



TASK CATALOGUE

FOR THE 15TH

FAI WORLD MICROLIGHT CHAMPIONSHIPS

Popham Airfield, Basingstoke, UK
20th-27th August 2016

ORGANISED BY: BRITISH MICROLIGHT AIRCRAFT ASSOCIATION (BMAA)

ON BEHALF OF THE FÉDÉRATION AÉRONAUTIQUE INTERNATIONALE

Note: These championships are held in conjunction with the 15th FAI World Microlight Championships. For reasons of simplicity, the task catalogue for the Paramotor Championships has been produced as a separate document.

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Task Catalogue

AUTHORITY

This Task Catalogue is to be used in conjunction with the Local Regulations. The General Section and Section 10 of the FAI Sporting Code takes precedence over the Local Regulation and Task Catalogue wording if there is ambiguity.

GENERAL

This task catalogue is designed to show examples of tasks that may be used in the competition. However, other similar tasks may be used during the competition at the Competition Director's discretion. Scoring and penalties shown in this catalogue are a guide only.

SYMBOLS

Key to symbols used in the task catalogue

	Line drawn before takeoff
	Line drawn after takeoff
	Free flight
	Direction of travel
	Marker selected from list of Marker Symbols
	Ground feature to be identified from photograph
	Turnpoint
	Turnpoint to be identified from photograph
	Ground feature to be photographed or controlled by FR evidence.
	Timing point or gate
SP	Initial or Start point
SP	Initial or Start point with time gate

F	Finish point
P	
F	Finish point with time gate
P	
Δ Π	Marker identity given before takeoff
	Home airfield
	Outlanding airstrip
	Direction of landing
	Left hand circuit
	Right hand circuit
	Circuit height above ground in feet
	Windsock
	Landing direction indicator
	Road or track

Marker Symbols

H
I
K
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X
□
=
Π
Δ

1. LIMITED FUEL TASKS

1.1. AREA TRIANGLE & SPEED

Objective:

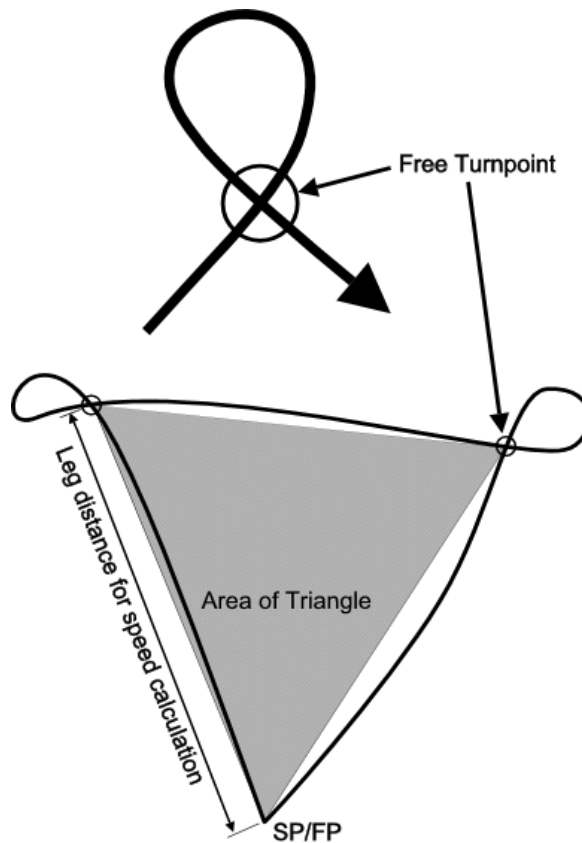
With limited fuel competitors must fly a triangular course with the objective of creating a triangle of maximum possible area. One of the first two legs, nominated by the competitor, will be a speed leg, to be flown as fast as possible.

The task will start and finish at the point SP/FP which will be a single point specified by the Competition Director. The other two turnpoints will be corners of the triangle which the competitors may choose freely unless otherwise briefed provided that this will not result in them infringing a briefed no-fly zones. These two free turnpoints will be the points where the two consecutive sides of the triangle intersect when a precision turn is flown, as illustrated below, so the new leg crosses the previous leg. The area within the triangle created by SP/FP and the two free turnpoints points will be calculated to determine the 'triangle area' score. One of the first two legs, nominated by the competitor, will be scored for speed (NOT the final leg). The procedure for the flight from takeoff to SP/FP and from SP/FP to landing will be as briefed.

If the first leg is nominated to be the speed leg, timing will start at SP/FP and finish at the intersection of the first two legs before the start of the precision turn, as illustrated below. If the second leg is nominated to be the speed leg then the timing will start at the intersection of the first and second tracks, after the precision turn, and finish at the intersection of the second and third tracks before the precision turn. Time taken will, therefore, exclude the turns themselves to avoid encouraging high speed and high bank angle turns.

Scoring:

$$\text{Competitor score} = (\sqrt{(\text{competitor area} / \text{best area}) \times 700}) + (\text{competitor speed} / \text{fastest speed} \times 300)$$



1.2. STRAIGHT LINE DISTANCE AND DURATION

Objective:

With limited fuel, to achieve maximum out and return distance from start point and maximum duration flight.

Task will start at a given SP1 and finish at a given FP1. Competitors will be free to make an out and return distance flight in any direction provided that this will not result in them infringing a briefed no-fly zones. Distance will be measured as the maximum straight line distance from SP1 to the most distant point reached and back to FP1. Duration will be measured from a given SP2 to a given FP2. SP1 may be the same point as SP2 and FP1 may be the same point as FP2. The procedure for the flight from takeoff to SP1 and from FP1 to landing will be as briefed.

Scoring:

Competitor score = (Competitor distance / best distance x 500)
+ (Competitor duration / best duration x 500)

1.3. TURNPOINT HUNT – SPIDERS WEB

Objective:

With limited fuel to visit as many given turnpoints as possible.

A turnpoint grid will be given. From SP enter the grid. This grid will have track lines drawn between turnpoints, resembling a web of radials and arcs. These track lines may only be flown in the direction marked on the official map. From the last visited turnpoint fly to FP. The procedure for the flight from takeoff to SP and from FP to landing will be as briefed.

