TASK CATALOGUE

Version 1 – 05/2022

FOR THE 2022
BRITISH OPEN PARAMOTOR CHAMPIONSHIPS
AND
BRITISH NATIONAL PARAMOTOR CHAMPIONSHIPS

Location: Wingland Airfield, Lincolnshire
July 2022

Organizer:	British Paramotor Competitions Committee (a panel of the BHPA)
	Barney Townsend (Chairman and Competition Director)
	Andy Phillips (Deputy Competition Director)
Telephone:	07760 128414
Email:	contact@ppgcomps.co.uk
Official Web Site	http://www.ppgcomps.co.uk

CONTENTS

With thanks to our 2022 Championship Sponsors:

EST. 1974
GREEN DRAGONS
AIRSPORTS

paraJET

NORTHERN SKIES
PARAMOTORING

SKYBOUND
AVIATION LIMITED

DUDEK

MINI PLANE UK
THE LIGHTER CHOICE

OZONE

Cross Country

bulldog

FlySpain

CUSTOM AIR
PARAMOTORS

Foot Flight Paramotors

1. Introduction

1.1 INTRODUCTION

Since 2018, the British National Paramotor Championships have followed the FAI 'Endurance' format, in which the emphasis is on long distance navigation, maximising flying hours for pilots and minimising extensive briefings or complex rules. There are two key objectives to our championship structure: firstly to award trophies to the pilots that demonstrate the highest degree of skill through tasks that accurately represent the flight planning, decision making, and aircraft control necessary to fly paramotors safely and enjoyably; secondly, to promote and encourage pilot skill development, providing a safe and nurturing environment in which pilots at any level can expand their skills by learning from the top pilots in the country.

Fundamentally, the competition is a compilation of navigational and piloting challenges, most of which can be attempted at any point during the allowed flying hours of the competition, that takes place over a period of several days. Further bonus points can be gained by collecting turn points en-route to and from the precision tasks. Pilots are permitted a maximum number of flying hours each day, within a longer flying window that utilises the majority of daylight hours. Pilots may make any number of flights and refuelling stops within each daily flying period. Pilots will normally conclude their day's flying by returning to the airfield; occasionally an alternative final landing point may be briefed if windy conditions dictate. Careful flight and weather planning across the period of the competition is therefore essential, as is equipment selection to maximise the distance/fuel economy balance of long distance flight.

Key features of the paramotor endurance format are:

- Large competition map area (approximately 10,000 km^2), with minimal restrictions and no fly zones.
- Many hours flying over spectacular and varied terrain.
- A strong focus on personal flight planning, airborne decisions and practical paramotoring and piloting skills.
- Free choice of flight windows up to a maximum (specified) limit of airtime hours per day, within a larger task window that utilises the majority of daylight hours.
- Principle task points available for precision navigation by flying prescribed routes. Some of these may also require pre-declared speed elements.
- Bonus task points available for collecting turn points en-route to and from precision tasks
- Minimum of briefings and penalties.
- Simple and fast scoring, using live GPS tracking to follow pilots.

1.2 DISCOVERY CLASS

The Discovery Class recognises that not all pilots are confident in navigating without the use of GPS. It gives new entrants an opportunity to try out competition flying, and develop their skills without committing to the challenge of navigating with paper maps only.

Pilots will fly exactly the same tasks as the main championship, with the simple exception that they are permitted to use GPS for navigation in addition to the issued maps, and they are not subject to restrictions on the use of smartphones or other navigation aids. They are also not required to make pre-flight declarations (although they are encouraged to do so for training purposes), or to switch off their engines at 500ft for precision landing tasks. As an official competition class, there will be trophies awarded for 1st, 2nd, and 3rd place in the Discovery class.

Specific details of 'Discovery Options' as a variation to the full task are described in the individual task catalogue sections.

1.3 CLUB PILOT CLASS

New in 2020, we introduced a class through which Club Pilots in training, looking to develop their skills and attain their BHPA Pilot (Power) rating have the opportunity to achieve this through attending the championships, participating in some tasks specifically designed for their level of experience, building their logged airtime hours, and learning from some of the most experienced pilots in the country. This was highly successful, repeated in 2021, and now continued for 2022

This class will be overseen by Competitions Committee member and highly experienced paramotor instructor Andy Shaw, of Green Dragons paramotor school. Pilots will be tasked with a structured series of flights based on the BHPA training scheme, supported of a number of theory rand flight planning seminars given during the period of the competition.

Pilots in this class will participate in all main competition briefings but will also have a structured series of training session and seminars to help them learn and plan a series of bespoke navigation tasks, based on those in this catalogue, but designed to match their experience level, and separate from the main competition for safety reasons. They may carry any GPS or navigation aids that they wish to, and have dedicated BHPA instructor support throughout.

The class will be scored in a 'friendly' format and trophies will be awarded. Pilots will register in teams through their BHPA club, and all tasks are planned as a group exercise in training seminars. This reduces pressure on pilots because only the best two scoring pilots from the team will count for each task, but it is important to have the scoring to offer a gentle taster of the excitement and rewards that paramotor competition can bring. CP pilots wishing to enter should discuss it first with their club coach, and also contact Andy Shaw.

