

Annex 1
to the
1995 European Microlight Championship Regulations

LOCAL REGULATIONS
for the
POWERED PARAGLIDER Class
(PPG)

Draft 3

Based on the Annex to the official rules for Paramoteurs, French National Championships 1995

25/11/12 PPG-4.DOC

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1. General

The purpose of the championships is to provide good and satisfying contest flying in order to determine the champion in the PPG class and to reinforce friendship between nations.

1.1. Programme

Training, aircraft inspection, registration	15 - 19 August
First competition briefing	18 August
Opening ceremony	19 August
Contest flying days	19 - 25 August
Closing ceremony, prize giving	26 August

1.2. Officials

Director	Jose Ortega
Deputy Director	TBD
International Jury	André Fraiture, (B) President Dr Marton Orody, (H) Jose A. Storch, (S) Tormod Veiby, (N)
Stewards	Mirosław Rodzewicz, (P) TBD

1.3. Entry

- 1.3.1. The championship is open to all active member and associate member countries of the European region. Competitors from outside the region are invited to compete but may not be named champion.
- 1.3.2. Teams will be limited to five aircraft.

1.4. Entry fee

- 1.4.1. Pilots £165.00
Team Leader £100.00
Assistants £50.00
Payment will be accepted in any EU currency.
Aviation maps will be provided.
A camp site for tents, caravans, and campers will be available at a fee of £5.00 each.
Toilets and showers will be provided.

1.5. Insurance

- 1.5.1. Documentary proof of insurance must be presented to the organisers before the start of the championships. UK Ministry of defence (the land owners) regulations require a higher than normal third party insurance cover which will be available on site for a small extra fee.

1.6. Language

- 1.6.1. The official language of the championship is English.

1.7. Class viability

See Sporting Code, Section 10, 4.4

- 1.7.1. For the championship to be valid there must be no less than 10 participants from 5 countries competing, with entry fees paid and who are available to fly on the first day.
- 1.7.2. The title of champion shall be awarded only if there have been at least six separate tasks of which at least three shall have been combined category task, one an economy task and one a precision task.
- 1.7.3. In the event of a quorum not being present the competition will still take place but a European champion or European champion team will not be declared.

1.8. Medals & prizes

- 1.8.1. FAI medals will be awarded to pilots placed first, second and third. Diplomas will be awarded to those placed fourth to tenth. FAI medals will be awarded to the team leaders of national teams placed first, second and third. The organisers will award further trophies and prizes.

2. Definitions

2.1. The foot launched Powered Paraglider (PPG)

See Annex 1 to Sporting Code, Section 10

- 2.1.1. A Powered Paraglider (hereinafter **PPG**) consists of a wing without any rigid structure (**the canopy**), coupled by flexible lines to a **power unit** with a surface not exceeding 1 square metre, that the pilot must carry on his back during take-off and landing. The wing may rest on the ground during the start of the take-off run.
- 2.1.2. All take-offs and landings in the competition must be made on foot without the assistance of any wheels, any kind of vehicle or any external power source.

2.2. The official noticeboard

- 2.2.1. The official noticeboard is the place where all information necessary to competitors is displayed: Briefing times, fuelling times, task opening times, results etc. Whatever is on the board at the time is the officially current information.¹

2.3. The Parc Fermé

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

2.4. The landing deck

- 2.4.1. A landing deck is a clearly marked area 100m x 100m.
- 2.4.2. There will be one landing deck provided for every 30 competitors.
- 2.4.3. Unless otherwise briefed, all take-offs and landings are to be made within a landing deck.
- 2.4.4. A landing deck will have a wind-sock within 100m of its boundary.
- 2.4.5. There will be no significant obstacles within 200m of the boundary of a landing deck.
- 2.4.6. Unless otherwise briefed, penalties will be awarded to Pilots or any part of their PPG's touching the ground anywhere outside the landing deck during a task.

2.5. The airfield boundary

- 2.5.1. The airfield boundary is the recognised boundary of the airfield upon which the landing decks are situated.

2.6. An outlanding

- 2.6.1. Any touch of the ground by pilot or PPG outside the airfield boundary will constitute an outlanding.

2.7. Timings

- 2.7.1. All times are given, taken and calculated in local time. ²
- 2.7.2. Unless otherwise briefed, take-off times are taken at the moment a pilot's feet leave the ground.
- 2.7.3. Unless otherwise briefed, landing times are taken at the moment a pilot's feet or any other part of the pilot or PPG touch the ground.

