

8th U.S. National Microlight Championships

Scottsburg, Indiana September 22-25, 2004

Organized by
Kentuckiana Ultralight Inc. and
Scottsburg Aero Club (SACII)
USUA 167

Sanctioned by the
United States Ultralight Association
An affiliate member of the
National Aeronautic Association

LOCAL REGULATIONS

AUTHORITY

These Local Regulations are to be used in conjunction with the pertinent sections of the Official U.S. Microlight Contest & Records Rulebook and Section 10 of the FAI Sporting Code, which shall take precedence over the Local Regulation wording if there is ambiguity.

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www.kentuckianultralight.com www.UltralightNationals.com

PART 1, Applies to All Classes

1.1 GENERAL

The purposes of the championships are to provide a good and satisfying contest to determine the champion in each class, prepare Americans for international competition, and to reinforce friendship among aviators. (S10 Chapter 4, 4.2).

1.2 PROGRAM DATES

Site open for practice beginning Monday, September 20.

Registration, aircraft inspection, and practice task: Wednesday, September 22

First competition briefing: 8:00 PM, Wednesday, September 22

First task: 9:00 AM Thursday, September 23

Contest flying days: Thursday, September 23 - Saturday, September 25

Closing ceremony: Saturday evening, September 25

1.3 OFFICIALS

Executive Committee: Larry Beckley, John Grammer, Bob McAdams

Championships Director: Tom Gunnarson

Asst. Championships Director: John Grammer

FAI Class Asst. Directors: TBD

Chief Marshals: Jim Sweeney, TBD

Chief Scorer: Janine Hemy

Chief Steward and Jury President: Sharon Westcott

Facilities Manager: Larry Beckley

Media Officer: Bob McAdams

1.4 ENTRY

The Championships are open to all U.S. citizens. Guests from other countries are invited to enter and will be scored, but will not be ranked nationally and may not be named champion.

The entry fee for each registered participant is:

Pilot \$200

Navigator (co-pilot) \$125

Assistant \$30

20% discount for registration and payment postmarked prior to July 1, 2004.

10% discount for registration and payment postmarked prior to August 1, 2004.
25% surcharge for registration and payment postmarked after September 1, 2004.
Any application and/or payment received after September 1, 2004 may be refused at the sole discretion of the organizer, in which case payment will be declined.

Entry fee for registered participants pays for:

- * Competition operations (setting, controlling and evaluating the tasks)
- * All competition materials (maps, task descriptions, control point atlases, etc.)
- * Use of the airport and entry to all official events
- * Secure aircraft storage area
- * Onsite camping facilities
- * Banquet Friday night
- * Awards

All entries must be made on the official Entry Form. Registration fees are non-transferable. No refunds will be made. Anyone who is not a registered participant is a spectator. Spectators are not allowed in controlled areas of the airport. Spectator fees may apply.

1.5 INSURANCE

1.5.1 Contestant 3rd Party Insurance Requirement: All entrants must provide proof of ultralight third-party liability insurance during the on-site check-in in the minimum amount of \$1,000,000 per occurrence and \$100,000 per person provided through First Flight Insurance Group, Inc. or another insurance carrier acceptable to USUA in USUA's reasonable discretion. You do not need to mail proof of insurance.

1.5.2 Hold Harmless Agreement: Each participant will execute a release and hold harmless agreement that releases USUA and the organizer from any liability from any personal injury and or property damage out of participation in the event.

1.6 (omitted)

1.7 MEDALS AND PRIZES

Official championships gold, silver and bronze medals will be awarded to pilots/navigators placing first, second and third overall in each class. Other prizes and awards may be given by the organizer.