On the final day of the event, CP pilots will be given the opportunity to sit the written exam for their Pilot (Power) rating, overseen by a BHPA examiner.

1.4 CHAMPIONSHIP CLASSES

Competitors may enter in the following classes:

British Open Championship Classes:	Discovery Classes:	Club Pilot Class
PF1: Solo Footlaunch Paramotor	PF1d: Solo Footlaunch Paramotor (Discovery)	PF1cp: Solo Footlaunch Paramotor (CP)
PF1f: Solo footlaunch Paramotor Female (valid with minimum 4 female pilots)		
PL1: Solo Paramotor Trike	PL1d: Solo Paramotor Trike (Discovery)	

1.5 COMPETITION MAPS

One full set of colour printed competition maps will be provided to each competitor. The following features will be indicated on the official competition map:

AF: Airfield.
Does not score as a turnpoint unless also briefed as a precision landing task.

TP: A standard turnpoint to be flown through, defined by a circle of 250m radius centered on a map feature. Landing here is forbidden and invalidates the score. Score value of turnpoints is increased by distance from the airfield, and the values of each will be clearly indicated on the map. Pilots score the maximum available points for the first time each TP is crossed in the competition, and a further 1 point for each time they cross it thereafter, so long as a minimum of three other turnpoints have been crossed in the intervening period.

SL/FL: A start/finish point. These will be a line between two clearly defined features on the map close to the airfield. All pilots must pass through one of these on their outbound climb and inbound landing approaches in order to activate and then stop their flight allowance timer for all tasks. There is no score for passing through them; but for pilots who land without having passed through an SP/FP on both their outward and return flights, their flight times will be computed from take-off and landing on the airfield itself. If there is more than one SP/FP defined, they can be used independently. EG in any single flight, a pilot might activate their time by passing SP/FP1, but they may return through either SP/FP1, or SP/FP2, according to their personal flight plan.

FD: A Fuel Depot point.
Marshal controlled refuelling point. Pilots should bring adequate spare fuel containers to provide marshals with reserves before flying each day. Performing a normal landing at these points will score the same as with turnpoints, 2 points for the first time it is used as a landing and 1 point each time thereafter. FD points may also contain a precision landing task, if briefed. There will be a maximum of two of FD points.

HG: A Hidden Gate.
Hidden Gates are a straight line 250m wide perpendicular to the briefed track (i.e. 125m to each side). They are used for scoring navigation or timing accuracy as per tasks 2.2, 2.3, and 2.4

NFZ: No-Fly Zone.
This may be CAA restricted airspace, or additional local restrictions. Incursions will typically incur a 50% reduction in the points scored for that day's flying, or more at the discretion of the director.

Pilots in Open Championship classes must fly only with the maps provided or the CAA air map and may not use any additional navigation aids.

Pilots in Discovery and CP Teams classes may fly with any additional maps, GPS units, google earth images etc that they wish to.

1.6 BRIEFINGS, TASK WINDOWS, AND FLYING HOURS

The intention of this format is to minimise the number and length of competition briefings. The first briefing will take place at 9pm of the evening before the first day's flying (Wednesday 6th July), at which all essential information relating to the tasks, the map area, and the flying site and local rules will be given. Competitors should plan to arrive on site during the daytime of Wednesday 6th.

Competition maps (not including the precision routes) will be distributed digitally one week in advance of the competition to all pilots who have registered in advance. This is to remove the incentive for late-night planning and the consequent lack of sleep that would arise from distributing them the evening before. Printed copies of these maps with precision routes included will be available on arrival at the site and pilot registration, and will be described at the first briefing.

Short 'top-up' briefings will be held after flying concludes on each day of the competition thereafter, at which further specific information relating to the following day's flying will be given. According to requirements of weather or other factors, additional briefings may still be called at other points during the competition if necessary.

The task window will normally be open from 0630 to 2100 daily, throughout each day of the competition, unless briefed otherwise.

A maximum total number of airtime hours a pilot may fly for any particular competition day will be defined by the director at the evening briefing the night before. This will be based on weather forecasts, and will be no more than 5 hours for any one day.

Airtime will be computed automatically from the GPS track, and there will be a penalty for exceeding this. The computation of airtime shall be defined as the time between the first time a pilot crosses one of the defined SP/FP points after takeoff, and the final time that they pass an SP/FP point before landing. This rule is in place for safety reasons, because it removes any incentive to rush a landing approach in order to avoid penalties for a late return. For pilots who fail to cross the SP/FP on either their outbound or return flights, their flight time will be computed from the precise moments of take-off and landing at the airfield, and all points gained on that particular flight will be subject to a 20% penalty.

1.7 FUELLING

Competitors wishing to use the option to refuel at the FD (Fuel Depot) zones during the tasks should bring their own containers to the championship which they can give to the marshals who will be on duty in the FDs. There will be a maximum of two FDs designated for any particular day's flying.