¹ It is important that competitors regularly check this noticeboard for changes. There can be no excuse for ignorance of news that has been posted.

² ie British Summer Time which is GMT + 1

- 2.7.4. 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.

3. General competition rules

3.1. Registration

- 3.1.1. On arrival the team leader and members shall report to the registration office to have their documents checked and to receive supplementary regulations and information. The following documents are required:
- * Pilot licence or qualification
 - * Evidence of a competitor's nationality
 - * Pilot's valid FAI sporting licence
 - * Aircraft Certificate of Airworthiness or Permit to Fly (If applicable)
 - * Certificate of insurance

3.2. Pilot qualifications

- 3.2.1. A competing pilot shall be of sufficient standard to meet the demands of an international competition and hold a valid licence or equivalent certificate. He must hold a FAI sporting licence issued by his own National Aero Club.

3.3. Aircraft and associated equipment

- 3.3.1. The PPG must comply with the FAI definition. (See Annex 1 to Sporting Code, Section 10)
- 3.3.2. All aircraft must be made available during the registration period for an acceptance check in the configuration in which they will be flown.
- 3.3.3. All PPG's must be in an airworthy condition. The director may at any moment during the competition check the condition of any PPG and ground it if he considers a safety risk exists.
- 3.3.4. The PPG must have a fuel capacity of minimum 5 litres and maximum 10 litres.
- 3.3.5. The aircraft shall fly throughout the competition as a single structural entity using the same set of components as used on the first day except that propellers may be changed. (See Sporting Code, Section 10, 4.19)

3.4. Contest numbers

- 3.4.1. The number or letters supplied by the organisers shall be displayed on the underside of the canopy along the centre line of the span at or in front of the centre of the chord line. The top of each character should have its top towards the leading edge. The same number should be displayed on the pilot's helmet.

3.5. Team leader responsibilities

- 3.5.1. The team leader is the liaison between the organiser and his team. He is responsible for the proper conduct of his team members and for ensuring that they do not fly when ill or suffering from any disability which either might endanger themselves or others.

3.6. Status of rules and regulations

- 3.6.1. 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 retrospective.
- 3.6.2. Competitors may not be substituted.

3.7. Rest days

- 3.7.1. There will normally be a rest day after six consecutive days flying unless this day is the last competition day of the championship.

3.8. Complaints and protests

- 3.8.1. A complaint may be made to the organisers, preferably by a team leader, to request a correction. It should be made with the minimum of delay and it will be dealt with expeditiously.

- 3.8.2. If a complainant is not satisfied with the outcome, the team leader may make protest in writing to the director or his deputy (See Sporting Code, General section, Chapter 5).
- 3.8.3. The time limit for protest is 12 hours after publication of the official task results, except that after the last contest task it is 2 hours.
- 3.8.4. The protest fee is £20.00 and is payable at the time of protest.

4. Flying and safety regulations

4.1. Briefings

- 4.1.1. Briefings will be held for team leaders and/or competitors on each flying day. Full task details, meteorological information, flight safety requirements and details of any prohibited or restricted flying areas will be given in writing, as a minimum to the team leaders.
- 4.1.2. The time and place for briefing meetings will be displayed on the official notice board.
- 4.1.3. Flight safety requirements given at briefings carry the status of regulations.
- 4.1.4. Team leaders' meetings, in addition to briefings, may be called by the director but shall be held within 18 hours if requested by five or more team leaders.

4.2. Pre - departure briefings

- 4.2.1. The purpose of these briefings is NOT to discuss the technical details of particular tasks but for the organisation to convey any important last minute information to pilots immediately before the start of a task. To prevent confusion and misunderstandings this briefing will be short and to the point.

4.3. Compliance with the law

- 4.3.1. Each pilot is required to conform to the laws and Rules of the Air of the country in which the championship is held.

4.4. Preparation for flight

- 4.4.1. Each pilot takes off, flies and lands entirely at his own risk.
- 4.4.2. Each PPG shall be given a pre flight check by its pilot and may not be flown unless it is serviceable.
- 4.4.3. Each competitor is obliged to analyse the weather conditions with reference to his own capacity as a pilot and the performance of his equipment before making a decision to fly.