Scoring:

Competitor score = (Competitor turnpoints visited / max turnpoints visited) x 1000

1.4. LIMITED FUEL TURNPOINT HUNT

Objective:

To fly to as many turnpoints as possible within a limited time, carrying limited fuel. Three of the turnpoints will be compulsory timing gates which must be overflown within 5 seconds of a time predicted by the competitor. One of the gates may require a precision touchdown.

Competitors will be given:

- The location and score of all turnpoints and gates
- A specified weight or volume of fuel

Before takeoff the competitor must:

- Declare the predicted time at which the gates will be overflown

The task will normally start and finish with a Deck Takeoff and Deck Landing and after completing the landing the competitor will be required to enter a Quarantine area for fuel checking and scoring.

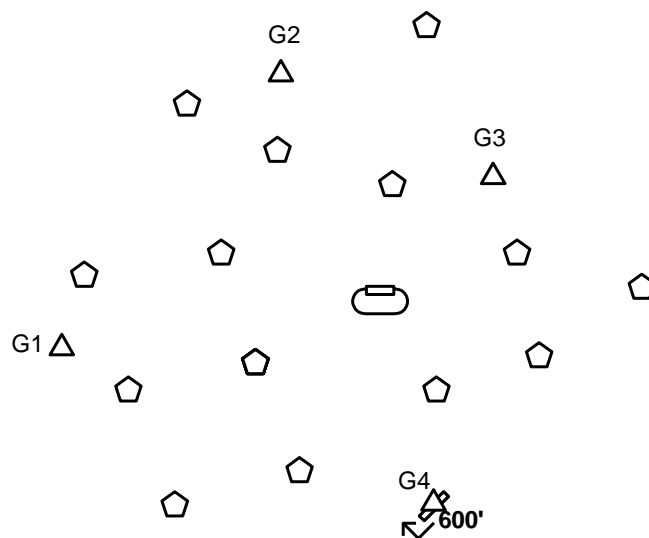
Safety

During the task competitors must be aware that their paths may cross those of other aircraft. They must maintain careful observation of the sky at all times and should avoid flying at predictable heights.

Scores

Typically each turnpoint will score 100 points and each time gate 250 points. The following penalties will apply:

- Takeoff deck penalty: 20%
- Landing deck penalty: 20%
- Breach of Quarantine: 100%
- Timing gate error >10 seconds from prediction: 10 points/second
- Time over maximum task duration: 10 points/second



1.5. PURE DURATION

Objective:

With limited fuel to achieve a flight of the maximum duration.

Timing will commence at a given SP, and finish at a given FP. The procedure for the flight from takeoff to SP and from FP to landing will be as briefed.

Scoring:

Duration scores will be divided into one hour steps and scores shall accrue thus:

- 1 = 5 points/min
- 2 = 4 points/min
- 3 = 3 points/min
- 4 = 2 points/min
- 5 and above = 1 point/min

Competitor score = (Competitor duration score/ max duration score achieved) x 1000

2. NAVIGATION TASKS

2.1. PRECISION NAVIGATION ALONG A KNOWN TRACK

Objective:

To fly as precisely as possible along a known track, whilst identifying ground features from photos provided, or ground markers and marking them accurately on a map. All or a defined part of the course may be scored against declared groundspeed(s). Defined legs of the course may be flown for fast or slow speed. The course may consist of straight legs, circles and/or curves.

A start order will be given. The course will start at SP and each competitor's time will commence at the given SP time. Groundspeed may be measured against elapsed time from SP time as the aircraft passes timing gates, or may be sampled between timing gates. Track accuracy will also be awarded by passing through track accuracy gates. The position of gates will not be given.

Photosheets will be given. If more than one is given then the changeover point along the course where one sheet ends and another starts will be specified. A list of possible ground markers is given in the local regulations. Competitors should identify on a map the actual position of the ground markers and the ground features in the photos. The task ends at FP. The procedure for the flight from takeoff to SP and from FP to landing will be as briefed.

Scoring:

Each track accuracy gate passed correctly = 100 points

Timing gates passed correctly = 100 points – 5 points per second over +/- 5 second tolerance from calculated time.

Each correctly identified ground feature or marker marked within 2mm on official scoring map = 50 points. If greater than 2mm but less than 5mm = 0 points. If greater than 5mm = -50 points.

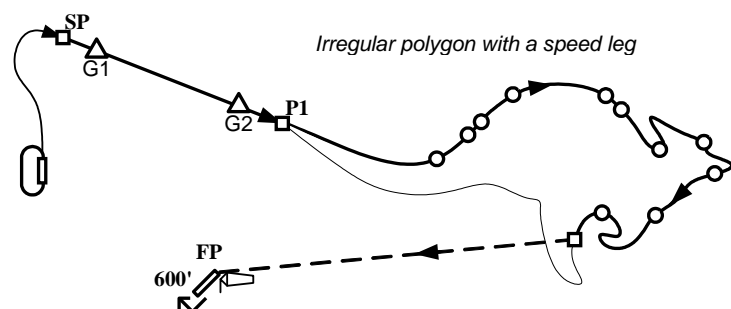
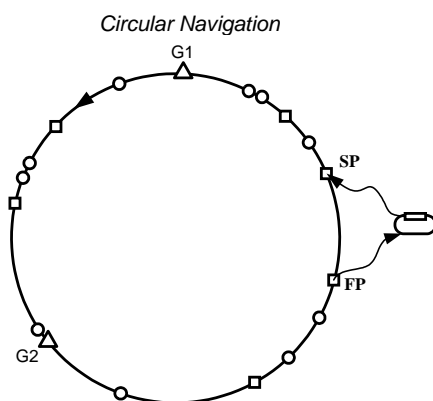
Fast / slow – (crews fast speed/fastest speed) x 100 + (slowest speed/crews slow speed) x 100

Competitor's score = $Q/Q_{max} \times 1000$ where:

Q = Competitor's individual accumulated score

Q_{max} = best individual accumulated score in task/class

Examples



2.2. PRECISION NAVIGATION WITH A PARTIALLY KNOWN TRACK

Objective:

To fly as precisely as possible along a known track, and to then construct and fly subsequent legs of the track from information found. All, or defined part of the course may be scored against declared groundspeed(s) or alternatively may be flown with points for fastest speed. The course may consist of straight legs, circles or curves. There may be additional photos of ground features to spot, or ground markers.