For any particular flying day, the director may brief a maximum limit to the amount of fuel that can be used (as per task 2.5). When such a task is defined, landings and takeoffs will only be performed at the Airfield, i.e. where marshals can monitor pilots during refuelling. When fuel is limited in this way, the amount of fuel will be specified by the director at the briefing. The amounts of fuel allowed may be different for each competition class.

Open Championship classes: fuelling to the specified limit will be done under supervision of marshals and fuel tanks will be sealed by marshals before flight.

Discovery classes: the same fuel limitation applies but Discovery pilots may carry as much fuel as they wish; fuel will be measured by weighing pilot+machine into and out of the flight deck. Failure to be weighed into / out of the deck will result in 0 score for that task.

1.8 LANDINGS / OUTLANDINGS

During the tasks, pilots may land in the Airfield, or in FD (Fuel Depot) points to refuel. Any of these landings may be used as a rest break or a pause for strategic reasons, but the pilot must eventually take off again from these points and continue their flight, finally returning to the airfield (or such other final landing point as defined in the briefing) to complete the days tasks, in order for these not to count as an outlanding.

Pilots are expected to conclude their day's tasks by landing back at the airfield, or another final landing point if defined in the briefing. Failure to do so, or landing at any point not designated as a landing zone, will be considered an Outlanding.

Outlandings as described above shall result in a 50% reduction in the points scored by the pilot for the day's flying up to the point of outlanding. If a pilot outlands with an engine or other problem during the task, they may, within the flying window, and if it is safe to do so, repair their aircraft, and continue flying to score more points for the day; these points will not be subject to any further penalty. Pilots may return to the airfield to make these repairs if necessary and if transport is available. When resources allow, roving marshal teams in vehicles will be assigned to assist with retrievals.

If a pilot has an outlanding, they must inform the organisers by telephone, with the minimum of delay and at the latest by the closing time of the task. If carrying a basic mobile phone (Open Championship Classes), they may do this without further penalty on top of the 50% for the outlanding. If the aircraft can be repaired in the field, a pilot may take off again and continue the task without further penalty. If they need to break the seal on either a

smartphone (or the fuel system, if defined), the 50% penalty applies to all points scored up to the point at which the phone is re-sealed by a marshal.

Upon outlanding, a pilot must fold up their canopy within 3 minutes of landing. A canopy that has not been folded within three minutes indicates that 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. A competitor landing to help an injured pilot shall not, at the discretion of the Director, be disadvantaged by this action.

The above procedure is evidently not applicable when the wing is being laid out for takeoff, but pilots should beware not to leave the equipment laid out ready and then wait for long periods before taking off.

1.9 ELECTRONIC EQUIPMENT

All pilots shall carry a Flight Recorder which will be issued by the competition organisers. This should be kept switched on and logging throughout flight to enable scoring. Competitors may carry a backup GPS unit of their own, but if competing in the Open Championship this must be sealed before flight and signed off by a marshal. The above rule does not apply to Discovery or Club Pilot Classes, who may use whichever GPS aids they wish to.

Competitors in Open Championship classes are not permitted to use any other navigational aids except in the case of task 2.5, if briefed. Smartphones with Internet or GPS capability may be carried as a back-up but must checked as switched off and be sealed by marshals before flight. Competitors are advised to carry a ‘basic’ non-GPS or internet enabled phone, which may be carried unsealed during flight, and this number will be used for notification of task cancellations. This will also enable pilots to telephone marshals for retrieval in the event of landing out without further penalty.

Sealed devices may only be unsealed during a day’s flight in order to change batteries. This must be done in the presence of marshals at the airfield or at FD points.

1.10 AIRCRAFT AND OTHER EQUIPMENT

Each 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 and carburettor jets may be changed. Any further changes to equipment, i.e. replacement of parts as a result of damage, must be approved by the director. Such changes will normally be permitted, but will be subject to a default penalty of 20% applied to any subsequent tasks flown, in which the replacement equipment is deemed by the director to offer any potential advantage to the pilot. For tasks in which no advantage can be gained by the used of the replaced equipment, this penalty may be waived, again at the director’s discretion.

Aircraft must be flown with manufacturer standard fuel systems only; no pilot modifications to fuel systems such as additional tanks are permitted, except for standard maintenance replacement of fuel pipes, bulbs, and filters. This restriction includes the use of header tanks or “comp bottles” unless they are installed and certified by the manufacturer of the paramotor and available as a standard option on paramotors for sale to the public. There is no need to carry additional or extended fuel tanks because pilots may land to refuel as many times as they need to.

A protective helmet must be worn whenever the pilot is strapped into the harness of an aircraft. Paramotor engines may only be started on the back of the pilot (i.e. not resting on the ground), and when the pilot is wearing a helmet.

An emergency parachute system is mandatory.

All pilots’ equipment may be subject to inspection by marshals at any time during the competition and the pilot may be prevented from flying if deemed to be unsafe.

1.11 ASSISTANCE TO PILOTS

Any assistance to pilots on the ground is encouraged, but no assistance may be given to Open Championship class pilots in-flight, or in any way regarding their navigation.