4.5. Flight limitations

- 4.5.1. Pilots must observe such airfield departure and approach procedures as may be given by the Director. Infringements will be penalised.
- 4.5.2. All manoeuvres considered dangerous are forbidden, whether a danger to the pilot, other aircraft or the public, or not. This includes stalls, spins, B line stalls and deep stalls. 'Big ears' is not considered a dangerous manoeuvre.
- 4.5.3. Flight in clouds is forbidden.

4.6. Damage to a competing aircraft

- 4.6.1. The director must be informed of any damage to a PPG without delay and before any repair is undertaken. Any replacement parts must conform to the original specifications. Change of any major part such as a canopy or engine may incur a penalty.
- 4.6.2. Any aircraft may be replaced if damage has resulted through no fault of the pilot. Replacement may be only by an identical make or model or by a PPG of similar or lower performance.

4.7. Test and other flying

- 4.7.1. No competitor may take off during the competition day from the contest site without the permission of the Director or his deputy.
- 4.7.2. Practising prior to a landing is not permitted.
- 4.7.3. Once a task has been declared, reconnaissance flights of the route in any aircraft are forbidden.

4.8. Protective equipment ³

- 4.8.1. A protective helmet must be worn whenever the pilot is strapped into the harness of a PPG

4.9. Fitness

- 4.9.1. A pilot may not fly unless fit. Any injury, drugs or medication taken which might affect the pilot's performance in the air must be reported to the director or the Championship doctor before flying.

4.10. Airfield discipline

- 4.10.1. Marshalling signals, take-off, circuit and landing patterns will be given at a briefing and must be complied with. Non compliance will be penalised.

4.11. Collision avoidance

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

4.12. Cloud flying

- 4.12.1. Cloud flying is prohibited and PPG's may not carry gyro instruments or other equipment permitting flight without reference to the ground.

4.13. Prohibited equipment

- 4.13.1. Any accessory or item of equipment considered dangerous by the director.
- 4.13.2. Ballast.
- 4.13.3. GPS, VOR or any other electronic navigation aid.
- 4.13.4. Radios, mobile phones or any other electronic communications equipment.
- 4.13.5. Binoculars.

4.14. External aid to pilots

- 4.14.1. Any help in navigation or thermal location by non competing aircraft is prohibited. This is to ensure as far as possible that the competition is between individual pilots neither helped nor controlled by external aids.

4.15. Assistants

- 4.15.1. Help from assistants is positively encouraged until that moment when a task starts. From then until the moment the task ends all help to pilots is forbidden except from marshals or those people expressly appointed by the Director.

5. Championship tasks

5.1. General

- 5.1.1. To count as a championship task all pilots will be given the opportunity to have at least one contest flight with time to carry out the task.
- 5.1.2. A pilot will be allowed one take-off for each task and the task may be flown once only. However, if a pilot returns to the landing deck within 5 minutes of take-off then he will be permitted to restart without penalty. This flight time will be added to subsequent flight time and refuelling is not permitted.

³ It is recommended that pilots are equipped with emergency parachutes.

5.2. Task period

- 5.2.1. Times for take-off, closing of take off windows and last landing will be displayed in writing. If the start is delayed, given times will be correspondingly delayed.

5.3. Task suspension or cancellation

- 5.3.1. The Director or Chief Marshal 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 pilot then the task will be cancelled. The task will not be cancelled except for reasons of force majeure once all pilots have taken off or have had the opportunity to do so.

5.4. Types of task

- 5.4.1. The tasks listed below in the **Catalogue of tasks** section will be used.
- 5.4.2. Tasks are divided into 4 categories:

Code	Category	Proportion of whole competition (tolerance: $\pm 5\%$)
E	Economy	27%
M	Precision	18%
V	Speed	4%
C	Combined	51%

Each task in the catalogue is described by the category letter followed by the name of the task.

5.5. Take-off

- 5.5.1. No pilot may take-off without permission from the Director or a Marshal.⁴
- 5.5.2. All take-offs, unless otherwise briefed, must be effected entirely within the landing deck.
- 5.5.3. Before departure a pilot and/or his machine may be inspected at any time for contraventions of any regulation of the task. It is the duty of competitors to assist marshals as much as possible in assisting and expediting any inspection.
- 5.5.4. Each pilot must ensure carefully that his equipment is properly in order before attempting to take-off. He must not attempt to take-off if this is not the case.
- 5.5.5. In principle an aborted take-off does not attract any penalty, however the pilot must comply with any instruction from the director to expedite a re-launch or the pilot risks being relegated to the end of the queue.
- 5.5.6. 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.
- 5.5.7. In the case where the take-off order is given, the pilot may have three attempts at taking off and then will be relegated to the back of the queue.
- 5.5.8. 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.
- 5.5.9. In all cases a minimum of two minutes separation shall be maintained between take-offs.