Task starts at SP. First track line will be known. When competitor finds a certain marker or feature this will dictate the turnpoint for the next leg which will be a straight line to the SP of the second known track line. Situation repeats until FP.

If competitor does not find a turnpoint feature/marker, they should continue to the end of the known track line then fly directly to the SP of the next known track line (or FP).

Groundspeed can be sampled anywhere on the course between unknown gates. No gate will be within 4km of a turnpoint – but gates may be either side of a turnpoint (means groundspeed may include travel around the turnpoints). Track accuracy will also be awarded by passing through track accuracy gates. The position of gates will not be given.

Photosheets will be given. If more than one is given then the changeover point along the course will be given where one sheet ends and another starts. A list of possible ground markers is given in the local regulations. Crews should identify the actual position of the ground markers, and the ground features in the photos. Task ends at FP. The procedure for the flight from takeoff to SP and from FP to landing will be as briefed.

Scoring:

Each track accuracy gate passed correctly = 100 points.

Timing gates passed correctly = 100 points – 5 points per second over +/- 5 second tolerance from calculated time.

Each correctly identified ground feature or marker marked within 2mm on official scoring map = 50 points. If greater than 2mm but less than 5mm = 0 points. If greater than 5mm = -50 points.

If flown for speed, the speed score = fastest elapsed time/competitor's elapsed time x 300

Competitor's score = $Q/Q_{max} \times 1000$ where:

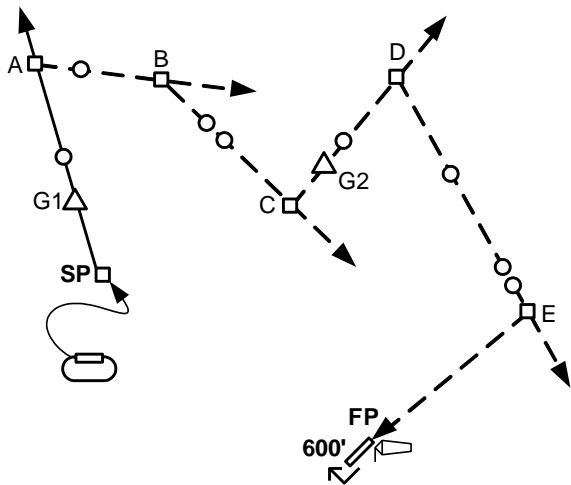
Q = Competitor's individual accumulated score

Q_{max} = best individual accumulated score in task/class

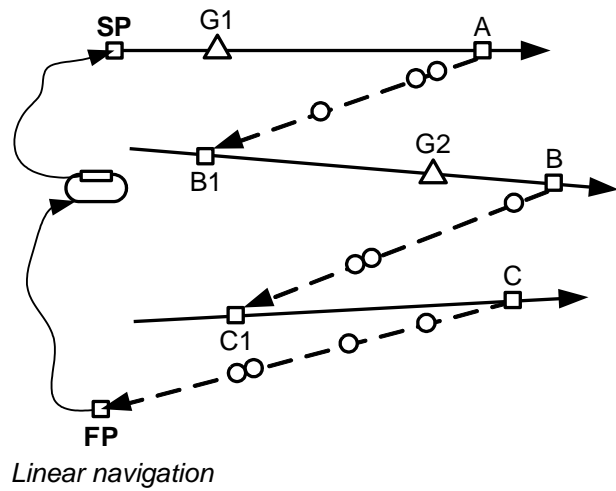
Examples:

- 'Gearwheel' - Known track consists of two concentric circles. SP is on outer circle. Pilot starts course on time and proceeds around circle in given direction looking for photos and markers and keeping to declared groundspeed. When turnpoint marker/photo is found, a line consisting of a radial is constructed and flown to intersect with the inner circle. Photos and markers may be found on the constructed line and groundspeed continues. On reaching inner circle follow it looking for photos and markers and keeping to declared groundspeed. When turnpoint photo/marker is found, a line consisting of a radial is constructed and flown towards the outer circle. Photos and markers may be found on the constructed line and groundspeed continues. On reaching outer circle continue and repeat process until FP.
- 'Zigzag' – Known track consists of a number of separated straight lines. Pilots starts course on time and proceeds in given direction looking for photos and markers. When turnpoint photo/marker is found a straight line is constructed to the SP of the second line. Repeat process until FP. If competitor does not find a turnpoint feature/marker, they should continue to the end of the known track line then fly directly to the SP of the next known track line (or FP). Groundspeed may be flown on entire course, or if wind strength is too much comp director may define groundspeed legs and competitors declare groundspeeds for each.