As described in 1.7, any pilot observing that another pilot has landed and has not folded their canopy within 3 minutes is obliged to render assistance. The director will decide on appropriate measures after the event to ensure that this does not disadvantage the pilot giving assistance.

1.12 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. At any time, the Director may decide to cancel the task, for sporting or safety reasons.

Because weather across the whole competition area may vary significantly, it is pilots’ sole responsibility to make appropriate decisions whether and where to take off or not, where and when to fly and land and to take care of their own safety.

1.13 CHAMPIONSHIP VALIDITY

The Open and Discovery Championships will be considered valid if a minimum of the equivalent of 5 hours task flying throughout the period of the championship is available and open to competitors.

The Club Pilot Championship will be considered valid if one navigation task is successfully flown.

2. Task details

The following navigation tasks descriptors 2.1, 2.2, and 2.3 provide details of the principles by which tasks will be presented on the official competition map. It should be noted that these task formats may be presented in combination with each other in any particular route given. This will be clearly indicated on the map and described in the initial competition briefing.

2.1 PRECISION CURVE NAVIGATION

Objective

To fly a prescribed course between two points as marked within the main competition map, without deviating from the width of the corridor defined in the task. Hidden gates will be placed at unknown points along the line.

Special rules

- TPs used to mark the course do not count for scoring the primary navigation task, and will not be designated LZ landing zones.
- The corridor for the course extends the width of the hidden gates, 125m perpendicularly to either side of the given track line.
- The number of hidden gates on the track line, and the approximate length of the curve, and the total point score available for the course, will be given in advance.
- The track line must be flown in the direction indicated on the map
- Backtracking within the width of the corridor, or flying the course in the wrong direction, results in 0 score for this particular precision part of the course. This is for obvious safety reasons.

Scoring

Each Hidden Gate passed correctly in the air will score 5 points. The total number of HG points available for any specific instance of this task will be displayed on the competition map.

.

2.2 PRECISION NAVIGATION WITH DECLARED SPEED

Objective

To fly a prescribed course between two or more turnpoints, declaring the time of arrival at each turnpoint, in seconds from the start point of the track. Hidden gates will be placed at unknown points along the line.

Special rules

- TPs used to mark the course do not count for scoring the primary navigation task, and will not be designated LZ landing zones.
- The corridor for the course extends the width of the hidden gates, 125m perpendicularly to either side of the given track line.
- The track line must be flown in the direction indicated on the map
- Backtracking within the width of the corridor, or flying the course in the wrong direction, results in 0 score for this particular precision part of the course. This is for obvious safety reasons.
- Pilots intending to participate in this task must submit their declaration sheet to marshals before their first takeoff from the airfield each day.

Scoring

Arrival at each timing point:

< +/- 10 seconds of declared time: 4 points

< +/- 20 seconds of declared time: 3 points

< +/- 30 seconds of declared time: 2 points

> 30 seconds difference from declared time: 0 points

Each Hidden Gate passed correctly in the air will score 2 points.

The total number of HG and TP points available for any specific instance of this task will be displayed on the competition map.

.

2.3 PRECISION NAVIGATION WITH CONSTANT SPEED

Objective

To fly a prescribed course between two or more turnpoints, at constant speed on each leg. Hidden timing gates will be placed at unknown points along the line, for which an ETA will be calculated from pilot's time of arrival at the next turnpoint in the course.

Special rules

- TPs used to mark the course do not count for scoring the primary navigation task, and will not be designated LZ landing zones.
- The corridor for the course extends 125m perpendicularly to either side of the given track line.
- The number of hidden gates on the course line will be given in advance
- The track line must be flown in the direction indicated on the map
- Backtracking within the width of the corridor, or flying the course in the wrong direction, results in 0 score for this particular precision part of the course. This is for obvious safety reasons.

Scoring

Arrival at each timing point:

< +/- 10 seconds of target time: 6 points

< +/- 20 seconds of target time: 4 points

< +/- 30 seconds of target time: 3 points

> 30 seconds difference from target time: 0 points

The total number of TP points available for any specific instance of this task will be displayed on the competition map.

.

2.4 OPEN NAVIGATION - TURN POINT HUNT

Objective

To fly a course of the pilot's choice between as many turn points or markers as possible within a given maximum time period.

This task is intended to allow pilots to gain bonus points en-route to and from the other navigation tasks in this catalogue.

Special rules

- This task runs daily throughout the competition. It is defined as a new task for each day of competition.
- Daily task window of available flight time to be specified by the director and briefed. Barring adverse weather conditions, this is normally expected to be between 0700 and 2000.
- Daily maximum number of pilot airtime hours to be specified by the director and briefed. 5 hours will be standard.
- All turnpoints shown on the maps provided are included in this task, unless otherwise briefed.

- According to the briefing, pilots may be required to pass a particular start and finish gate to activate the task.

Scoring

Turn point score weightings will vary between 1 and 3 points according to their distance from the Airfield. These will be clearly indicated on the published maps.