5.6. Emergencies

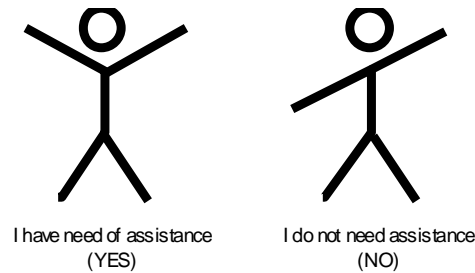
- 5.6.1. All pilots must fold up their canopies immediately upon landing. A canopy which has not been folded within three minutes indicates the pilot is in need of help. Any pilot who observes such a situation is obliged to render assistance and contact the organisation as soon as possible.

5.7. Outlandings

- 5.7.1. There may or may not be a penalty applied for outlanding depending on the task being undertaken.
- 5.7.2. Upon outlanding and having folded his canopy, a pilot must contact the organisation *as soon as possible* and before contacting anyone else to declare that he has outlanded. The organisation will need to know the pilot's precise landing location, where he can be picked up and the name of the person the organisation should contact to pick him up.
- 5.7.3. The contact procedure must be followed EVERY time, even if the pilot, by outlanding, has scored zero. Failure to do so will attract a penalty.

⁴ This, in part, ensures that the take off time has been noted.

5.7.4. To signal other pilots, the international emergency signals are:



5.8. Landing

- 5.8.1. All landings, unless otherwise briefed, must be effected entirely within the landing deck. The pilot may be liable to penalty if he or any part of his PPG touches the ground outside the deck before he has removed his harness.
- 5.8.2. Upon landing, pilots must immediately remove their PPG's to a parking area.⁵
- 5.8.3. Landings outside the landing deck but within the airfield boundary will attract a 20% penalty.
- 5.8.4. Landings outside the airfield boundary are considered outlandings.
- 5.8.5. Pilots 'abandoning' their PPG's on the landing deck will be liable to penalty.

6. Control of flight tasks

6.1. Distance measurement

- 6.1.1. Distance will be measured for all pilots on the same official map of a scale not smaller than 1:250,000. Measurement will be made to the nearest 0.5 Km.

6.2. Outlanding confirmation

- 6.2.1. Pilots must take photographs of their PPG on the ground showing its competition number and recognisable local features. They must also obtain the name, address and telephone number of at least one witness other than a member of their own national team.

6.3. Fuelling

- 6.3.1. All PPG's must be equipped with a simple method of sealing the fuel tank when required.
- 6.3.2. A time window or individual times may be set for competitors to fuel their aircraft.
- 6.3.3. Fuel quantities will be measured by weight.
- 6.3.4. Measured fuel quantities *include* oil where it is mixed with petrol.
- 6.3.5. The competitor must bring his PPG to the refuelling area **completely** empty of fuel ⁶ together with a can of fuel, an empty can of fuel into which to pour the measured amount and a funnel.
- 6.3.6. Immediately refuelling is complete the competitor, under supervision of a marshal, must remove any spare fuel from the refuelling area and place his PPG in the Parc Fermé.
- 6.3.7. It is the duty of the competitor to assist the marshals as much as possible in expediting the refuelling process.

6.4. Photographic evidence

See also Sporting Code, Section 10, para 5.8

- 6.4.1. Except when stated at briefing, photographic evidence of turnpoints only is acceptable. Incorrect or unclear photographs will not be scored.
- 6.4.2. Cameras must have a fixed focus lens between 35mm & 58mm focal length and it must not be possible to alter the order of the exposures.

⁵ It is recommended that competitors view the official notice board as soon as possible after landing to get the latest information.

⁶ Completely means the entire fuel system including fuel tank, fuel lines, filters, primer bulbs and carburettor. Competitors not presenting their PPG for refuelling completely empty may be liable to penalty.

- 6.4.3. All photographs must be on a single uncut roll of film⁷ as follows:
- Photograph of the official task board showing date and time
 - Photograph of the aircraft showing the aircraft competition number and recognisable background.
 - Turnpoints as briefed in correct sequence.
 - If outlanding, photographs showing the aircraft competition number with recognisable background of the landing place.
- 6.4.4. As soon as possible after landing the pilot must take his flight report and camera(s) to control and rewind and remove the film in the presence of the marshal. If two cameras are used both films are to be handed in marked 1 and 2 (back up film).