1.8 CHAMPIONSHIP CLASSES

The Championships may be held in the following classes (S10 Chapter 1, 1.5):

FAI Class

Description

AL1

Movable Aerodynamic Control / Landplane / Flown solo

AL2

Movable Aerodynamic Control / Landplane / Flown with two persons

WL1

Weight-shift Control / Landplane / Flown solo

WL2

Weight-shift Control / Landplane / Flown with two persons

PF1

Paraglider Control / Foot-launched / Flown solo

PL1

Paraglider Control / Landplane / Flown solo*

PL2

Paraglider Control / Landplane / Flown with two persons*

* NOTE - PL1 and PL2 classes include the American-style powered parachute as well as those with paraglider harnesses detachable from the wheeled frame. Either ram-air or elliptical wings are acceptable in these classes.

Each class is a championship in its own right and as far as possible interference of one class by another shall be avoided.

1.8.1 CLASS VIABILITY (U.S. Rulebook Chapter 4.3.2)

For the championships to be valid, the class must be viable. A class is viable if it has no less than five (5) pilots entered representing no less than three (3) regions. (12 regions are defined in the Official U.S. Microlight Contest & Records Rulebook.)

In the event that either AL1 or WL1 does not form a viable class, they will be combined to become the class "L1," if viable. In the event that either AL2 or WL2 does not form a viable class, they will be combined to become the class "L2," if viable. Single-seat and two-seat classes will not be combined. Prior to the first briefing the director will declare any combined classes.

1.8.2 CHAMPIONSHIP VALIDITY (U.S. Rulebook Chapter 4.3.3)

The title of Champion in any class shall be awarded only if there have been at least 4 separate tasks including at least one from each task type.

1.9 GENERAL COMPETITION RULES

1.9.1 REGISTRATION

On arrival, all participants shall report to the Registration Office to have their documents checked and to receive supplementary regulations and information. The following documents are required:

1. Driver's license or state-issued photo ID
2. Valid FAI Sporting License for pilot and navigator

3. Valid pilot and aircraft registration or certification
4. Evidence of conformity to class rules
5. Receipt for payment of entry fees
6. All Pilots must provide proof of ultralight third-party liability insurance during the on-site check-in in the minimum amount of \$1,000,000 per occurrence and \$100,000 per person provided through First Flight Insurance Group, Inc. or another insurance carrier acceptable to USUA in USUA's reasonable discretion. You do not need to mail proof of insurance.

The Registration Office will be open as indicated on the information board. Registration forms may be inspected by competitors on request prior to the start of competition flying only.

1.9.2 PILOT AND NAVIGATOR QUALIFICATIONS

A competing pilot shall be of sufficient standard to meet the demands of a national competition as described in the Official U.S. Microlight Contest & Records Rulebook. Both pilot and navigator must hold an FAI Sporting License issued by the National Aeronautic Association. The navigator must have reached the age of 14 years.

1.9.3 AIRCRAFT AND ASSOCIATED EQUIPMENT

Aircraft and equipment provided by the competitor must be of a performance and standard suitable for the event. The aircraft must comply with the FAI definition of a microlight at all times (see S10 Chapter 1, 1.3.1/1.3.2). The aircraft shall fly throughout the championships as a single structural entity using the same set of components as used on the first day except that propellers may be changed provided that the weight limit is not exceeded. (S10 Chapter 4, 4.19.4)

All aircraft must be made available during the Registration period for an acceptance check in the configuration in which they will be flown. The organizers have the right to inspect for class conformity and airworthiness and, if necessary, ground any aircraft for safety reasons at any time during the event.

All aircraft must be capable of draining all fuel from the tank(s) and have a simple method of tamper-evident sealing the fuel tank(s). The preferred method is drilling the fuel cap to receive a piece of safety wire.

The term microlight refers to a single or two seat aircraft that meets the FAI microlight definition. For the purpose of this championships, a microlight may be operated under FAR Part 103, FAR Part 91, or a waiver or exemption granted by the FAA.

1.9.4 PILOT RESPONSIBILITIES

The pilot is responsible for his or her proper conduct. A pilot must not fly if ill or suffering from any disability that might endanger the safety of others. All pilots, navigators, and assistants must have read and understand the rules, including (but not limited to) the Official U.S. Microlight Contest & Records Rulebook and Section 10 of the FAI Sporting Code. The pilot is responsible for the proper conduct of his or her navigator, assistants, and guests. Any penalties attributable to these people will be assessed against the pilot's score.

