F5K – Multiple Task Contest
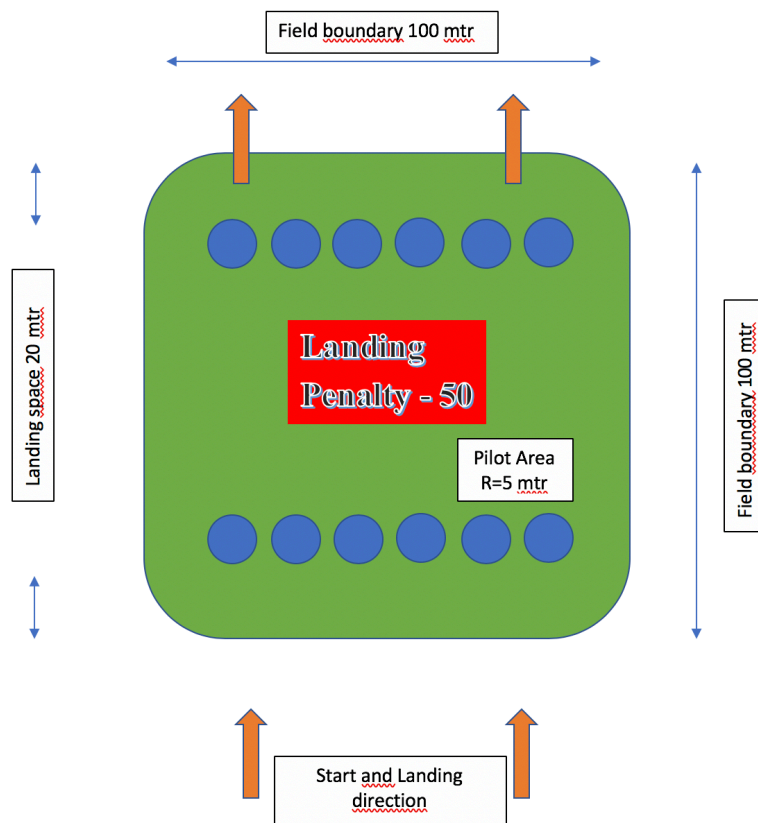
The Objective:

Flying multiple "F3K- and F5J-type" tasks using electric powered sailplanes for launch and limited to maximum launch altitude.

Contest Format

- The contest will be run on a MOM (Man-on-Man) format where each competitor in a group will be scored against only the pilots within his group. The scores will be normalized to 1000 within each group and each round normalized score will be added to get the final flight score.
- Five completed rounds are the minimum required to make a contest. The organiser may announce more rounds to be flown before the start of the contest. In certain situations (for example bad weather conditions) the jury may decide that fewer rounds than initially announced will be flown. In these cases, the number of rounds may be fewer than five and all the rounds shall be considered as the final result.

Field restrictions:

Plane restrictions:

- Max wingspan 1500 mm
- Minimum wing load 12 gr/dm2 (surface area = wing area)
- Maximum weight 600 gram
- Radius of the nose must be a minimum of 5 mm in all orientations.
- Any number of control functions is permitted.
- All ballast must be carried internally and fastened securely within the airframe.
- Each competitor is allowed to use three model gliders in the contest. It is permissible to change parts between these three model gliders. The competitor may change his model gliders at any time as long as they conform to the specifications and are operated on the assigned frequency. The organiser has to mark the three model gliders and all interchangeable parts of each of the five model gliders. All spare model gliders must stay outside the start and landing field and only one model is permissible in the start and landing field to score a valid flight time. The previous model must be removed before a replacement model may be launched.
- Any telemetry data from the plane to the pilot is permitted.
- The use of gyros and variometers onboard the model glider is not allowed.
- Any material is permitted

Launch rules:

- Maximum motor run is limited to 7 sec (to be defined)
- The motor must not be run before the start signal is given. A penalty of 100 points will be applied for any breach of this rule.
- A helper may launch the plane for the pilot
- The launch altitude will be either 50-55-60 Meters (to be defined) for all rounds of the contest at the CD's discretion. Once the launch height is called it cannot change for the day. Multi-day contests can have a different specific launch height each day.
- Motor restarts within a flight after the initial climb are prohibited, a restart will result in a zero for the task within a given round.
- While retrieving the model, it is not permissible to fly it back to the start and landing field. Launching outside the start and landing field in this situation will be penalised with 100 points that will be deducted from the final score.

