have to build their own models.

4.4 Streamers. Streamers shall be constructed of crepe paper having a minimum width of 2", a maximum length of 8 ft., and a piece of 6–8 lb. test string tied directly to the crepe paper, which is doubled over twice. The string shall extend 7" beyond the streamer, allowing 1" for attaching to the model, and a minimum of 6" extension from the tail of the model to the crepe paper.

4.5 Streamer Attachment. The contestant is responsible for his own streamer. If the streamer is detached from the plane by the pilot's crew on takeoff, the contestant is disqualified. The streamer shall be attached as close as possible to the centre of the model. If the streamer becomes separated as a result of a structural failure in the model, the contestant will be disqualified. If the string, attaching the streamer to the model, is found defective (i.e., breaks without any external assistance) a rematch will be awarded, at the Contest Director's discretion.

4.5.1 The streamer must be completely unfurled before completion of the mandatory courtesy lap once both aircraft are airborne otherwise a rematch must be awarded.

4.6 Officials. Three officials shall be required for each flight; a starting judge equipped with a stopwatch, and two scoring judges (one for each contestant), each equipped with an accumulative stopwatch.

4.7 Flights. A flight shall consist of 5 minutes starting from the signal to start engines. (This signal shall be made audibly by the starting judge, and shall be made as soon as both contestants have indicated readiness.) An Event Director may at his discretion, place a one minute time limit on preparatory procedures, and in such a case, the starting signal may then be made whether or not either or both contestants are ready. After the passage of 5 minutes, the timekeeper shall stop the match by signaling "time-up". (Any means may be employed for starting engines.)

- 8.1 During the starting period the launching positions must be separated by at least a quarter of a lap.
- 8.2 A first signal, given by the starting judge, shall signify the beginning of the 60-second period when the mechanic(s) or the pilot have the opportunity to start, run and adjust their motors.
- 8.3 A second signal, the signal to launch, preceded by a 5 second count-down, is given by both visual (flag) and acoustic means 60 seconds after the first signal.
- 8.4 From the moment the starting judge has given the signal to launch, the contest lasts for 4 minutes.
- 8.5 When the starting judge is satisfied that each model has completed two level laps, anti-clockwise, and separated by approximately half a lap, he will give a prolonged acoustic signal that combat may commence.
- 8.6 Combat may begin after a restart by a signal from the starting judge. This signal shall be given as soon as the starting judge is satisfied that there is approximately half a lap separation between the two models.
- 4.8 Scoring. Scoring is on a point basis, and shall be the aggregate obtained from an air time score and a cut score.
- 9.1 Each contestant shall be awarded one point for each second his model is airborne during the 4-minute flight time. The scoring judge shall start his watch as soon as the model to which he has been assigned takes off after the starting signal. Should the model land during the 4-minute flight time, the scoring judge's watch shall be stopped, and then restarted when it is airborne again. Both scoring watches shall be stopped when the "Time Up" signal is given at the end of the 4-minute flight time. The aggregate number of seconds shown on the scoring watch shall be recorded as the contestant's air-time score points.
- 9.2 Cut Score. Sixty points shall be awarded for each time that the contestant cuts a portion of the opponent's crepe paper streamer. If the string which attaches the streamer to the model is severed by either contestant, the contestant responsible for the severing will be said to have "killed" his opponent and the match will be awarded to the contestant regardless of the accumulated points at the time of the kill. To obtain a kill, the actual string must be severed, and the knot on the string must be severed.
- 9.3 Totals. All cuts, airtime, etc., will be totaled by the official starting judge and the timers only. Contestants are not to be involved in any way. Any excessive discussion with the judges regarding the scoring of any match is forbidden. Disregard for this point may be grounds for the contestant's removal from further competition, along with his pit crew.
- 9.4 A differential of 5 points or less between competitor's scores shall result in a rematch.
- 4.9 Attacks. A contestant shall be able to attack his opponent only after the completion of a courtesy lap in which both airplanes are airborne simultaneously and fly one full complete lap in level flight at a minimum of 15 feet and a maximum of 20 feet above the ground in level flight. When one model is airborne and the other is launched, under no circumstances shall the pilot whose model is airborne endanger his opponent's pit crew. If the Contest Director feels that this rule has been violated, the pilot committing the infraction will be disqualified. The pilot must remain in a five-foot diameter centre circle during the time his model is in the air. When pitting, the model must be moved outside the flying circle. The pilot may attempt to elude his opponent in any way, except as mentioned above.

4.10 Collisions. Should a collision occur, and neither of the models is able to become airborne again during the five minute flight time, the points gained prior to the collision shall be used to decide the winner of the heat. Should one or both of the models become airborne again, points for airtime and cuts shall be awarded as usual. The judges shall be responsible for ensuring that no model that has become unsafe be allowed to continue in the heat, and any of the three officials that have an opportunity to examine such a model may order it grounded. All cuts or kills resulting from a collision will be scored. In the event of a collision, where the streamer and part of the model to which the streamer was attached is severed from the model, no additional points will be awarded.

4.11 Competition Procedure. Charts shall be made up of multiples of four (i.e., 1 – 4 entries use 4; 5 – 8 use 8; 9 – 16 use 16; 17 – 32 use 32; etc.). Names shall be drawn and placed in squares starting from the bottom to the top, skipping every other square, then down again, filling in the blanks as far as the names go. This may cause only one match in the first round, but will even things up for all other rounds. Example: 19 entries allows only 3 matches and 13 byes into the second round, with an even 16 contestants left. Eliminations shall continue until four contestants are left. The two winners of the semi-final heats are then matched to decide first and second places and the two losers in the semi-final are then matched for third and fourth places. Registration may be left open until the end of the first round, or until all squares are filled on the chart. At the Contest Director's discretion a round robin type competition may be used (in which each competitor meets all other competitors). If this method is used, the winner will be decided by the competitor who has the most victories. In the event of a tie, an elimination fly-off will be held. The round robin competition is suggested when there are few entries and lots of time.

4.12 The pilot must initially start his own engine, and may assist in pitting his model afterwards.

4.13 In the event of a line failure, the match will be ended.

4.14 Engine replacements are permitted during the 4-minute flight time.

4.15 To preclude the chance of a flyer releasing the control handle during a combat match while his model is still airborne, a safety thong shall be worn which shall be attached to the flyer's wrist and secured to the control handle. The safety thong shall be capable of withstanding the minimum pull test of the model when attached to the handle.

## G.4A SLOW COMBAT

4A.1 Engines.

Maximum .36 cubic inch displacement, plain bearing. The fuel system must be of the suction type, with no pressurized fuel systems being allowed. The tank in its entirety shall be mounted on the outboard side of the fuselage, and between the leading edge of the wing and the rearmost portion of the motor.

4A.2 Lines: Same as Fast Combat. See G.4.2



- (3) No kill (only cuts).
- (4) Max. 240 pt. Air time.
- (5) Double loss system throughout pyramid for elimination.
- (6)
  - 1). Streamer leader min. 6' from stab hinge line to streamer tie.
  - 2). Streamer leader string max. breaking pull test 4 lbs.
- (7)
  - 1). Streamer material 1 / 2" wide min.
  - 2). Streamer material length 6' min.
- (8) Contestant responsible for cutting lines of opponent's model is automatically disqualified from the match.
- (9) No restrictions on model design.
- (10) Max. 2 models, engines and line sets per match.
- (11) No exchanging of handle and lines during match.
- (12) No repairing of handle and lines during match.
- (13) Max. pull-test of 2.2 lbs. or 1 kilo.