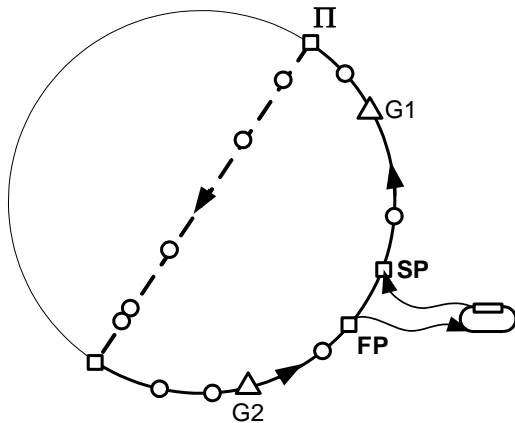
Examples



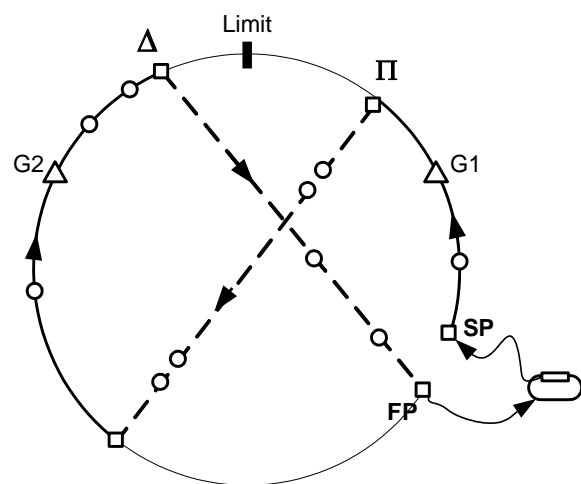
Sequential navigation



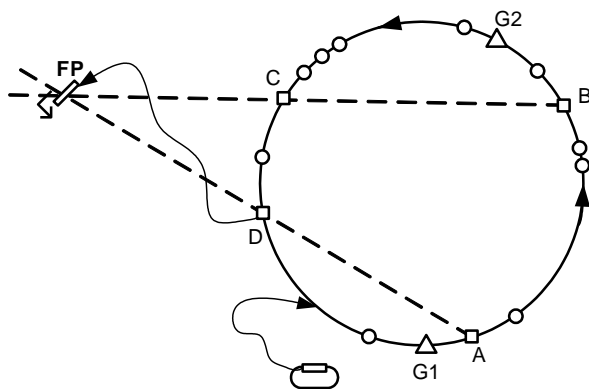
Linear navigation



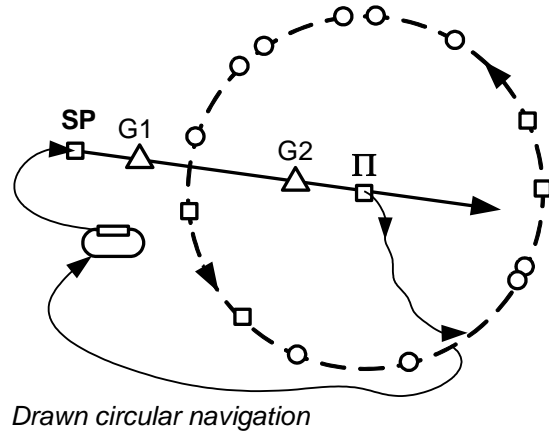
Circular navigation and diameter



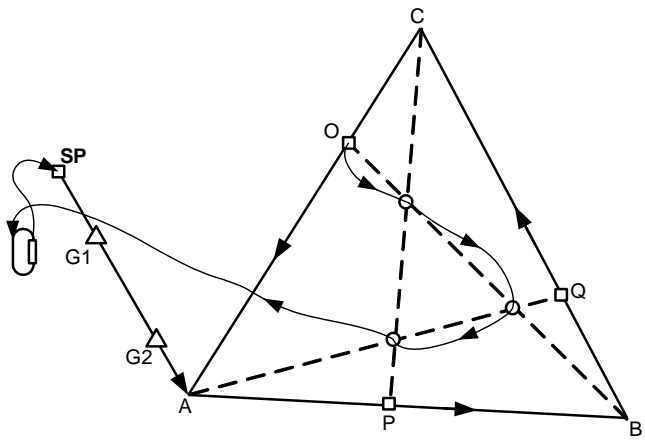
Circular navigation, diameter and reverse.



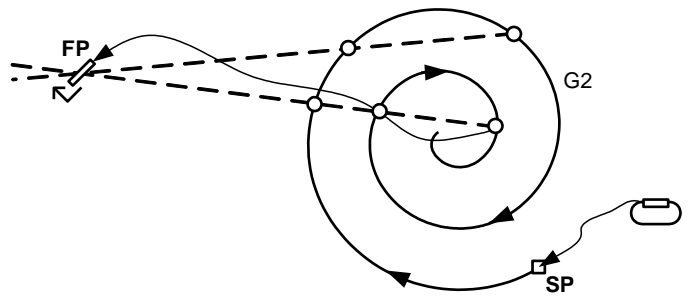
Circle and two lines



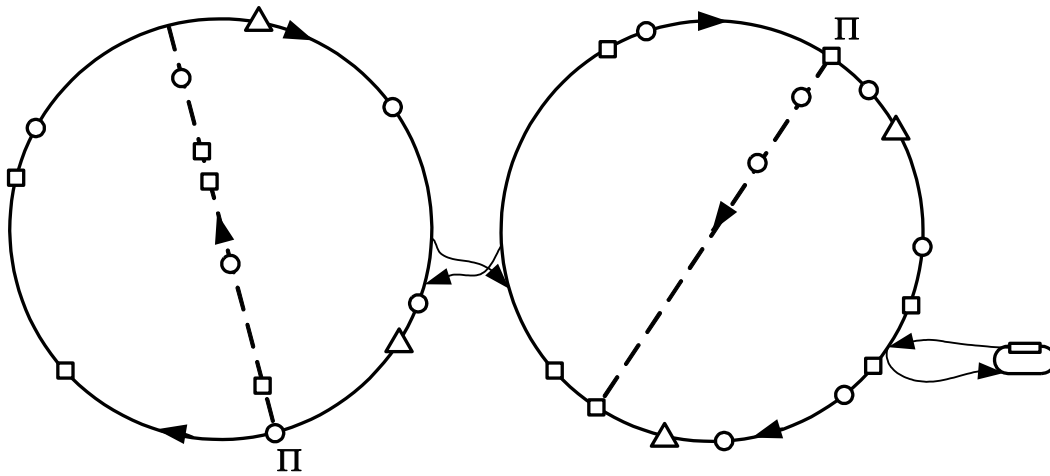
Drawn circular navigation



Triangle and three lines



Speed spiral and two lines



Double circular navigation

2.3. CONTRACT TURNPOINT HUNT

Objective:

To visit as many turnpoints as possible in limited time to a declared plan

Crews assemble next to aircraft prepared for flight in quarantine area near takeoff deck. On stated time they receive map with turnpoints and limited time starts. Before takeoff crews must complete a declaration stating which turnpoints and in which order they intend to visit them. Possibly, some of the turnpoints will be compulsory timing gates, which must be overflown within 5 seconds of the time predicted by the competitor. This must be handed to the marshall on start of takeoff deck. Marshalls shall allow aircraft departure every 30 seconds in order of aircraft leaving quarantine ready for flight. Any aircraft reaching the deck and not ready to takeoff shall be sent to back of queue.

After takeoff crews shall fly to SP using procedures as briefed. After last turnpoint is visited crews should fly to FP where time finishes. The procedure for the flight from takeoff to SP and from FP to landing will be as briefed.