Each TP passed correctly in the air for the first time will score its full point value. Subsequent passes of that turnpoint, at any time during the remainder of the competition flying days, will not score any points. But neither will they be penalised if crossed inadvertently whilst en-route towards other tasks.

Penalty for exceeding maximum defined airtime or task window: 1 point per minute over allowed time.

Penalty for returning to the airfield by any means other than flight (i.e. outlanding): 50% of that day's points scored up to the point of landing. This includes any points scored on precision tasks.

2.5 DISTANCE ECONOMY – FAI TRIANGLE

Objective

To take off from the deck with a limited amount of fuel by weight and fly a triangular course of pilot's choice, maximising distance covered, and returning to land within the airfield. If possible, this task will be set to specifically emulate an FAI record category and it may be possible for pilots to set world records if conditions allow.

Special rules

- All 3 legs of the chosen triangle must be between 28% and 38% of the total length.
- Pilots in the Open Championship class will have fuel measured by weight before takeoff.
- Pilots in Discovery class may carry as much fuel as they wish for the task to avoid risk of outlandings. If the fuel limit is exceeded, their score for the task will be reduced according to the penalties defined below. Pilot+Machine will be weighed at the airfield before take-off, and immediately upon landing.
- Fuel tanks will be sealed by marshals before takeoff, and checked again on landing.
- Normally precision landing tasks (2.6 and 2.7) will not be included when this task is set to avoid the risk of pilots burning fuel whilst stacking for a landing approach.
- When this task is set, all other navigation tasks (i.e. 2.1, 2.2, 2.3 and 2.4) are deactivated for the period of this task.
- According to the briefing, pilots may be required to pass a particular start and finish gate to activate the task.
- This is the only task for which Open Championship pilots may, if it is defined in the briefing, be allowed to carry GPS navigational aids. This is to enable, if conditions allow, longer distances to be covered that take pilots beyond the limits of the standard competition map.

Scoring

Pilot score = $N \times \frac{D_p}{Dmax}$

Where:

N = A multiplier to be defined at the briefing. This will vary between 40 and 80 points, and will be set by the director based on the balance of points available from other task types according to the amount of flying enabled by weather.

Dp = The pilot's distance calculated by the straight line distance between the centres of the three turnpoints used

Dmax = The maximum distance covered by any pilot in the class

The outcome of the calculation will be rounded to the nearest whole number.

Penalty for exceeding maximum defined airtime or task window: 2 points per minute over allowed time.

Penalty for exceeding maximum allowed fuel limit (discovery class): 2 points per 100ml fuel over limit.

Penalty for breaking the seal on fuel tanks outside of marshal supervision: 100%

Penalty for returning to the airfield by any means other than flight (i.e. outlanding): 75% of the points scored up to the point of landing during this task only.

2.6 PURE ECONOMY

Objective

Take-off with a measured quantity of fuel and remain airborne for as long as possible before returning to the landing deck.

Special rules

- Pilots in the Open Championship class will fly with limited fuel, measured by weight before takeoff.
- Pilots in Discovery class may carry as much fuel as they wish for the task to avoid risk of outlandings. If the fuel limit is exceeded, their score for the task will be reduced according to the penalties defined below. Pilot+Machine will be weighed at the airfield before take-off, and immediately upon landing.
- Fuel tanks will be sealed by marshals before takeoff, and checked again on landing.
- Normally precision landing tasks (2.6 and 2.7) will not be included when this task is set to avoid the risk of pilots burning fuel whilst stacking for a landing approach.
- When this task is set, all other navigation tasks (i.e. 2.1, 2.2, 2.3 and 2.4) are deactivated for the period of this task.
- According to the briefing, pilots may be required to pass a particular start and finish gate to activate the task.

Scoring

Pilot score = $N \times \frac{T_p}{Tmax}$

Where:

N = A multiplier to be defined at the briefing. This will vary between 40 and 80 points, and will be set by the director based on the balance of points available from other task types according to the amount of flying enabled by weather.

Tp = The pilot's time,

Tmax = The longest time taken to complete the task

The outcome of the calculation will be rounded to the nearest whole number.

Penalty for exceeding maximum defined airtime or task window: 2 points per minute over allowed time.

Penalty for exceeding maximum allowed fuel limit (discovery class): 2 points per 100ml fuel over limit.

Penalty for breaking the seal on fuel tanks outside of marshal supervision: 100%

Penalty for returning to the airfield by any means other than flight (i.e. outlanding): 75% of the points scored up to the point of landing during this task only.

2.7 SPOT LANDING

Objective

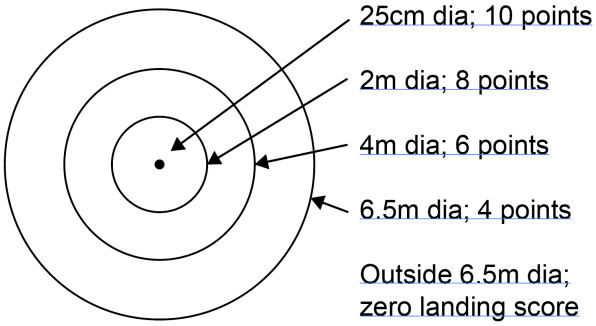
To land with engine off as near as possible to a target.

