TASK CATALOG

FOR THE

11th WORLD PARAMOTOR CHAMPIONSHIPS

Competition at

LINHARES, BRAZIL

24TH JUNE – 4TH JULY 2020

REVIEW	DESCRIPTION	DATE
∅	INITIAL VERSION	05/12/2019

AUTORITHY

This Task Catalogue is to be used in conjunction with the Local Regulations. This Task Catalogue and scoring system described for this championship have been selected and published according to the standards of Annex 4 of Section 10 of FAI Code, 2019 **(2020 UPDATE SOON).**

This catalogue describes tasks normally held at FAI World and Continental Championships, with local adaptations. Certain aspects of the scoring have been included in the task descriptions, in particular a schedule of penalties. However, the specific scoring for markers, turn points etc to be used in the competition will be briefed prior to the task being flown

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.

clarification

PF1 class, PF2, PL1 and PL2 are "Paramotors".

RPF1Tm - Paraglider Control / Foot-launched / Flown solo / Thermal Engine / Male	PF1
RPF1Tf - Paraglider Control / Foot-launched / Flown soil / Thermal Engine / Female	PF1f
RPL1T - Paraglider Control / landplane / Thermal Engine / Flown solo	PL1
RPL2T - Paraglider Control / landplane / Thermal Engine / Flown with two persons	PL2

Navigation, Precision and Economy tasks will be held.

The women's competition will take place together with category PF1, with the score for categories PF1 and PF1f.

CONTENTS

1. PRINCIPLES

The principles of this championship are based on guidelines and principles of the FAI rules. The purpose of the tasks defined in the Competition Classic is to simulate real world flight situations, tasking the skills of the pilots against each other in a way that can be measured simply and fairly, without bringing excessive danger to the pilots. Flying such tasks should be an enjoyable experience. Thus, the basic principles of the 2020 Championship can be characterized by four key words:

SAFE - FUN - SIMPLE - FAIR

SAFE

There are no Slalom tasks for this Event. This is a classic competition that should provide an alternative to the extreme sport events, while remaining true to the spirit of cooperation and integration of pilots for which they were designed, providing a mix of "navigation tasks, economy and precision". Our priority is that all pilots return to their homes on their walking over own feet !!!

FUN

We fly paramotors because brings us pleasure and it's fun. It follows that the more tasks are flown in a competition, much more enjoyable it becomes for all pilots, and give them more opportunity to fully demonstrate their skills and get good results. The Director of the Competition will face a difficult challenge in defining tasks that are adequately complex to challenge the best pilots without slowing down the competition. Tasks for different classes can be performed independently in order to use the airspace more effectively and maximize flight opportunities. These tasks will be sufficiently challenging to the pilot's skills in having to fly on a new and different location.

SIMPLE

Competition tasks must be simple, without being easy. There is much evidence listed in Annex 4 of the FAI, many of which were never used in classical competitions FAI for many years. In order to simplify the competition, only a few navigation tasks, accuracy and economy were selected and building on world last two competition and indications of FAI rules of 2019. This will allow shorter briefings and reduce the risk of confusion (especially when it is the first time that pilots have contact with these tasks), in addition to waste time with planning too long problems and long delays for the release of scores.

FAIR

Being fair is another central principle of the competition. The tasks must be designed primarily to measure the pilot's skill and to minimize the chance of random elements that affect the score. The classic competitions should reward the pilots to have a balanced set of skills and a balanced equipment. This directs the development of equipment and pilots, since the classic competitions encourage the training of many abilities and development of paramotors increasingly well designed.

2. TASK TYPES

The competition will be divided into three categories:

N	Navigation:	flight plan, estimated times, and speed. Without limiting fuel.
E	Economy:	Autonomy, speed and duration of fuel. With fuel limitation.
P	Precision:	Flights by gates, pylons, kicking bats, knock pins and landings on the fly.

- For the championship is valid will have to occur at least 3 distinct tasks with declared score of the categories. It should be performed at least one declared navigation, an economy and precision. If necessary, the Director of Competition may place more than one category in the same flight, however for championship validation only it will be declared category.