The legality of each flight is the responsibility of the pilot in command. The organizers have neither the responsibility nor the authority to ensure or enforce legal conformity of any pilot's actions.

1.9.5 STATUS OF RULES AND REGULATIONS

Once competition flying on the first day has started no rules or regulations may be changed. Any additional requirements within the rules needed during the event will not be retroactive. Competitors may not be substituted, change to another class, or change their aircraft (S10 Chapter 4, 4.19.4).

1.9.6 REST DAYS

There will be no rest days during these Championships.

1.9.7 COMPLAINTS AND PROTESTS

A competitor who is dissatisfied on any matter may, personally or through his registered assistant, make a complaint in writing to the Director. Complaints shall be made and dealt with without delay. Complaints concerning provisional scores must be made in writing within the time limit specified on the PROVISIONAL score sheet (see A3, 1.6.1.8). A complaint that could affect a task result shall be dealt with and answered in writing before any official score sheet is issued. If the competitor is dissatisfied with the Director's decision, the competitor may make a protest to the Director in writing within 2 hours of publication of the OFFICIAL task results, except that after the last contest task it is 1 hour. The protest fee is \$50 and is refundable only under the criteria defined in (S10, Chapter 4, 4.30.1-2)

1.10 FLYING AND SAFETY REGULATIONS

1.10.1 BRIEFINGS

Briefings will be held for competitors and assistants on each flying day. The time and place for briefing meetings and any postponements will be prominently displayed. All briefings will be recorded in notes, by tape recorder or video recorder. A full task description, meet information, flight safety requirements, penalties and details of any prohibited or restricted flying areas will be given in writing, as a minimum, to competitors. Procedures for flight preparation, take off, flying the task, landing and scoring, together with any penalties, will be specified in each task description. (S10 Chapter 4, 4.17.1/3/4) Flight safety requirements given at briefing carry the status of regulations. (S10 Chapter 4, 4.17.2)

Competitors' meetings, in addition to briefings, may be called by the Director, but shall be held within 6 hours if requested in writing by five or more competitors. (S10 Chapter 4, 4.18.)

1.10.2 COMPLIANCE WITH THE LAW

Each competitor is personally responsible for conforming to the laws and the rules of the air. (S10 Chapter 4, 4.19.1)

1.10.3 PREPARATION FOR FLIGHT

Each aircraft shall be given a pre-flight check by its pilot and may not be flown unless it is serviceable. (S10 Chapter 4, 4.19.3)

1.10.4 FLIGHT LIMITATIONS

Each aircraft shall be flown within the limitations of its Certificate of Airworthiness and/or manufacturer's performance limitations. Any maneuver hazardous to other competitors or the public is prohibited. Unauthorized aerobatics are prohibited. (S10 Chapter 4, 4.19.2)

1.10.5 DAMAGE TO A COMPETING AIRCRAFT

Any damage shall be reported to the organizers without delay and the aircraft may then be repaired. Any damaged parts must be replaced by an identical part, except that major

parts (such as the wing of a trike) may be replaced by a similar model or one of lesser performance. Note: Change of major parts may incur a penalty. (S10 Chapter 4, 4.19.4)
An aircraft may be replaced by permission of the Director if damage has resulted through no fault of the pilot or his team. Replacement may be only by an identical make or model or by an aircraft of similar or lower performance and is eligible to fly in the same class.(S10 Chapter 4, 4.19.5)

1.10.6 TEST AND OTHER FLYING

No competitor may take off on a competition day from the contest site without the permission of the Director. Permission may be given for a test flight, but if the task for that class has started the pilot must land and make a competition take-off on the task. Practicing prior to a task is not permitted. (S10 Chapter 4, 4.21)

1.10.7 FITNESS

A pilot may not fly unless fit. Any injury or drugs or medication taken, that might affect the pilot's performance in the air must be reported to the Director before flying. All relevant information can be found on the FAI web site: www.fai.org/medical

1.10.8 AIRFIELD DISCIPLINE

Marshaling signals and circuit and landing patterns will be given at briefings and must be complied with. Non-compliance will be penalized.