Scores

Typically each turnpoint will score 100 points and each time gate 250 points. Each turnpoint declared and not visited = -100 points. If visited in wrong order = -100 points per incorrectly visited turnpoint.

The following penalties will apply:

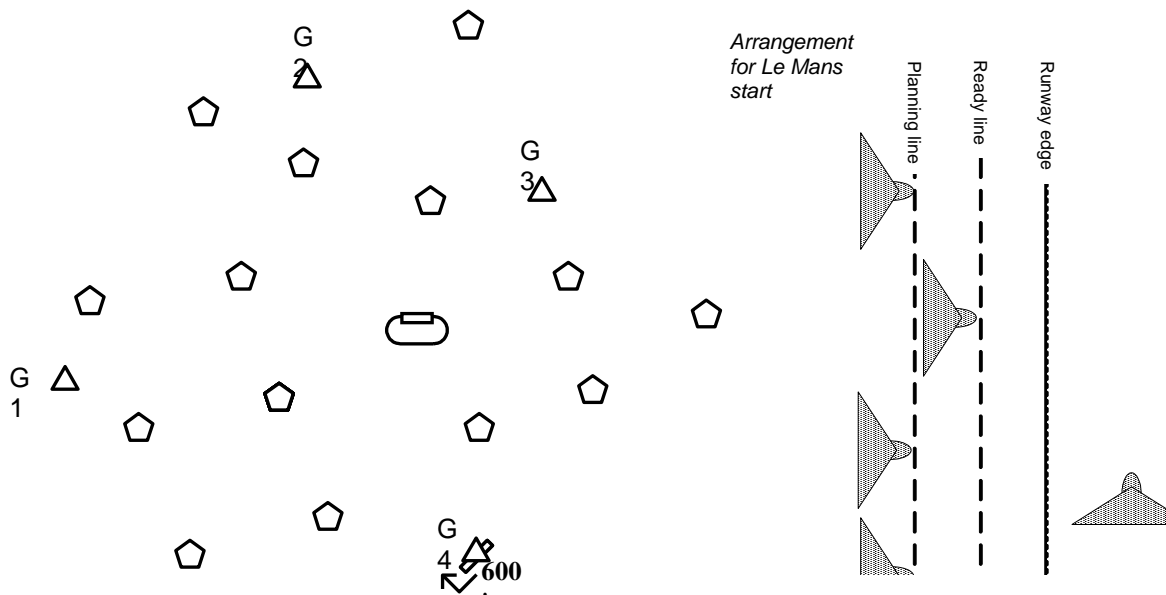
- Takeoff deck penalty: 20%
- Landing deck penalty: 20%
- Breach of Quarantine: 100%
- Timing gate error >10 seconds from prediction: 10 points/second
- Time over maximum task duration: 10 points/second

Crews score = $Q/Q_{max} \times 1000$ where:

Q= Crews individual accumulated score

Qmax = best individual accumulated score in task/class

Example



3. PRECISION TASKS

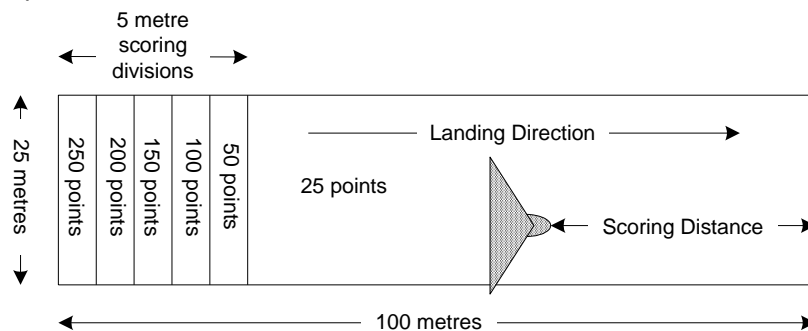
3.1. SPOT LANDING

Objectives

The objective is for the aircraft to touch down within a marked deck, as close to the start of the deck as possible, coming to a halt in as short a distance as possible.

Summary

This task simulates a landing on an aircraft carrier deck, the deck being a deck 100 metres long and 25 metres wide. The first 25-metre section of the deck is divided into five 5 metre strips which are scored from 250 to 50 points as shown. The remainder of the deck scores 25 points. In order to score the main wheels must touch down in a particular strip and the aircraft must come to a complete halt within the 100-metre deck, as close to the start of the deck as possible.



Takeoff

The takeoff order will be specified at the task briefing. The pilot must position his aircraft to the satisfaction of the marshal and must not take off until instructed to do so by the marshal. The form of signal to be used by the marshal for this purpose will be specified at the briefing.

Climbing Circuit

The procedure for the climbing circuit will be specified at the task briefing.

Engine to Stop or Idle

The aircraft must approach the deck in the landing direction at a height of 1,000 ft. Before passing over the start of the deck the engine must be switched off or the throttle must be closed and the engine set to idle, as specified in the briefing. The aircraft must then fly over the full length of the deck before starting the descending circuit.

Descending Circuit

The procedure for the descending circuit will be specified at the briefing.

Landing

Once the aircraft has started its final approach no deviation of over 90 ° from the deck centreline either in the air or on the ground is permitted and the engine must remain at idle or may be switched off. The aircraft must come to a complete standstill and must not move until instructed to do so by a marshal.

Scoring

The score will be the value of the strip in which both main wheels touch down with the ground (PS) plus the distance between the finish of the deck and the closest wheel, scored 1 point per whole metre (PD). Touching down on a dividing line scores the higher of the two strips.