- The tasks defined by the Competition Director may have only one category or combine with other categories of evidence, provided that the flight is declared valid for a category, which is the most relevant and having a score above 50% of the task.

- The proportion of evidence accumulated in the championship will be approximately 1/3 for each category. (S10 4.29.3).

- The pilot's score will be set by adopting the arithmetic sum of the results of Navigation tasks, Economy, and Precision, and the final result of the calculated competition as the simple arithmetic average, rounded to two decimal places (xxx,xx), obtaining maximum value of 1000.00 points.

- Each task will have a maximum score of 1000 points and the results normally have partial or total score normalized by higher performance pilot who receive full marks, and the other competitors will have score in proportion to the better performance.

- Any proof established more than once may be identical or variation.

- Distances and times to be flown can be as long as possible with regard to the autonomy of aircraft that will compete.

- In any event that requires pre-declaration of speed or allotted time, the Director of Competition will organize Gates undeclared (Hidden Gates) and control along the flight path to make sure that the pilot is following the predetermined path. No information will be given at the briefing about the existence or location of these control points (Hidden Gates).

- The concept of backtracking will be applied to ENSURE the flight safety by the FAI established rules. **The precise definition of backtracking will be taken according to new S10 2020.** However, in the case of the competition using software scoring system to check navigation, the margin of error of +/- "x" degrees in flight direction should be adopted, and a time limit of "y" seconds that the paramotor can flying in the direction considered backtrack, provided it is clear that this safety margin is not being systematically used by the pilot to improve his performance. Values of "x" and "y" will be informed asap, after new S10 2020 definitions.
- The Competition Director shall prescribe a period of time before the task is completed taking into account the last landing period during the day (Sunset).

3. GENERAL SCORING CRITERIA

The maximum value of each task will be 1000 points.

The results of the tasks will be standardized for the best performance according to the following formula:

$$P = (Q / Q\,max) \; x \; 1000$$

Where: Q = Pilot score, Qmax = Best score of the task, P = Final Score for the Pilot
The Q and Q max scores are considered after the penalties applied.

In the specific case of minimum time control, the results are usually normalized by the better performance (less time) according to the following formula:

$$P = (Tmin / T) \; x \; 1000$$

Where: Tmin = min (best) time of task; T = pilot time; P = Final Score Pilot
The scores T and Tmin are considered after the penalties applied.

Depending on the evidence, some pilot performance evaluations can be measured with absolute scores functioning as bonus. When the combination of tasks is used, performance bonus must not exceed 50% of the total points available on the task, example: 500 points.

Ex.: P= Q/Qmax x 750 + y (ex: where the maximum value of this item is 250 points)

In this case, Q = Pilot score, Qmax = Best score of the task, y = a bonus for performance in some other category; P = Final Score Pilot. The Q and Qmax scores are considered after the penalties applied. If the main task result "zero" the pilot will not be entitled to the bonus. In the task that have combined scoring, the best pilot maybe cannot reach 1000 points, because part of score is not normalized. See description in each task.

Some proofs may have only one category or combine with other categories of tasks, as long as the task is declared valid for the most relevant category (> 50%) and its result is specifically linked to that category (Navigation, Economy, and Precision).

As a criterion of moderation if less than 50% of the pilots in the class, that are in condition to initiate the task, in this case the score is reduced proportionally "pro rata" and according to the formulation below.

$$Final\ Score\ Pilot\ Task = Ps \; x \; @MINIMO\,(1, (Ts / Tc) \; x \; 2)\,)$$

Where:
Ps = Pilot score after all penalties
Ts = Total pilots who started the task (after 5 Minutes Rule);
Tc = Total pilots in the subclass on site competition and in condition to do the task.

The final score of the pilot will be defined as the arithmetic mean of all the evidence ($\sum N + \sum E + \sum P$) / $\sum n$, and values of N, E and Q are obtained by simply summing the results of the tasks of the same category, "n" being the total number of valid tasks.