1.10.9 COLLISION AVOIDANCE

A proper look-out must be kept at all times. An aircraft joining another in a thermal shall circle in the same direction as that established by the first, regardless of height separation. A competitor involved in a collision in the air must not continue the flight if the structural integrity of the aircraft is in doubt. (S10 Chapter 4, 4.20.5)

1.10.10 CLOUD FLYING

Flying in clouds is prohibited. Aircraft may not carry gyro instruments or other equipment enabling flight without visual reference to the ground. (S10 Chapter 4, 4.20.6)

1.10.11 ELECTRONIC APPARATUS

(a) Radios, VOR, and similar electronic navigation aids are prohibited. GPS units are prohibited, except as detailed in 1.10.11(b). The normal penalty is disqualification from the competition. ELT's without voice transmission capability are permitted. Mobile phones may be carried in a pre-declared sealed container for use solely in the event of an emergency. The Director must be immediately informed if the seal is broken. (S10 Chapter 4, 4.22.3)

(b) GPS units will be used for primary flight evidence. Each pilot must provide a GPS unit to record his or her flights and a means of preventing the pilot's access to any GPS information before, during, or after the flight. GPS specifications and suggested models will be announced on the official web site: www.UltralightNationals.com .

1.10.12 EXTERNAL AID TO COMPETITORS

Any help in navigation, thermal location, or otherwise by non-competing aircraft, including a competing aircraft not carrying out the task of their own class is prohibited. This is to ensure as far as possible that the competition is between individual competitors neither helped nor controlled by external aids. (S10 Chapter 4, 4.22.1/2)

1.11 CHAMPIONSHIP TASKS

1.11.1 GENERAL

To count as a valid championship task, all competitors in the class must have an opportunity to carry out the task. Tasks for each class may be different and one task may be set for all classes. (S10 Chapter 4, 4.24.4)

A competitor will generally be allowed only one take-off for each task and the task may be flown once only. However, in the event of a mechanical failure occurring within 5 minutes of take-off, a further start may be made. Exceptions and penalties will be specified in the Task Description. (S10 Chapter 4, 4.25.2)

Precision tasks may be combined with other tasks or set separately.

1.11.2 TASK PERIOD

Times for take-off, opening and closing times of take-off windows, turn points and last landing time will be displayed in writing. If the start is delayed, times will be correspondingly delayed unless the briefing specified otherwise.

1.11.3 TASK SUSPENSION OR CANCELLATION

The Director may suspend flying after take-offs have started, if to continue is dangerous. If the period of suspension is sufficiently long to give an unfair advantage to any competitor, the task shall be cancelled. Once all competitors in a class have taken off or had the opportunity to do so, the task will not be cancelled except for reasons of force majeure. (S10 Chapter 4, 4.25.3)

1.11.4 TYPES OF TASKS

Only tasks approved by the FAI Microlight Commission or U.S. Microlight Contest and Records Board will be used:

* Type A: Flight planning, navigation, estimated time and speed, with no fuel limitation (50%)

* Type B: Fuel economy, speed, range, duration, with limited fuel (25%)

* Type C: Precision (25%)

A catalog of tasks (and their scoring systems) to be implemented during the championship will be made available to registered pilots and on the official championships web site.

1.11.5 FLYING THE TASKS

Any part of a competition task may be flown either:

1. along a set course in the direction specified at the briefing,
2. along an in-flight decided course in the direction selected by the pilot, or
3. according to a local pattern specified at the briefing.

The resulting complete task is the combination of the above.

Order of take off may be

1. a scheduled take off order, specified by the organizers,
2. open window, or
3. current standings or reverse standings order.

The actual scheduled take off order is annexed to the relevant Task Description. If a touch and go is required in order to separate parts of a task, details will be given in the Task Description and at the briefing.