7. Scoring

7.1. General

- 7.1.1. The overall results will be computed from the sum of the daily scores for each pilot, the winner having the highest score.
- 7.1.2. A score given to a pilot shall be expressed to the nearest whole number, 0.5 being rounded up.
- 7.1.3. All distances are rounded to the nearest 0.5 Km. All times are taken to Hours, Minutes and Seconds.
- 7.1.4. A pilot who did not fly in a particular task scores zero and will be marked DNF on the score sheet. A pilot who is disqualified will be marked DSQ.
- 7.1.5. Deduction of penalty points shall be made after scoring for that task is completed.
- 7.1.6. 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.

7.2. Precision tasks

- 7.2.1. Targets on posts 2m high are arranged around a course.
- 7.2.2. A valid strike on a target is one where not only has the pilot touched it but it has fallen over as a result of him striking it.

7.3. Ground markers

- 7.3.1. In certain designated tasks, ground markers made of one or more white sheets or tarpaulins 5m x 1m will be laid out along the line of a route to represent different symbols.
- 7.3.2. When a ground marker is observed its symbol AND position should be recorded.

7.4. Turn points

See Sporting Code, Section 10, para 5.8

8. Penalties

Abbreviations:

- A = Warning
 x % = Percentage of score penalised for that task
 S0 = Zero score for that task
 DSQ = Disqualification from the competition

	Infraction	Penalty
8.1.	Bringing the event, its organisers, the FAI or the sporting code into disrepute	DSQ
8.2.	Not informing the organisation of an injury, medical complaint or medication being taken	DSQ

⁷ Pilots are advised to scratch their competition numbers on the leader tongue of their film(s).

8.3.	The use of performance enhancing drugs	DSQ
8.4.	Unauthorised interference with a PPG in the Parc Fermé	DSQ
8.5.	Flight outside the specified flight envelope of the PPG or dangerous flying	DSQ
8.6.	Flight in clouds	DSQ
8.7.	Flight or attempted flight with prohibited equipment	DSQ
8.8.	Use of any other transport during a task (before declaring an outlanding)	DSQ
8.9.	Use of a camera with an unpermitted focal length	S0
8.10.	Unauthorised assistance during a task	S0
8.11.	Unauthorised changes to canopy or power unit	S0
8.12.	Flight without Helmet	S0
8.13.	Unauthorised take-off	S0
8.14.	Taking off outside a previously given order	S0
8.15.	Outlanding in a task where it is not permitted	S0
8.16.	The aircraft disappears from the sight of the marshals (Economy tasks only)	S0
8.17.	Departure from the permitted flight area (Economy tasks only)	S0
8.18.	The task is not completed in the given order (Precision tasks only)	S0
8.19.	Violation of briefed airfield departure and approach procedures	20%
8.20.	Landing or touching the ground outside the deck but within the airfield boundary	20%
8.21.	Abandoning a PPG on the landing deck	20%

9. Catalogue of tasks

Abbreviations

TP	= The pilot's time
TPv	= The pilot's time in a speed task
TPe	= The pilot's time in an economy task
Tmax	= The longest time taken to complete the task
TmaxE	= The longest time taken to complete an economy task
Tmin	= The shortest time taken to complete the task
TminV	= The shortest time taken to complete a speed task
NQ	= The number of targets
NBv	= The number of ground markers a pilot collects in a task
NBt	= The number of ground markers set in a task
CmP	= The distance from a point, in centimetres, achieved by the pilot
KmP	= The distance in Km achieved by the pilot
KmMax	= The greatest distance achieved in the task
ETP	= The difference between the pilot's estimated and actual time
EtMin	= The minimum difference between estimated and actual time achieved in the task
VP	= The speed of the pilot in Km/H in the task
Vmax	= The highest speed achieved in the task, in Km/H
Vmin	= The lowest speed achieved in the task, in Km/H
EP	= The difference between the pilot's slowest and fastest speeds, in Km/H
Emax	= The maximum difference between slowest and fastest speeds, in Km/H
AP	= The pilot's maximum altitude
AMax	= The maximum altitude achieved in the task.

E/ECO1 - Pure Economy

Objective

Take-off with a measured quantity of fuel and stay airborne for as long as possible and return to the deck.