- N (navigation) Score from navigation tasks (N1, N2, N3, etc.)
- E (economy) Score from economy tasks (E1, E2, E3, etc.)
- P (precision) Score from precision tasks (P1, P2, P3, etc.)

A score given to a competitor for a task must be expressed to the nearest whole number, 0.5 being rounded value for more. (Ex.: 600,25 = 600; 892,50 = 893: 783,68 = 784). This criterion applies to score each task. The end result of the competition will be expressed in arithmetic average rounded to 2 decimal place after the decimal point (xxx.xx).

It is considering the winner of the competition in each subclass the pilot who had the highest average (highest score), limited to 1000 points after calculated, and according to the following formula:

$$S = \frac{(\sum N) + (\sum P) + (\sum E)}{\text{Number of considered tasks}} \leq 1000{,}00$$

The Winning Country will also be awarded the one that obtained the highest number of points, considering for each delegation's score the athlete who received the highest score in each subclass. Only one athlete will be considered by the subclass of each country, and disqualified athletes will be disregarded by the score in the overall calculation of this award.

4. SIGNALING TRACK AND PROOF

Flag on Main Mast will show:

No flag on display	The championship window is closed.
Green flag	**open flight window**. Authorized entering quarantine and flight to attend the task.
Red flag	**Window closed temporarily.** Pilots cannot take off. However, those who are in the air should continue the task.
Black Flag	**Window closed flight.** Pilots must land immediately and cannot take off. Applies to all pilots.

Hand held flags with marshals.

Marshals have flags in hands that will be used to authorize the take-off or stop, depending on the traffic of aircraft or poor weather conditions. In some precision tasks the flags (flags) may be used to signal for opening the gate or landing site, in addition to indicating the validity or penalty to the pilot shortly after his execution.

FLAGS W/ MARSHALS	ON DECK	THE TASK SITE
Green flag	Authorized takeoff	Signals that the Gate, landing site, and the relaunch is authorized and the pilot should continue in the task. Started the task by the competitor, the green flag raised by the Marshals indicates that the competitor meets the task and is being properly judged.
Red flag	Unauthorized takeoff, and the pilot must wait.	Signals that the Gate, landing site, or relaunch is prevented / closed and the pilot must wait in flight (or authorization to relaunch). Started the task by the competitor, the red flag raised by the judge indicates that the time has run out and/or a problem in the circuit was detected. The pilot must leave the task course.
Black Flag	The window was closed. The pilot should abandon the launch area.	Signals that the gate or landing site is closed and the pilot must land immediately.

5. EVIDENCES

5.1. NAVIGATION

N1. PURE NAVIGATION - Collection "Waypoints" (WPT) weighing

Objective

This is a time-limited task in which the pilot must fly a course of their choosing from a given array of turn points, in order to collect as many points as possible within the time limit set for the task. The pilot must pass a starting gate (SP) and an finish gate (PF) which can be or not defined as a waypoint, and may also be necessary to pass individual intermediate gates during the task as specified in the briefing. There are no pre-declaration elements. Unless otherwise indicated, the pilots will perform free takeoff from your designated deck, under Marshals supervision, and within the window of the task.

Special rules

If the waypoint is collected two or more times during the task period then it is deleted from the total count. Within the limited period of time for the task (T) 5 min tolerance for passing the PF is allowed, within which all the pilots waypoints are counted. At the end of time T + 5min no further waypoints will be counted. If the pilot reaches the FP within the time T with 5 min of tolerance, 100% of the waypoints will be counted. If you arrive between 5 and 10 min will have 5 points deducted in its general computation of waypoints, and 10 to 15 min will have a deduction of 10 points. From 15 min the score will be "zero" for task. The WPT have different weights, with the closest weight "1", the intermediate weight "2" and the farthest weight "4". The weight of each WPT will be informed on the map to be provided to pilots. The deduction of points for delay in passing the PF will be applied after applying the weights at each turn point.