1.11.6 OUTLANDINGS

Outlandings will normally be scored zero, unless specifically stated otherwise at the briefing. Any pilot landing away from the goal field or from base must inform the organizers by telephone, with the minimum of delay and at the latest by the closing time of the task. The pilot may break the fuel tank seal and fly home or return by road. The

pilot may break the seal on his cellular telephone and GPS. Evidence of the landing place must be obtained from photographs, GPS data, and/or the name and addresses of a witness other than the pilot's team. On return to base the pilot must go immediately to Control with his report, GPS, and films. Failure to follow this procedure without good reason may result in no score for the task or disqualification. Each pilot is personally and financially responsible for any emergency rescue services initiated by any party on his or her behalf. (S10 Chapter 4, 4.27.1)

1.11.7 FLIGHT BOUNDARIES

Flights terminating beyond the boundaries as marked on the organizer's official map shall score only to the point where a straight line between the start point or last turn point and the landing place last cuts the boundary, unless permission is given at briefing to cross such boundaries. (S10 Chapter 4, 4.29.1)

1.11.8 EMERGENCIES

A competitor landing or taking other action to aid an injured pilot will not be disadvantaged by this action.

1.12 CONTROL OF TASK FLIGHTS.

1.12.1 TIMING

All times are given, taken and calculated in local time to the nearest second. Data back cameras will not be used for time calculation. GPS data may be used for timing.

1.12.2 FUELING

Fuel will be measured by weight in pounds. Measured fuel quantities include oil where it is mixed with fuel.

Refueling will be in the order of and in accordance with the instructions given at briefing. Failure of the aircraft to be present on time may result in penalty for the pilot.

1.12.3 ACCURACY

Landing accuracy will be verified by marshals and/or video cameras. Pilots are encouraged to make a prominent asymmetrical marking on both main wheels, as with masking tape.

1.12.4 GATES, TURNPOINTS AND MARKERS

Gates are normally a straight line 800 ft wide perpendicular to the briefed track.

Gates may be:

- * Known gates. Their position and the height to be crossed will be briefed.
- * Hidden gates. The height to be kept along the sections of the course where they may be situated will be briefed.

Proof of passing a gate and its timing will be by Marshal's report, GPS evidence, and/or video surveillance.

A control point may be: a geographical point, a ground marker, or a longitude/latitude location.

Control points may be:

- * Known control (turn) points. Their positions and descriptions will be briefed.
- * Hidden control points. The track along which they will be found and their descriptions will be briefed.

Proof of reaching a control point may be:

- * by photography

- * by the competitor recording the symbol and position on the declaration sheet
- * by a Marshal's report
- * by GPS evidence
- * by video surveillance

The precise requirements will be described in the Task Description.

1.13 SCORING

1.13.1 GENERAL

The overall results will be computed from the sum of the task scores for each competitor, the winner having the highest total score in the class. (S10 Chapter 4, 4.29.1) A score given to a competitor shall be expressed to the nearest whole number, 0.1 being rounded up. (S10 Chapter 4, 4.29.4) Distances are rounded up to the nearest 0.1 mi. All times are taken to hours, minutes and seconds. (S10 Chapter 4, 4.29.5)

A pilot who did not fly scores zero and will be marked DNF on the score sheet. A pilot who is disqualified will be marked DSQ. (S10 Chapter 4, 4.29.6) Deduction of penalty points shall be made after scoring for that task is completed. (S10 Chapter 4, 4.29.7) If a pilot's score is for any reason negative, including penalties, his score for the task will be taken as zero. Negative scores will not be carried forward. (S10 Chapter 4, 4.29.8)

The following standard symbols will be used for scoring:

V = Speed, D = Distance, T = Time

The scoring system to be used will be attached to the Local regulations. Score sheets shall state the date for the task and the date and the time when the score sheet was issued, the task description, task number, classes involved, competitors' name, competitors' home state, the competitors' number and score. Score sheets shall be marked Provisional, Official, or if a protest is involved, Final. (S10 Chapter 4, 4.29.1)

1.13.2 PENALTIES

In general, any infringement of any flying, safety or task regulation will result in penalty.