Special rules

Free take-off within the time window.

Departure from view of the marshals or egress from the permitted flight area will incur penalties.

Outlanding: Score zero.

Scoring

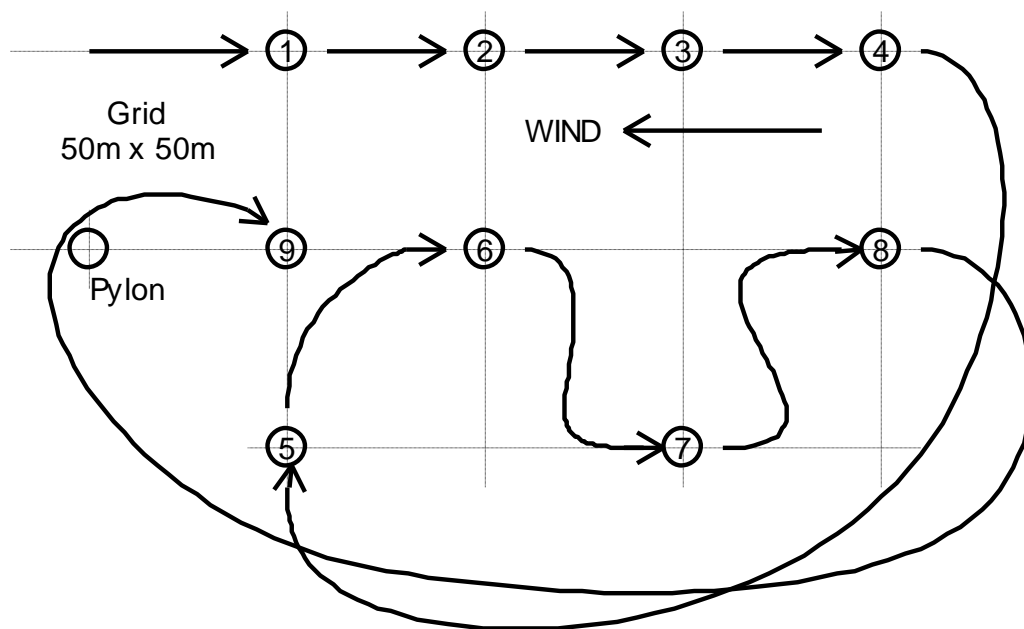
$$1000 \times \frac{TP}{T_{max}}$$

M/MANIA1 - Precision circuit in the shortest time.

Objective

To knock over a number of targets laid out in a given order in the shortest possible time and return to the deck.

Circuit layout



Description

8 targets are laid out 50M apart in two arrays. The first array has 4 targets in a straight line, the second array has 4 targets in a slalom.

A 9th target serves to stop the clock.

A further target is placed 50M behind the 9th to serve as a pylon which must be flown round before the 9th target is knocked over.

Special rules

Start time: The moment the first target falls.

Finish time: The moment the 9th target falls.

Taking longer than 3 mins to complete the task; 10% penalty per minute.

The pilot does not turn the pylon properly: 50% penalty.

Scoring

$$1000 \times \frac{NQ^3}{TP}$$

M/MANIA2 - Slalom in the shortest time.

Objective

To knock over a number of targets laid out in a given order in the shortest possible time and return to the deck.

Special rules

The pilot may not have more than one attempt at knocking over each target.

Start time: The moment the pilot passes through the starting gate.

Finish time: The moment the pilot passes through the finish gate.

Taking longer than 3 mins to complete the task; 10% penalty per minute.

Scoring

$$1000 \times \frac{NQ^3}{TP}$$

M/MANIA3 - Precision landing.

Objective

To land as near as possible to a point.

Description

The pilot tries to land as near as possible to a 5cm diameter spot within a 5m diameter circle.

Special rules

The pattern to be flown and the place and height at which the engine is to be stopped will be given at briefing.

The first touch of the ground by pilot or PPG is the point from which measurement to the centre of the spot is made, to the nearest centimetre.

A first touch on the 5cm spot: score 250

A first touch outside the 5m circle: Score zero

Scoring

$$250 \times \frac{(500 - CmP)}{500}$$

V/VIT1 - Pure speed

Objective

To fly around a course with one or more turn points in the shortest possible time.

Scoring

$$1000 \times \frac{T_{min}}{TP}$$

C/NAV-VIT1 - Navigation with speed while finding unknown ground markers

Objective

To fly a given route in the shortest possible time and find all the ground markers and return to the deck.