Description

This task will be located at the airfield or at one or more of the FD fuel depot points, as briefed. The location will be briefed in advance.

On approach, the pilot should circle the field at minimum 500ft to indicate to marshals that they are intending to attempt the task. If there are other pilots ahead of them in the queue, they should stack in a circuit above them, over a field to the side of the target. Circuit locations will be briefed in advance.

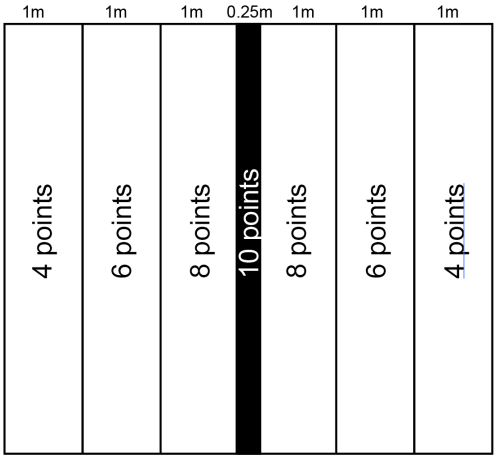
When given a green flag by marshals, they should pass at least 500ft directly overhead the target, cut the engine and try to make a first touch as near as possible to the centre of a target consisting of:



- A series of concentric circles for PF1 and PF2 classes.
- A series of 5m wide parallel strips for PL1 and PL2 classes

Special rules

- There are no points awarded for flying through or simply landing in an FD point without attempting the landing task.
- A pilot may only attempt each available landing task once per day of flying. They may still land normally in FD points for fuel or rest breaks.
- The circuit to be flown will be detailed at briefing.
- The first touch of the ground by the pilot's foot (PF) or the aircraft wheels (PL) is the point from which the pilot's score will be derived. A first touch on the line scores the higher score. When more than one PL wheel touches simultaneously, the point chosen is the one in favour of the pilot.
- For PF classes, there will be no penalty applied for any part of the aircraft touching the ground prior to the first scoring touch of the foot or wheels, so long as a ‘good’ landing is achieved, as described in S.10 A3, 3.3.5.



Outside rectangle: zero landing score

- If a pilot runs out of fuel whilst in a queue for the task, they will be permitted to refuel and attempt the task again.

Penalties

Not crossing the gate or crossing it with engine on: zero landing score.

Flying less than 45 seconds with no engine: zero landing score (Open championship classes only).

Falling over during landing or two knees on the ground: zero landing score.

Scoring

Bullseye: 10 points

Inner ring: 8 points

2nd ring: 6 points

Outer ring: 4 points

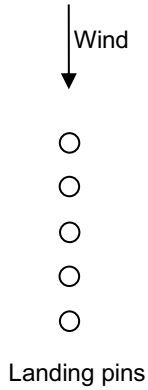
Discovery class

Discovery pilots are not required to switch their engine off for the task, but should idle it and attempt not to use the throttle on approach unless necessary for safety reasons.

2.8 BOWLING LANDING

Objective

Land with the engine off, hitting as many pins as possible.



Description

This task will be located at the airfield, or at one or more of the FD fuel depot points, as briefed. The location will be briefed in advance.

5 or more pins are placed along a line into wind in the landing area at regular intervals between 1 and 2 m. The pins are 50 cm high for PF classes and 100 cm high for PL classes and they are covered by dense foam. Pins will be simply standing on the ground. A pin is said to be hit when it is knocked down.

On approach, the pilot should circle the field at minimum 500ft to indicate to marshals that they are intending to attempt the task. If there are other pilots ahead of them in the queue, they should stack above them, over a field to the side of the target. Circuit locations will be briefed in advance.

When given a green flag by marshals, they should pass at least 500ft directly overhead the target, and cut the engine.

They will fly a minimum of 45 seconds and will try to hit as many pins as possible before touching the ground. Each pin knocked down before touching the ground is scored as a successful hit.

Special rules

- There are no points awarded for flying through or simply landing in an FD point without attempting the landing task.
- A pilot may only attempt each available landing task once per day of flying. They may still land normally in FD points for fuel or rest breaks.
- The circuit to be flown will be detailed at briefing.
- The first touch of the ground by the pilot's foot (PF) or the aircraft wheels (PL) is the point from which the pilot's score will be derived. A first touch on the line scores the higher score. When more than one PL wheel touches simultaneously, the point chosen is the one in favour of the pilot.
- For PF classes, there will be no penalty applied for any part of the aircraft touching the ground prior to the first scoring touch of the foot or wheels, so long as a ‘good’ landing is achieved, as described in S.10 A3, 3.3.5.
- If a pilot runs out of fuel whilst in a queue for the task, they will be permitted to refuel and attempt the task again.

Scoring

Each pin hit successfully is worth 2 points.

Penalties

Not overflying the target or crossing it with engine on: zero landing score.

Flying less than 45 seconds with no engine: zero landing score (Open Championship classes only)

Falling over during landing or two knees on the ground: zero landing score.