Actions that will normally result in disqualification:

- * Bringing the event, its organizers, the USUA or the official rulebook into disrepute. The use of hostile "tactical protests" falls into this category.
- * The use of banned substances.
- * Unauthorized interference with an aircraft in a Secure Area.
- * Flight outside the specified flight envelope of the aircraft or dangerous flying.
- * Flight or attempted flight with prohibited equipment.
- * Unauthorized assistance during a task.

PART 2, Applies to classes AL1, AL2, WL1, WL2

2.1 GENERAL REMARKS

2.1.1 RANGE

Competition tasks may expect a still-air range of not less than 80 miles. The maximum amount of fuel permitted for limited-fuel tasks is 30 pounds for aircraft flown solo and 48 lbs for aircraft flown with two people, although lesser amounts may be stated at briefing. (S10 Chapter 5, 5.5.1)

2.1.2 TAKE-OFF AND LANDING

Unless it is stated differently in the task description, all competition take-offs and landings must be completed within a deck 328 ft x 82 ft (100m x 25m). The penalty for failing to take off or land entirely within the deck will be 20% - 100% of pilot score, as briefed for each task.

2.1.3 CONTROL OF CLASS CONFORMITY

All aircraft will be weighed before the event to confirm compliance with the FAI definition of a microlight for the class in which it is flown. (S10 Chapter 1, 1.3) Aircraft may be weighed again at any time during the championships. The take-off weight is the weight of the aircraft ready to fly including pilot(s), fuel, and any supplementary equipment.

2.1.4 CONTEST NUMBERS

The numbers or letters supplied by the organizers shall be displayed on a suitable space on the underside of the wing with their top towards the leading edge. The underside wing number shall be of a color contrasting to the background.

The identification numbers must also be displayed on the side of the pilot's helmet, as briefed during registration.

2.1.5 PROTECTIVE EQUIPMENT

A protective helmet must be worn on all flights, unless this restricts vision from within an enclosed cockpit canopy with supine seating. An emergency parachute system is recommended. (S10 Chapter 4, 4.20.1)

2.2 FLIGHT CONTROL

2.2.1 FUEL

Prior to fueling for economy tasks, competitors must be able to demonstrate that their aircraft tanks are empty and that the engine cannot run more than 60 seconds in either the ground or in-flight attitude. Fuel observed in a tank will be cause for penalty. Normal fuel lines, carburetors, etc. need not be drained.

2.2.2 DISTANCE MEASUREMENTS

Distance will be measured for all competitors on the same official map, of a scale of 1:250,000. Measurement will be made to the nearest 0.1 miles or as specified during the Task briefing.

When GPS evidence is employed, all distances shall be measured by determining the geodesic between each point, based on the WGS84 ellipsoidal world model (Ref. G.S. 7.3.1.1). GPS measurements may be made to the nearest 30 feet, as conditions allow.

2.3 SCORING

2.3.1 CROSS COUNTRY TASKS (Types A and B)

All scores will be normalized to a 1000-point scale. The maximum score may be up to 1000 points per task and is calculated as follows:

$$P = 1000 \times Q/Q_{\max}$$

where: Q = pilot score, Q_{\max} = best score for the task, P = Total score

2.3.2 PRECISION TASKS (Type C)

Maximum score: 250 points per task or 2 x 250 points for the combined precision task.

2.3.3 The number of tasks flown in each class during the Championships must be as close as possible to 50% Type A, 25% Type B, and 25% Type C.

2.3.4 The winner of each class shall be the pilot or crew gaining the highest total points in the class.

PART 3, Applies to Class PF1 (PPG) PL1 and PL2 (PPG-trike/Powered Parachute)

3.1 GENERAL REMARKS

3.1.1 RANGE

All aircraft will be expected to have a still air range of 62 mi (100 km).