Description

A number of ground markers are laid out along the route. As many symbols as possible must be found before the pilot returns to the deck.

Special rules

If declarations of ground marker position and/or symbol are to be made to the marshal they must be done immediately upon landing.

No symbol may be declared as having more than one position.

Scoring

$$\left(750 \times \frac{NB_v}{NB_t} \right) + \left(250 \times \frac{T_{min}}{TP} \right)$$

Tmin is defined as the shortest time in each group of pilots who have found the same number of ground markers.

TP is scored as zero if the pilot has found less than 50% of the available number of ground markers.

C/NAV-VIT2 - Navigation with speed while finding known ground markers

Objective

To fly a given route in the shortest possible time and find the positions of ground markers and return to the deck.

Description

Before departure each pilot is given a series of photographs of ground markers. As many as possible shall be found and their position recorded before the pilot returns to the deck.

Special rules

If declarations of ground marker position and/or symbol are to be made to the marshal they must be done immediately upon landing.

No ground marker may be declared as having more than one position.

Scoring

$$\left(750 \times \frac{NB_v}{NB_t} \right) + \left(250 \times \frac{T_{min}}{TP} \right)$$

Tmin is defined as the shortest time in each group of pilots who have found the same number of ground markers.

TP is scored as zero if the pilot has found less than 50% of the available number of ground markers.

C/NAV-VIT3 - Navigation with speed around a partially unknown course

Objective

To fly a route in the shortest possible time where only the first leg is known and return to the deck.

Description

Before departure each pilot is given a series of tracks to follow. Somewhere along the first track the pilot will encounter a ground marker at which he should change direction to the second track he was given, along this second track he will encounter a ground marker where he should change direction to the third track he was given, and so on.

Before departure the pilot will also have been given the symbol of a ground marker (for example an "X") which indicates that it is the last ground marker and that he should return to the deck.

Special rules

If declarations of ground marker position and/or symbol are to be made to the marshal they must be done immediately upon landing.

No ground marker may be declared as having more than one position.

Scoring

$$\left(750 \times \frac{NB_v}{NB_t} \right) + \left(250 \times \frac{T_{min}}{TP} \right)$$

Tmin is defined as the shortest time in each group of pilots who have found the same number of ground markers.

TP is scored as zero if the pilot has found less than 50% of the available number of ground markers.

C/NAV-ECO1 - Navigation-Economy; maximum distance between turnpoints

Objective

To fly the maximum distance with limited fuel between turn points of pilot's choice.

Description

The pilot may choose his route between any number of given turn points.

Special rules

No turn point may be recorded more than once.

If a turnpoint is incorrectly recorded then the distance between the previous correct turn point and the subsequent correct turn point will be scored.

Scoring

$$1000 \times \frac{\text{KmP}}{\text{KmMax}}$$

C/NAV-ECO2 - Navigation-Economy; maximum distance & turnpoints

Objective

To fly the maximum distance past as many turn points of the pilot's choice as possible with limited fuel.

Description

The pilot may choose his route between any number of given turn points.

Special rules

No turn point may be recorded more than once.

If a turnpoint is incorrectly recorded then the distance between the previous correct turn point and the subsequent correct turn point will be scored.

Scoring

$$\left(1000 \times \frac{\text{KmP}}{\text{KmMax}} \right) + (\text{NBv} \times 100)$$

C/NAV-ECO3 - Navigation-Economy; maximum distance around a course

Objective

To fly the maximum distance with limited fuel between a series of given turn points.

Description

The pilot shall fly a given route between turn points which could be a circuit which may be flown more than once.

Special rules

If a turnpoint is incorrectly recorded then the distance between the previous correct turn point and the subsequent correct turn point will be scored.

Scoring

$$1000 \times \frac{\text{KmP}}{\text{KmMax}}$$

C/NAV-ECO4 - Navigation-Economy; maximum distance around a course & return

Objective

To fly the maximum distance with limited fuel between a series of given turn points and return to the deck.

Description

The pilot shall fly a given route between turn points which could be a circuit which may be flown more than once but must return to the deck.

Special rules

If a turnpoint is incorrectly recorded then the distance between the previous correct turn point and the subsequent correct turn point will be scored.

Outlanding: Score zero.