2.9 PRECISION WING CONTROL

Objective

Land and display precise control of the wing before taking off again.

Description

This task will normally be flown in wind conditions in which a reverse launch is possible. A straight course consisting of two sticks is laid out facing approximately into wind. The precise distance between the sticks is arbitrary but they should be a minimum of 100m apart. The pilot enters the course into wind. They must kick the first stick to start their time. They must then land in between the two sticks, bringing the wing down such that the trailing edge is clearly seen to touch the ground.
When a marshal has confirmed that wing has touched the ground they will show a green flag as a signal that the pilot may take off again.
The pilot will then launch and kick the second stick to stop the timer.

Special rules

A valid strike on a stick is:
EITHER one where the pilot or any part of the Paramotor has been clearly observed to touch it.
OR when electronic 'kick stick' sensors which have been shown to meet the standard tests are used, a valid strike is one which is recorded by the device.
- The clock starts the moment the pilot kicks the first stick and stops the moment he kicks the second stick.
- The pilot may have 3 attempts at kicking each stick.
- If the pilot relaunches the wing before being shown a green flag by the marshal they will incur 100% penalty for the task.
- If a launch fails the pilot may make as many attempts as they need to relaunch the wing,within the specified time limit.
- The maximum time allowed for a pilot to complete the course is 3 minutes.

Scoring

Pilot score = $N \times \frac{T_{min}}{Tp}$

Where:

N = A multiplier to be defined at the briefing. This will vary between 20 and 40 points, and will be set by the director based on the balance of points available from other task types according to the amount of flying enabled by weather.

Tp = The pilot's recorded time,

Tmin = The shortest pilot time taken to complete the task

The outcome of the calculation will be rounded to the nearest whole number.

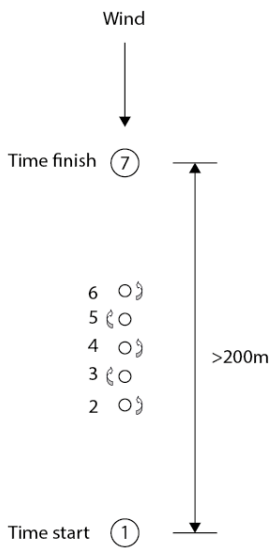
2.10 PRECISION WING CONTROL – GROUND HANDLING

Objective

Land and display precise control of the wing before taking off again.

Description

A straight course consisting of two sticks is laid out facing approximately into wind. The precise distance between the sticks is arbitrary but they should be a minimum of 200m apart.
At the center point between the sticks a minimum of five pins are placed in line with the sticks. The pins are small plastic cones of the type used in sports training. The task director will specify the distance between each pin at the briefing
The pilot enters the course into wind. They must kick the first stick to start their time. They must then land before the first pin, keeping the wing flying in the air above them.
Whilst kiting the wing, they should walk or run through the course of pins, turning in alternate directions around each one to follow a slalom course. The body of the pilot must be clearly observed to pass outside of the line of pins when making each turn, and they must not touch any of the pins. After the pilots has passed the final pin, they will then launch as quickly as possible and kick the second stick to stop the timer.



Special rules

- A valid strike on a stick is:
EITHER one where the pilot or any part of the Paramotor has been clearly observed to touch it.
OR when electronic 'kick stick' sensors which have been shown to meet the standard tests are used, a valid strike is one which is recorded by the device. - The clock starts the moment the pilot kicks the first stick and stops the moment he kicks the second stick.
- The pilot may have 3 attempts at kicking each stick.
- The pilot may turn either to the left or to the right when rounding the first of the pins, so long as they alternate the turn direction on each subsequent pin. - If the wing drops to the ground whilst the pilot is running through the slalom course they may relaunch it as many times as they need within the specified time limit.
- The maximum time allowed for a pilot to complete the course is 3 minutes
- Each pin that is touched by the body of the pilot in the course counts as a missed target.
- Each time the pilot fails to turn outside the line of pins it counts as a missed target.