3.1.2 THE SECURE AREA

Is a clearly marked area where aircraft must be placed from time to time as instructed by the director. Once in the Secure Area and without the express permission of the director, no aircraft may be touched for any reason other than to remove it from the Secure Area. Competitors who do not respect the rules of the Secure Area may be liable to penalty.

3.1.3 A "CLEAN" TAKE OFF

Is defined as a take off attempt in which the canopy does not touch the ground between the moment it first leaves the ground and the moment ten seconds after the entire aircraft including the pilot is airborne.

3.1.4 THE LANDING DECK

- A landing deck is a clearly marked area 328 x 328 (100m x 100m).
- There will be one landing deck provided for every 30 competitors.
- A landing deck will have a windsock within 300 ft of its boundary.
- There will be no significant obstacles within 500 ft of the boundary of a landing deck.
- Unless otherwise briefed, penalties will be awarded to Pilots or any part of their PF's touching the ground anywhere outside the landing deck during a task.

3.1.5 CONTEST NUMBERS

PF's shall carry the number centrally on the underside of the paraglider, top towards the leading edge.

3.1.6 EMERGENCY EQUIPMENT

An emergency parachute is not to be considered as a part of the structural entity of a PF and may be removed or added during a competition.

3.1.7 PROTECTIVE EQUIPMENT

A protective helmet must be worn whenever the pilot is strapped into the harness of a PF. An emergency parachute system is highly recommended.

3.1.8 PROHIBITED EQUIPMENT

In addition to those items detailed in Part 1 of the local regulations: Disposable ballast & binoculars.

3.2 FLIGHT CONTROL

3.2.1 TIMINGS

Normally, take-off times are taken at the moment a pilot's feet leave the ground.

Normally, landing times are taken at the moment a pilot's feet or any other part of the pilot or PF touch the ground. Timings may also be taken when the pilot kicks a stick or flies overhead an observer as briefed for the task in question.

A task is deemed to have started the moment the first pilot to take-off is ready to take-off and ends the moment the last pilot has landed and has exited the landing deck.

In the case of a take-off time window, the precise time of take-off is entirely at the discretion of the pilot but should be within the overall time window. In the case where a particular take-off time is given, the clock will start running at that moment and the pilot may subsequently take-off at any time.

3.2.2 DISTANCE MEASUREMENT

Distance will be measured for all competitors on the same official map, of a scale not smaller than 1:100 000. Measurement will be made to the nearest 0.1 mi.

3.2.3 FUEL MEASUREMENT

Fuel will be measured by weight or volume but will be consistent for any given refueling session. Refueling will be in the order and in accordance with the instructions given at briefing.

Failure of the aircraft to be present on time may result in penalty for the pilot.

Competitors must be able to demonstrate that their entire fuel system is empty.

3.2.4 FLIGHT ACCURACY MEASUREMENT

Ground markers

- Certain ground markers may be designated as "Landing markers", where a bonus score may be available in the task for landing on the marker. Landing markers are min. 10ft x 10 ft.

Kick sticks

- Some tasks may involve the use of "Kicking sticks". A valid strike on a stick is one where the pilot or any part of the PF has been clearly observed to touch it.
- The stick should be approx. 6 ft in height, visible from a range of at least 800 ft, and of a construction such that it is unlikely to enter a PF's propeller once struck. (Standard ski slalom posts are recommended).
- One or more sticks may be used in a task for the purposes of separating elements of that task (e.g. to take a time) and a bonus score may be available for successfully kicking a sequence of sticks in a given order and/or time.

3.4 FLYING THE TASKS

3.5.1 PROPORTIONS

The proportion of the tasks accumulated during the Championships is approximately A:

B:C = 1/3:1/3:1/3

3.5.2 ASSISTANTS

Help from assistants is positively encouraged until a competitor enters the deck to start a task.

From that moment onwards, all external assistance is forbidden except from marshals or those people expressly appointed by the Director, until the moment the competitor leaves the deck having finished a task, or otherwise lands according to the outlanding rules.