The pilot will be scored zero if:

- The aircraft commences takeoff before instructed to do so by the marshal
- The engine is not stopped or the throttle is not closed before passing over the deck
- The aircraft does not pass over the entire length of the deck before turning to descend
- The engine does not remain at idle once final approach has started if engine idle permitted
- The aircraft turns by more than 90 degrees from the deck centreline between starting the landing approach and coming to a standstill
- Any part of the aircraft touches the ground before the deck.
- The aircraft does not stop within the limits of the deck.
- The aircraft moves from the deck before instructed to do so by a marshal

- The aircraft is unable to taxi or take off unaided following the touchdown although failure to start the engine will not incur a penalty

Thus the score calculation will be $(P_s + P_D) \times 250/350$ with a maximum score of 250

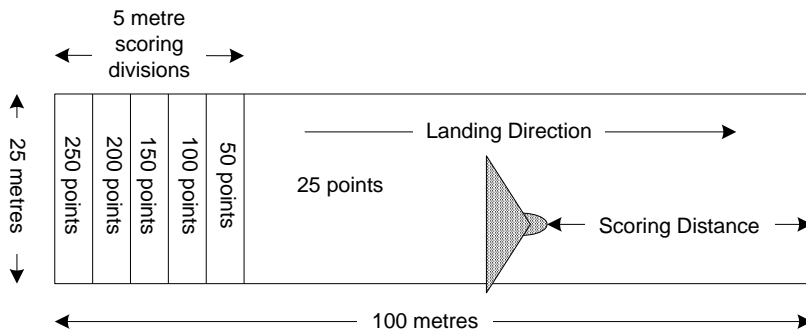
3.2. SPOT LANDING - TIMED

Objectives

The objective is for the aircraft to touch down within a marked deck at a specific time, as close to the start of the deck as possible, coming to a halt in as short a distance as possible.

Summary

This task simulates a landing on an aircraft carrier deck, the deck being a deck 100 metres long and 25 metres wide. The first 25-metre section of the deck is divided into five 5 metre strips which are scored from 250 to 50 points as shown. The remainder of the deck scores 25 points. In order to score the main wheels must touch down in a particular strip and the aircraft must come to a complete halt within the 100-metre deck, as close to the start of the deck as possible. Additional points may be scored if the scoring touchdown takes place at or near an exact full minute as indicated by the competition clock, eg 11:31:00 hrs is a full minute, 11:31 17 hrs is not.



Takeoff

The takeoff order will be specified at the task briefing. The pilot must position his aircraft to the satisfaction of the marshal and must not take off until instructed to do so by the marshal. The form of signal to be used by the marshal for this purpose will be specified at the briefing.

Climbing Circuit

The procedure for the climbing circuit will be specified at the task briefing.

Engine to Stop or Idle

The aircraft must approach the deck in the landing direction at a height of 1,000 ft. Before passing over the start of the deck the engine must be switched off or the throttle must be closed and the engine set to idle, as specified in the briefing. The aircraft must then fly over the full length of the deck before starting the descending circuit.

Descending Circuit

The procedure for the descending circuit will be specified at the briefing.

Landing

Once the aircraft has started its final approach no deviation of over 90 ° from the deck centreline either in the air or on the ground is permitted. The aircraft must come to a complete standstill and must not move until instructed to do so by a marshal.

Scoring

The score will be the value of the strip in which both main wheels touch down (PS) plus the distance between the finish of the deck and the closest wheel, scored 1 point per whole metre (PD). Touching down on a dividing line scores the higher of the two strips. If the aircraft touches down on a full minute, the time being taken from the official clock, ± 5 seconds a further 100 points is scored (PT). This score will be reduced by 5 points for every second outside ± 5 seconds from a full minute.

The pilot will be scored zero if:

- The aircraft commences takeoff before instructed to do so by the marshal
- The engine is not stopped or the throttle is not closed before passing over the deck
- The aircraft does not pass over the entire length of the deck before turning to descend
- The engine does not remain at idle once final approach has started if engine idle permitted
- Any part of the aircraft touches the ground before the deck.
- The aircraft turns by more than 90 degrees from the deck centreline between starting the landing approach and coming to a standstill
- The aircraft does not stop within the limits of the deck.

- The aircraft moves from the deck before instructed to do so by a marshal
- The aircraft is unable to taxi or take off unaided following the touchdown although failure to start the engine will not incur a penalty

Thus the score calculation will be $(PS+PD+PT) \times 250/450$ with a maximum score of 250

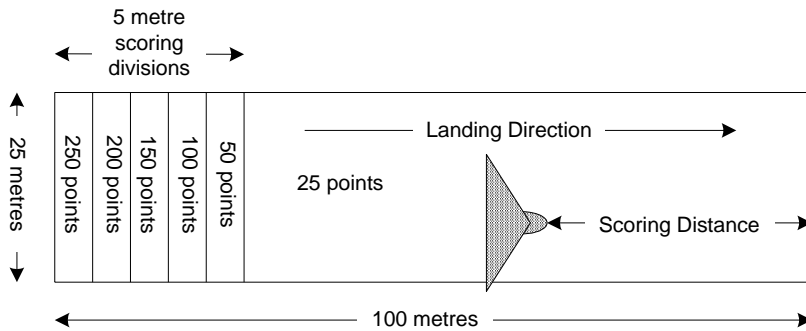
3.3. POWERED PRECISION LANDING

Objectives

The objective is for the aircraft to touch down within a marked deck, as close to the start of the deck as possible, coming to a halt in as short a distance as possible.

Summary

This task simulates a landing on an aircraft carrier deck, the deck being a deck 100 metres long and 25 metres wide. The first 25-metre section of the deck is divided into five 5 metre strips which are scored from 250 to 50 points as shown. The remainder of the deck scores 25 points. In order to score the main wheels must touch down in a particular strip and the aircraft must come to a complete halt within the 100-metre deck, as close to the start of the deck as possible.



Joining

This task will follow the completion of a prior task in which no landing is required. Instructions for joining will be provided at the briefing or in the instructions for the prior task.

Landing

Once the aircraft has started its final approach no deviation of over 90 ° from the deck centreline either in the air or on the ground is permitted. The pilot may choose whatever engine setting he chooses or may switch off the engine unless otherwise instructed at the briefing. The aircraft must come to a complete standstill and must not move until instructed to do so by a marshal.

Scoring

The score will be the value of the strip in which both main wheels touch down (P_S) plus the distance between the finish of the deck and the closest wheel, scored 1 point per whole metre (P_D). Touching down on a dividing line scores the higher of the two strips.

