

Midwest Slope Challenge Combat

CONVENTIONAL AIRCRAFT AND FLYING WING COMBINED!

Class Definition

Open to any plane, meeting the aircraft specifications below.

Entry Limits

There is a limit of ONE entrant PER FREQUENCY in this event. See Pre-Registration page for details.

Aircraft specifications

1. The maximum allowable wingspan shall be 49 inches.
2. The maximum allowable flying weight shall be 35 ounces.
3. With the exception of control surfaces, covering and structural reinforcements listed below, the aircraft must be constructed entirely of expanded bead, plastic foam material.
4. Wings shall have a plastic foam leading edge at least 1 ½ inches wide, measured chord wise, the entire span of the wing. The wing may be covered with film covering material, vinyl tape, fiber reinforced vinyl tape or any combination of the three. Wood, metal, solid plastic, carbon fiber, Kevlar or any resin impregnated fiber material on or in the wing leading edges are not permitted.
5. Wing spars of any non-metallic material are permitted, provided they do not violate the provisions of Section 5.4 (more than 1 ½ inches away from leading edge at any point along the span).
Maximum total cross sectional area for spars shall not exceed ¾ sq. in. Moveable control surfaces at the trailing edge (ailerons) will not be considered a part of the total spar cross section.
6. The fuselage of a Conventional Aircraft must have a plastic foam nose section at least 1½ inch in length. The fuselage may have longerons of any non-metallic material provided their total cross-sectional area does not exceed ½ sq. in. area, and that the longerons do not extend into the forward 1½ inches of the nose. The fuselage may be covered with film covering material, vinyl tape, fiber reinforced vinyl tape or any combination of the three.
7. Any flight control surfaces may be constructed of wood or corrugated plastic/paper material.
Metal, solid plastic, carbon fiber, Kevlar or any resin impregnated fiber construction or covering material on the control surfaces is not permitted.
8. Any ballast added to an aircraft must be imbedded and secured internally within the aircraft structure and may not be attached externally to the aircraft structure.
9. No plane shall use any form of thrust power. Engines, electric motors, compressed gas or chemical propellants are prohibited. Aircraft converted from electric power must have the motor, motor

battery, propeller and any hard surface hatches removed from the aircraft prior to competition.

10. There shall be no limitation on the number of controls. The builder-of-the-model rule does not apply for this event.

Contest Structure

1. The CD will define flight groups for each round. The number of aircraft flown per group will be at the discretion of the CD based on the total number of entrants, the desired number of rounds to be flown in the time available and the size of the slope flying area. Typically there will be 10 to 20 aircraft per group. The size of the groups flown in a round will be equalized to the greatest extent possible. After each pilot has had the opportunity to compete in at least two non-elimination rounds, the scores will be totaled, with a number of the highest scoring contestants, determined by the CD, advancing to the final round. The top scores of the final round are the winner and runner-ups of the contest.
2. In the case of a point tie in the final round, the total points of the qualifying rounds will be used to determine the winner of the tie. If this also results in a tie, the tied pilots will compete in a round to determine the winner (fly-off). At the discretion of the CD, additional non-scored aircraft may be allowed to participate in the fly-off to increase the likelihood of points being scored.
3. Launching. Aircraft must be launched by hand. Dollies, wheels, or catapults are prohibited. Every contestant is allowed the use of one helper to assist in launching the aircraft.
4. Round Duration. The CD will determine and announce the duration of each round. If a contestant crashes at any time during the round, an unlimited number of relaunches are allowed within the duration of the round, provided the aircraft is down in an area which allows its safe retrieval. No repairs may be made until after the conclusion of the round.
5. Change of Aircraft. During a round, no change of aircraft is allowed for any reason. In between rounds, the contestant may freely choose from any aircraft available.
6. Inter-round Safety Inspection. The CD may re-inspect and remove any aircraft that may have been made unsafe for flight during an earlier round. The pilot of the aircraft so removed may make field repairs and resubmit the aircraft to the CD for inspection.

Contest Officials

1. Judges. There will be one judge for each aircraft flown. Fellow pilots or helpers may act as judges. Each aircraft's judge will validate and register points gained by the aircraft and rule upon round disqualification for crossing safety lines defined in Section 4.3. The judge will report the pilot's score to contest officials at the end of the round.

Scoring

1. Causing an opponent's plane to strike the ground and cease flight after a mid-air contact scores a

- point. No matter who initiates the engagement, the plane that remains flying after such an event, and demonstrates flight control by performing a verification maneuver, shall gain one point.
2. Mid-air contact that does not result in a single aircraft striking the ground and ceasing to continue flight, and in the remaining aircraft being able to demonstrate flight control, will net no score for either pilot.
 3. Points shall be verified in one of two ways by the victorious pilot of an engagement
 - o (A) Execute a single, 360-degree roll and return to fully controlled straight and normal flight,
 - o (B) Execute a single 360-degree loop and return to fully controlled straight and normal flight.
1. The point verification maneuver must be performed prior to re-engaging in combat with another aircraft.
 2. If an aircraft crashes as a result of attempting to complete the point verification maneuver, no points will be awarded for the engagement. The judge for a given aircraft will determine if the verification maneuver was successfully completed and that straight and normal flight control was demonstrated.
 3. Multiple collisions. If an aircraft collides with multiple aircraft in the pursuit of a single engagement, points will only be awarded for the last such collision unless a point verification maneuver was successfully performed prior to each individual collision.
 4. One bonus point will be awarded if a pilot can fly an entire round without the aircraft coming to rest on the ground.