Scoring

$$1000 \times \frac{\text{KmP}}{\text{KmMax}}$$

C/NAV-ECO5 - Navigation-Economy; max. distance around a course without return

Objective

To fly the maximum distance.

Description

The pilot shall fly a given route between a number of turn points. Thereafter he shall fly the greatest distance possible in a direction of his choice.

Special rules

The distance scored is that distance between the last correct turn point and the outlanding.

Distance 'lost' through incorrect turnpoints will be subtracted from KmP.

Scoring

$$1000 \times \frac{\text{KmP}}{\text{KmMax}}$$

C/TEMPS-ECO1 - Economy with estimated time

Objective

To fly the longest possible time with limited fuel, landing back on the deck with the smallest possible deviation from a pilot declared endurance.

Special rules

Free take-off within the time window.

Departure from view of the marshals or egress from the permitted flight area will incur penalties.

Outlanding: Score zero.

No declared endurance: ETP = zero.

Scoring

$$\left(750 \times \frac{\text{TP}}{\text{Tmax}} \right) + \left(250 \times \frac{\text{ETmin}}{\text{ETP}} \right)$$

C/VIT-MAXMINI1 - Slow / fast speed

Objective

To fly a course as fast as possible and then return along the course as slow as possible.

Description

A straight course between 250m and 500m long and 25m wide is laid out with gates at each end.

The pilot makes a timed pass along the course as fast as possible, turns, and makes a second timed pass in the opposite direction as slow as possible.

Special rules

If the pilot touches the ground during the first pass: $VP_1 = \text{zero}$ & $EP = \text{zero}$

If the pilot touches the ground during the second pass: $VP_2 = \text{zero}$ & $EP = \text{zero}$

If the body of the pilot overflies a side of the course: Score zero.

If the pilot zigzags: Score zero

If the pilot flies more than 2m above ground during either leg of the course: Score zero

Scoring

$$\left(250 \times \frac{VP_1}{V_{\max}}\right) + \left(250 \times \frac{V_{\min}}{VP_2}\right) + \left(500 \times \frac{EP}{E_{\max}}\right)$$

C/VIT-MAXI1 - Speed, including take-off

Objective

To fly a course with one or more landings as fast as possible and return to the deck.

Description

The pilot leaves the deck and flies to the first landing point. He lands, signs a ticket, takes off and flies to the second landing point, and so on.

Special rules

The clock starts at the moment of the start of the first attempt to take-off.

The clock stops the moment the pilot either crosses a line or lands back on the deck.

Assistance: Score zero.

Scoring

$$1000 \times \frac{T_{\min}}{TP}$$

C/VIT-ECO1 - Speed with economy

Objective

With limited fuel, to fly a course as fast as possible, cross a line, then stay airborne for as long as possible and return to the deck.

Description

Part 1: With limited fuel the pilot shall fly a given route as fast as possible between a number of turn points and cross a line where the time will be taken and part 2 starts.

Part 2: The pilot shall stay airborne for as long as possible.

Special rules

If any turnpoint is incorrectly recorded: $TP_v = \text{Zero}$

In part 2: Departure from view of the marshals or egress from the permitted flight area will incur penalties.

Outlanding: Score zero.

Scoring

$$\left(500 \times \frac{T_{\min V}}{TP_v}\right) + \left(500 \times \frac{TP_e}{T_{\max E}}\right)$$

C/ECO-VIT1 - Economy with speed

Objective

With limited fuel, to stay airborne for as long as possible, cross a line and fly a course as fast as possible and return to the deck.

Description

Part 1: With limited fuel the pilot shall stay airborne for as long as possible then cross a line where the time will be taken and part 2 starts.

Part 2: The pilot shall fly a given route as fast as possible between a number of turn points

Special rules

In part 1: Departure from view of the marshals or departure from the permitted flight area will incur penalties.

If any turnpoint is incorrectly recorded: TPv = Zero

Outlanding: Score zero.

Scoring

$$\left(500 \times \frac{TPe}{T_{maxE}} \right) + \left(500 \times \frac{T_{minV}}{TPv} \right)$$

C/ALT-MAX1 - Altitude

Objective

With limited fuel, to reach the greatest altitude and return to the deck.

Description

With limited fuel, the pilot should climb to the greatest possible altitude and at that moment take a photograph directly overhead a turnpoint then return to the deck.

Special rules

Photograph not taken exactly overhead the turnpoint: zero score.

Scoring

$$1000 \times \frac{AP}{A_{max}}$$