The pilot will be scored zero if:

- Any part of the aircraft touches the ground before the deck
- The aircraft turns by more than 90 degrees from the deck centreline between starting the landing approach and coming to a standstill
- The aircraft does not stop within the limits of the deck.
- The aircraft moves from the deck before instructed to do so by a marshal
- The aircraft is unable to taxi or take off unaided following the touchdown although failure to start the engine will not incur a penalty

Thus the score calculation will be $(P_S + P_D) \times 250/350$ with a maximum score of 250

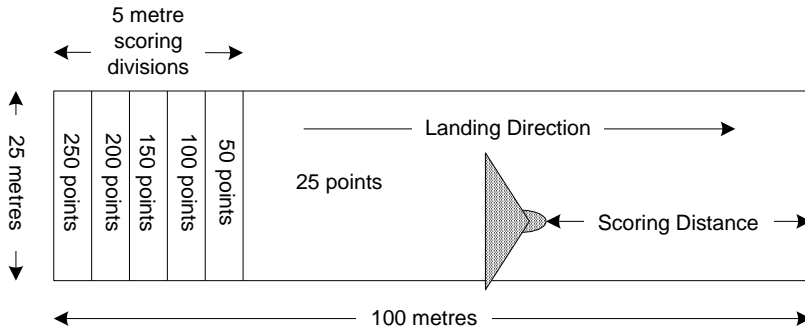
3.4. POWERED PRECISION LANDING - TIMED

Objectives

The objective is for the aircraft to touch down within a marked deck at a specific time, as close to the start of the deck as possible, coming to a halt in as short a distance as possible.

Summary

This task simulates a landing on an aircraft carrier deck, the deck being a deck 100 metres long and 25 metres wide. The first 25-metre section of the deck is divided into five 5 metre strips which are scored from 250 to 50 points as shown. The remainder of the deck scores 25 points. In order to score the main wheels must touch down in a particular strip and the aircraft must come to a complete halt within the 100-metre deck, as close to the start of the deck as possible. . Additional points may be scored if the scoring touchdown takes place at or near an exact full minute as indicated by the competition clock, eg 11:31:00 hrs is a full minute, 11:31 17 hrs is not.



Joining

This task will follow the completion of a prior task in which no landing is required. Instructions for joining will be provided at the briefing or in the instructions for the prior task.

Landing

Once the aircraft has started its final approach no deviation of over 90 ° from the deck centreline either in the air or on the ground is permitted. The pilot may choose whatever engine setting he chooses or may switch off the engine unless otherwise instructed at the briefing. The aircraft must come to a complete standstill and must not move until instructed to do so by a marshal.

Scoring

The score will be the value of the strip in which both main wheels touch down with the ground (PS) plus the distance between the finish of the deck and the closest wheel, scored 1 point per whole metre (PD). Touching down on a dividing line scores the higher of the two strips. If the aircraft touches down on a full minute, the time being taken from the official clock, ± 5 seconds a further 100 points is scored (PT). This score will be reduced by 5 points for every second outside ± 5 seconds from a full minute.

The pilot will be scored zero if:

- Any part of the aircraft touches the ground before the deck
- The aircraft turns by more than 90 degrees from the deck centreline between starting the landing approach and coming to a standstill
- The aircraft does not stop within the limits of the deck.
- The aircraft moves from the deck before instructed to do so by a marshal
- The aircraft is unable to taxi or take off unaided following the touchdown although failure to start the engine will not incur a penalty

Thus the score calculation will be $(P_S + P_D + P_T) \times 250/450$ with a maximum score of 250

3.5. PRECISION TOUCHDOWN - TIMED

Objectives

The objective is for the aircraft to touch down within a marked deck at a specific time, as close to the start of the deck as possible.

Summary

The deck is 6 metres long, 10 metres wide and is marked in four 1.5 metre strips which are scored from 200 to 50 points as shown. In order to score the main wheels must touch down in a particular strip as close to the start of the deck as possible. The lines will be defined by raked wet sand to ensure accurate scoring. Additional points may be scored if the scoring touchdown takes place at or near an exact full minute as indicated by the competition clock, eg 11:31:00 hrs is a full minute, 11:31 17 hrs is not.

Joining

This task will form part of another task. Instructions for joining will be provided at the briefing or in the instructions for the main task.

Landing

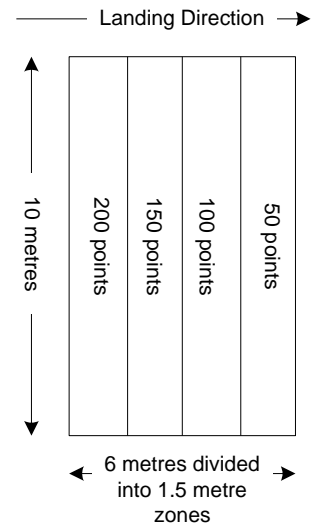
Once the aircraft has started its final approach no deviation of over 90 ° from the deck centreline is permitted. The pilot may choose whatever throttle setting he chooses or may switch off the engine unless otherwise instructed at the briefing. Once the touchdown is completed the pilot may immediately take off unless otherwise instructed at the task briefing.

Scoring

The score will be the value of the strip in which both main wheels touch down (PS). Touching down on a dividing line scores the higher of the two strips. If the aircraft touches down on a full minute, the time being taken from the official clock, ± 5 seconds a further 50 points is scored (PT). This score will be reduced by 5 points for every second outside ± 5 seconds from a full minute. The pilot will be scored zero if:

- Any part of the aircraft touches the ground before the deck
- The aircraft fails to touchdown within the limits of the deck
- The aircraft turns by more than 90 degrees from the deck centreline between starting the landing approach and coming to a standstill
- The aircraft is unable to taxi or take off unaided following the touchdown although failure to start the engine will not incur a penalty

Thus the score calculation will be $(P_S + P_T)$ with a maximum score of 250



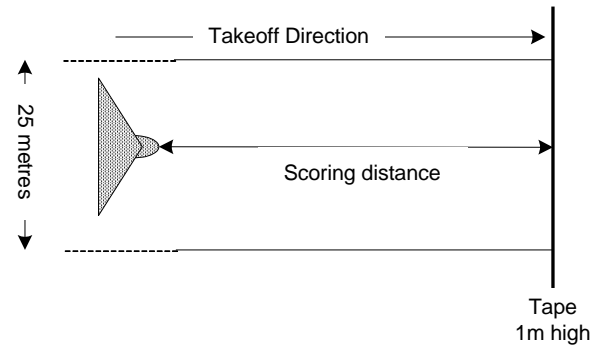
3.6. SHORT TAKEOFF OVER AN OBSTACLE

Objectives

The objective is for the aircraft to take off over and clear an obstacle, starting the takeoff run as close to the obstacle as possible.