Landing rules:

- It is permitted to catch a plane for a landing, all flights must conclude with a ground landing. This includes the landings between tasks as well as the final round landing.
- Each pilot-timer team will have a "Pilots Area" that he or she can move around in, but not go out of. This area is defined using a 5M tape pinned at the center making a 10M diameter circle that is the individual "Pilot's Area".

- At the end of each task the plane must land within the field boundary. The field boundary is 75M. Landing outside the boundary or inside any protected area results in a zero score for the task being flown. Any part of the plane inbounds is considered inbounds.
- The CD will announce the direction of launch for each round and all pilots must launch in that direction until the plane is clear of other launching planes. At that time the pilot may deviate from the launch direction with the stipulations in case a collision or other significant disturbance to another launching plane due to a pilot re-directing his flight path will result in zero points for the offending pilot for that round.
- Landings must be in the direction of the launch from the downwind side of the "Pilot's Area".
- Plane retrieval between tasks is a given (if within the field boundary but outside the "Pilots Area") but if competing pilots are on landing approach, a grounded plane's retriever must wait until the retrieval lane is clear of incoming aircraft. It is the pilot's timer's responsibility to warn any retrieving person of a plane on landing approach.
- If the pilot hits a person other than their self or their timer, the pilot will be awarded a round score of zero.

Rounds specifications:
- No points for landing
- In cases of mid-air collisions of two or more model gliders the competitors will not be granted re- flights nor will penalties be levied.
- No flying during preparation time
- Each round will be timed within a "round window"; the "round window" will be determined by the number of tasks for that round and calculated thusly:
  - I. The base or initial time for the window will be the sum of the required times for each task for that round (Ex. A round with 6, 4, and 2 minutes tasks will have a base time of 12 minutes
  - II. Added to that will be 30 secondsfor each task after the first task. For example as in the case above two 30 second intervals will be added for a total round window of thirteen (13) minutes. In cases where there the calculation requires an odd 30 second add, it will be rounded up to 1 minute (Ex. 12:30 would round to 13:00 Min)
  - III. In rounds where multiple launches are permitted within a timed task to achieve a single goal, only the task will account for the added 30 seconds, not each launch. (Ex. Multiple launches to achieve a 10 minute goal within a fixed window of 11min)
- The "Task Window" will end at the "End of the Audio Signal"

- The timer recording the timing of tasks will record minutes and seconds using the truncated rules for seconds. For example if the task time is two (2) minutes and a pilot flies 1:12.8, the recorded time will be 1:12. A point a second will be deducted for going over or under the target time.
    I. Exceptions to this rule are in tasks like "Poker" where the target time must be met before you can advance so here only the time over the target is subtracted.
- A ready time of 'X' minutes will be used between each group of flyers as well as between rounds. This ready time is at the CD's discretion but should not be less than 3 minutes.
- There will be a 30 second count down window after the completion of the final task of a round and if a contestant has not landed within the 30 second window, he will receive a zero for the round. For task " all up, last down" the zero will be for the task, not the round.

- The organiser may define safety areas. The organiser must ensure that the safety areas are permanently controlled by well-trained personnel. A competitor will receive a penalty of 100 points, if
    II. The organiser may define forbidden airspace, flying inside of which is strictly forbidden at any altitude. If a competitor flies his model glider inside such a forbidden airspace, a first warning is announced to the competitor. The competitor has to fly his model glider out of the forbidden airspace immediately and by the shortest route. If during the same flight the model glider enters the restricted airspace again, the competitor will receive 100 penalty points.

Weather conditions:

- The maximum wind speed for F5X contests is 9 m/s. The contest has to be interrupted or the start delayed by the contest director or the jury if the wind is continuously stronger than 9 m/s measured for at least one minute at two metres above the ground at the start and landing field. In case of rain, the contest director should consider interrupting the contest.