3.5.2 TAKE-OFF

A PF must be foot launched for all tasks.

No pilot may take-off without permission from the Director or a Marshal.

Open window or given order of take off may be applied to tasks.

All take-offs, unless otherwise briefed, must be effected entirely within the landing deck, except for emergency provisions given at briefing. Failure to comply will result in a penalty of 20% of the pilot's score.

Before departure a pilot and/or his PF may be inspected at any time for contravention of any regulations. It is the duty of competitors to assist marshals as much as possible in assisting and expediting any inspection.

Except in specified tasks, an aborted take-off does not in principle attract any penalty, however the pilot must comply with any instruction from the marshals to expedite a re-launch or the pilot risks being relegated to the end of the queue.

In the case where the take-off order is given:

- No more than six pilots are permitted on a take off deck at any one time.
- The first 6 pilots must be ready to takeoff at the start of the task.
- Every pilot must take off before the sixth pilot in order after him has taken off or a 20% penalty will apply.
- If a marshal considers a pilot to be causing unreasonable delay (has been on the deck more than 20 minutes with the opportunity to take off), a 20% penalty will apply.

In the case where a particular take-off time is given, the clock will start running at that moment and the pilot may subsequently take-off at any time.

3.5.3 FLIGHT LIMITATIONS

Aerobatics and manoeuvres such as stalls, B-line stalls, deep stalls and spins are prohibited.

'Big ears' is accepted.

3.5.4 LANDING

All landings, unless otherwise briefed, must be effected entirely within the landing deck, except for emergency provisions given at briefing. Failure to comply will result in a penalty of 20% of the pilot's score. The pilot may be liable to penalty if he or any part of his PF touches the ground outside the deck before he has removed his harness.

- Upon landing, pilots must immediately remove their PF's from the deck.
- Landings outside the landing deck but within the airfield boundary will attract a 20% penalty.
- Pilots 'abandoning' their PF's on the landing deck will be liable to penalty.

In tasks where pilots are asked to make a precision landing or to land on a marker, the objective is for the pilot to make a good landing on his own two feet without falling over.

"Falling over as a result of the landing" will be interpreted as:

- GOOD: If the pilot falls to ONE knee - landing score as achieved.
- BAD: If the pilot falls to TWO knees OR if any part of the power unit touches the ground during the landing process - zero landing score.

In tasks where the pilot is asked to switch off his engine above specific heights, the heights will be determined by:

- 500 Ft: "The engine must be stopped & propeller stationary for a minimum period of 60 seconds before any part of the aircraft or the pilot touches the ground."
- 15 ft: "The engine must be stopped & propeller stationary for a minimum period of 2 seconds before any part of the aircraft or the pilot touches the ground."

Obstruction at landing markers: If a pilot or any part of his PF obstructs the attempted landing or the takeoff of another competitor at a landing marker then a 20% penalty will apply. However, any pilot who scores more than zero for his landing at a landing marker has exclusive use of the area immediately surrounding the marker for a maximum period of one minute in which to clear his aircraft from the area.

3.5.5 EMERGENCIES

All pilots must fold up their canopies immediately upon landing. A canopy that has not been folded within three minutes indicates the pilot is in need of help. Any pilot who observes such a situation is obliged to render assistance and contact the organization as soon as possible.

3.6 SCORING

3.6.1 ALL TASKS

The maximum score may be up to 1000 points per task and is generally calculated as follows:

$$P = Q/Q_{\max} \times 1000$$

Where: Q = pilot scores, Q max = best score for the task, P = Total score but, depending on the task, absolute scores for pilots' performance may also be awarded either in combination with the above or exclusively. Where a combination is used the total available absolute score shall not be more than 50% of the total available score.

e.g.: $P = Q/Q_{\max} \times 750 + y$ (where the maximum value of y would be 250)

OR $P = y$ (where the maximum value of y could be 1000)

In all cases: P = Total score, Q = pilot score, Q max = best score for an element of the task, y = an absolute score

The winner of the class shall be the pilot gaining the highest total points in the class.

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