Scoring

Pilot score = $N \times \frac{T_{min}}{T_{pen}}$

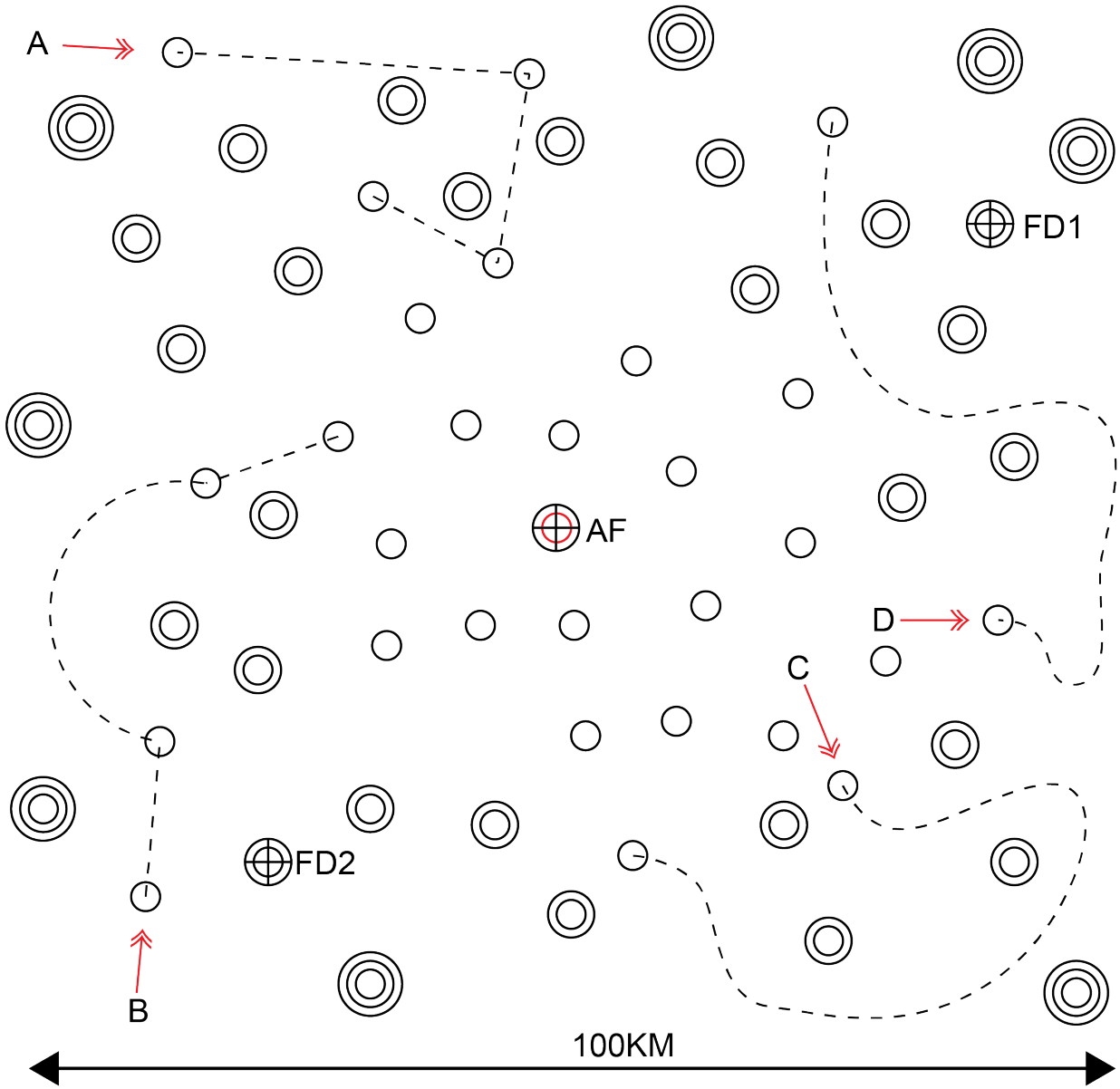
Where:

N = A multiplier to be defined at the briefing. This will vary between 20 and 40 points, and will be set by the director based on the balance of points available from other task types according to the amount of flying enabled by weather.

Tmin = The shortest pilot time taken to complete the task (after penalties for missed targets)
Tp = The pilots recorded time in the course
M = the number of missed targets
Vpen = the time penalty for each missed target (seconds)
Tpen = The pilots time (after penalties for missed targets) = Tp + M * Vpen

The outcome of the calculation will be rounded to the nearest whole number.

3. Example Competition Maps and Information for Pilots



FEATURE	NOTES	POINTS VALUE
○	TP – Standard Turnpoint	No. of rings indicates value of points for first crossing in the air. i.e. 1 ring = 1 point, 2 rings = 2 points, 3 rings = 3 points 1 point for each further crossing (only after minimum 3 other TPs have been crossed in between)
⊕	FD – Fuel Depot	2 points for first landing 1 point for each further landing (only after minimum 3 other TPs have been crossed in between)
⊕ AF	AF - Airfield	No points for flying through or performing normal landing. Up to 5 points for precision landing (if available as briefed). Pilots must conclude each competition day by flying back to Airfield to complete the day's task or accept 50% penalty on points for day as an outlanding.
A → - - -	Route A. Task 2.3 Precision Navigation with Declared speed	5 timing declaration points on the turnpoints, worth up to 4 points each. Total available for this task: total 20 points Route may only be flown once in the competition per pilot
B → - - -	Route B. Task 2.4 Precision Navigation with constant speed	4 timing gate points, worth up to 4 points each Total available for this task: 16 points Route may only be flown once in the competition per pilot

C	Route C. Task 2.2 Precision Navigation	6 hidden gate points, worth 5 points each Total available for this task: 30 points Route may only be flown once in the competition per pilot
D	Route D. Task 2.2 Precision Navigation	8 hidden gate points, worth 5 points each Total available for this task: 40 points Route may only be flown once in the competition per pilot

3.1 MAP AREA EXAMPLE WITH DOWNWIND OUTLANDING

An external outlanding with a downwind precision navigation may be defined in the event of strong wind conditions;