Table of Penalty Values:

Infraction	Penalty
Motor Restarts	Zero's the task
Over run of 30 Sec End of Task	Zero's the task
Landing Out of Bounds	Zero's the task
Landing Out of Pilot Area (D=10 mtr)	50 points per infraction per round
Hitting Someone Else	Zero's the round
Flying in forbidden area	100 point per round

Task selection:

Task A: Last Flight

- Three Launches maximum within a 7 minute window
- Last flight counts
- Max flight is limited to 5 minutes.
- It is not necessary for the pilot to announce the target time prior to launch.

Task B: Last two flights

- Three Launches maximum within a 10 minute window
- Only last two flight counts
- Max flight is limited to 4 minutes.
- It is not necessary for the pilot to announce the target time prior to launch
- Partial times count for scoring

Task C: All up, Last down (AULD) – no timer in the field

- There will be three separate tasks that must be flow in unison with all competitors meaning all competitors must launch within a 3 second window of the organizer's acoustic signal. After each task is complete the pilot will have 30 seconds to land or receive a zero for that task. Launching after the 3 second window will also zero that task. Max flight is limited to 4 minutes.
- The time for each task will be four (4) minutes
- The timer starts the watch at launch not the acoustic signal. At the end of the four minute task window if the pilot is still in the air the timer must stop the clock at the acoustic signal
- The prep time for the next task after the 30 second landing window is 30 seconds.
- The score is the accumulation of the score for each of the three tasks minus

Task D: The Ladder 1 minute increasing
- Three Launches maximum within a 10 minute window
- Target first flight is 2 minutes
- Target second flight is 3 minutes
- Target third flight is 4 minutes
- Before starting the next task it is not necessary to succeed the previous.
- Partial times count for scoring

Task E: Poker
- Three (3) flights to get three target times with a 10 minute maximum accumulated score in a 10 minute window.
- Each competitor has three flights to achieve or exceed up to three target times. Before the first launch of a new target, each competitor announces a target time to the official timekeeper. It is necessary for the pilot to announce the target time prior to launch.
- If the target time is not reached, the announced target flight time cannot be changed or scored. The competitor may try to reach the announced target flight time until the end of the working time with the remaining of his three launches, if any are available. Towards the end of the working time, and if the previous times have been accomplished and the competitor has flights left, the can call "all in" and the timer will clock the time until the window buzzer goes off.
- The achieved target times are added together to make the round score.
- Pilot can call "all in", maximum result is 9.59 minute

Task F: 2, 4, 6 minute flights in any order
- Three Launches maximum within a 13 minute window
- 2, 4 and 6 minutes maximum flights ___*in any order*___ with three launches within a 13 minute window.
- Target first flight is 2 minutes
- Target second flight is 4 minutes
- Target third flight is 6 minutes
- Partial times count for scoring

Task G: 2, 4, 6 minute flights in order

- Three Launches maximum within a 13 minute window
- 2, 4 and 6 minutes maximum flights _**in order**_ with three launches within a 13 minute window.
  Target first flight is 2 minutes
- Target second flight is 4 minutes
- Target third flight is 6 minutes
- Partial times count for scoring

Task H: Two 6 minute flights

- Three Launches maximum within a 13 minute window
- Max flight is limited to 6 minutes.
- Two 6 minute maximum flights with two launches within a 13 minute window.
- Partial times count for scoring

Task I: Low launch flight

- Three Launches maximum within a 13 minute window
- Max flight is limited to 4 minutes.
- Three four (4) minute flights with a low launch bonus in a 13 minute window. Low start bonus is applicable. All 3 launch altitude (height) is recorded on an altimeter device
- Penalty for start <= 50 mtr : 0,5 point (fe 50 mtr = 50x0,5 –> 25 points penalty)
- Penalty for start >50 <= 60 mtr : 3 points (fe 56 mtr = 50x0,5 + 6x3 –> 43 points penalty)
- Penalty for start >60 mtr : 6 points (fe 62 mtr = 50x0,5 + 10x3 + 2x6 –> 67 points penalty)
- Partial times count for scoring

Task J: Decreasing launch flight

- Three Launches maximum within a 13 minute window
- Max flight is limited to 4 minutes.
- First flight ALES : 60 mtr
- Second flight ALES : 55 mtr
- Third flight ALES : 50 mtr
- Partial times count for scoring

Field boundary 100 mtr

Landing space 20 mtr

Field boundary 100 mtr

Landing
Penalty - 50

Pilot Area
R=5 mtr

Start and Landing
direction