Summary

This task simulates a short field takeoff over a hedge, the hedge being represented by a tape stretched across the runway 1 metre above the ground. The pilot may position his aircraft on the runway as close as he wishes to the tape. This distance will be measured from the centre of the foremost wheel and rounded up to the nearest 0.1 metre. The aircraft must take off over the tape without breaking it.



Takeoff

The takeoff order will be specified at the task briefing. The pilot may position his aircraft as close to the tape as he wishes and must not take off until instructed to do so by the marshal. The form of signal to be used by the marshal for this purpose will be specified at the briefing.

Procedure after Takeoff

The procedure to be flown after takeoff will be specified at the briefing.

Scoring

The competitor in each class that starts the takeoff run closest to the tape (D_{MIN}) and clears the tape without breaking it will score 250 points. Other competitors will be awarded scores based on their distance from the tape at the start of their takeoff run (D_P) relative to D_{MIN} . The competitor will be scored zero if:

- The aircraft commences takeoff before stationary
- The aircraft commences takeoff before instructed to do so by the marshal
- The aircraft fails to fly over the tape
- Any part of the aircraft breaks the tape

Thus the score calculation will be $(250 \times D_{MIN} / D_P)$ with a maximum score of 250

3.7. SHORT LANDING OVER AN OBSTACLE

Objectives

The objective is for the aircraft to fly over and clear an obstacle, to land and come to a standstill as close to the obstacle as possible.

Summary

This task simulates a short field landing over a hedge, the hedge being represented by a tape stretched across the runway 1 metre above the ground. The pilot must land over the tape and stop. This distance will be measured from the centre of the foremost wheel and rounded up to the nearest 0.1 metre.

Joining

This task may form part of another task. Instructions for joining will be provided at the briefing or in the instructions for the main task.

Landing

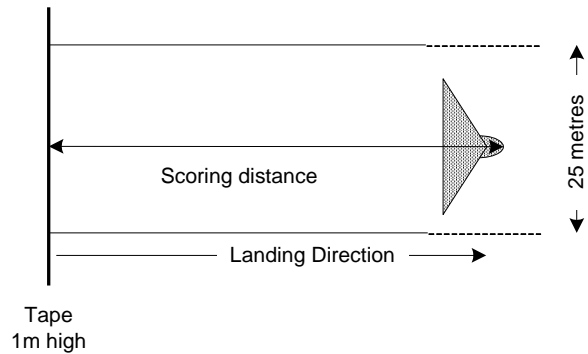
Once the aircraft has started its final approach no deviation of over 90 ° from the centreline of the runway is permitted. The pilot may choose whatever engine setting he chooses or may switch off the engine unless otherwise instructed at the briefing. The aircraft must come to a complete standstill and must not move until instructed to do so by a marshal.

Scoring

The competitor in each class that comes to a standstill closest to the tape (D_{MIN}) having cleared the tape without breaking it will score 250 points. Other competitors will be awarded scores based on their distance from the tape when they stop (D_P) relative to D_{MIN}. The competitor will be scored zero if:

- The aircraft fails to fly over the tape
- Any part of the aircraft touches the ground before the tape
- Any part of the aircraft breaks the tape
- The aircraft turns by more than 90 degrees from the runway centreline between starting the landing approach and coming to a standstill
- The aircraft is unable to taxi or take off unaided following the touchdown although failure to start the engine will not incur a penalty

Thus the score calculation will be $(250 \times D_{\text{MIN}} / D_{\text{P}})$ with a maximum score of 250



3.8. DECK TAKEOFF

Objectives

The objective is for the aircraft to take off from a deck 100 metres long by 25 metres wide.

Summary

This task proves the short takeoff capability that is fundamental to the performance characteristics of a microlight by demonstrating that the aircraft can take off in 100 metres in still air at sea level. Where local conditions, such as airfield altitude or slope of the runway, will make a significant difference to takeoff runs the length of the deck may be adjusted accordingly.

Takeoff

This task will form the start of another task. The takeoff order will be specified at the main task briefing. The pilot must position his aircraft with its main wheels, or tail wheel in the case of a tail-dragger, immediately in front of the start line of the deck to the satisfaction of the marshal and must not take off until instructed to do so by the marshal. The form of signal to be used by the marshal for this purpose will be specified at the briefing.

Procedure after Takeoff

The procedure to be flown after takeoff will be specified in the main task at the briefing.

Scoring

There is no score for a deck takeoff but instead a 20% penalty will normally be applied to the main task if the aircraft fails to leave the ground before reaching the end of the deck. This penalty will normally apply if the aircraft:

- Commences takeoff before stationary
- Commences takeoff before instructed to do so by the marshal
- Main wheels fail to leave the ground before reaching the end of the deck.
- Touches the ground before climbing away.

3.9. DECK LANDING

Objectives

The objective is for the aircraft to land in a deck 100 metres long by 25 metres wide.

Summary

This task proves the short landing capability that is fundamental to the performance characteristics of a microlight by demonstrating that the aircraft can land in 100 metres in still air at sea level. Where local conditions, such as airfield altitude or slope of the runway, will make a significant difference to landing runs the length of the deck may be adjusted accordingly.

Joining

This task will form the end of a task. Instructions for joining will be provided at the briefing or in the instructions for the prior task.

Landing

Once the aircraft has started its final approach no deviation of over 90 ° from the deck centreline either in the air or on the ground is permitted. The pilot may choose whatever engine setting he chooses or may switch off the engine unless otherwise instructed at the briefing. The aircraft must come to a complete standstill and must not move until instructed to do so by a marshal.

Scoring

There is no score for a deck landing but instead a 20% penalty will normally be applied to the main task if the aircraft fails to touch down and come to a halt within the deck. This penalty will normally apply if:

- Any part of the aircraft touches the ground before the deck
- The aircraft turns by more than 90 degrees from the deck centreline between starting the landing approach and coming to a standstill
- The aircraft does not stop within the limits of the deck.
- The aircraft moves from the deck before instructed to do so by a marshal
- The aircraft is unable to taxi or take off unaided following the touchdown although failure to start the engine will not incur a penalty