Score

$$\boldsymbol{Pilot\ Score\ P = (NBp\ /\ NBmax)x\ 1000}$$

At where
NBP = Number of WPT x WEIGHT collected by the pilot in the task, less penalties.
NBmax = Highest number of WPT x WEIGHT, collected by a rider in the task, discounted penalties.

penalties

100% penalty will be applied for:
- Passing the finish gate PF more than 15 minutes over the specified task time;
- Not cross the SP or FP or crossing over into the wrong order;
- Cross the SP or FP outside the task window;
- Take-off or landing outside the task window;
- Flying in prohibited airspace;
- Other describe in the Regulation, including disqualification if is necessary.

Other penalties":
- Landing outside the airfield – 20% penalty will be applied;
- Passing the FP between 5 and 10 minutes late; deduct 5 points;
- Passing through the FP between 10 and 15 minutes late; deduct 10 point;

Example:

Takeoff time window:	3 pm
Maximum Time of proof between SP and FP (T):	90 minutes (tolerance +5 min)
Pilot time held between SP and FP (T):	93 (ok)
Total waypoints and turn points available in the task =	30 waypoints
Collected by pilot x the weight points =	15 points (5wpt x 1+ 3wpt x 2 + 1wpt x 4)
Most points collected in the task by a pilot =	20 points
Pilot Score = 1000 x 15 / 20 =	**750 points**

Precautions

Maintain eye contact with other pilots who may be in separate traffic of yours. Do not focus only on the map and on the ground because there are other pilots in navigation. Give preference to those who are lower. As it is free to prioritize circuit turns the left and at most 90 degrees. Fly predictably. Overtaking pass should be made by the pilot's right to be exceeded.

Landing

After crossing the finishing point (FP = Finish Point), the pilot must start your landing procedure. Unless otherwise briefed, pilots should make a close circuit with preset at the designated location and other visual security pilots. Immediately after landing and have their paramotors in a safe place pilots must take their tracking devices (GPS) properly sealed to the Judge or Marshals Proof.

N2. PRECISION NAVIGATION - DECLARED TIME / SPEED / ACCURACY

OBJECTIVE

This is a task in which the pilot must fly a path defined by an arbitrary line on the map, providing time estimates and a time limit of the task.

Planning

A flight circuit will be set through the starting point (SP) and finish (FP) and a line drawn on a map with a small number of "Timing Gates" for taking the time (TG). All TG points will be known before takeoff.

Pilots will fill a declaration sheet indicating the estimated arrival times for each TG in the circuit, including the point of arrival. **The estimated time will be given in seconds starting from the SP, but it is recommended that the pilot has the same time in HH: MM: SS to use your timer for the task** Planning can be done in quarantine or not, according to the briefing. The pilots will deliver his statement to a marshals/judge immediately prior to takeoff.

Take-off

Unless otherwise stated in the briefing, the pilots will perform a free take-off within the task window time.

Flight

The time will begin counting when the Paramotor cross the SP (starting point). Pilots must remain precisely on the circuit trying to go through the time making Gates the defined order and the estimated times. Navigation and the end of time taking place in the FP (finishing point).

To ensure that the pilot does not get out of the route to save time there will be any number of hidden gates (HG) to validate the path. The gates must necessarily be crossed in order and proper direction.

The time in this task will be measured normally at five crossing points (TG) and checked against pilot returns. If a time gate is crossed more than once, the time will be taken from the first intersection. There will be a small bonus for speed throughout the course, which may include or not planning time informed.

SP	⟶	B	⟶	W	⟶	D	⟶	AND	⟶	FP
t =0	*HG*	T1	*HG*	T2	*HG*	T3	*HG*	T4	*HG*	T5

Landing

After crossing the finishing point (FP = Finish Point), the pilot must start your landing procedure. Unless otherwise briefed, pilots should make a close circuit with preset at the designated location and other visual security pilots. Immediately after landing and have their paramotors in a safe place pilots must take their tracking devices (GPS) properly sealed to the Judge or Marshals Proof.

Score

There will be 5 known timing gates TG defined, and various Hidden Gates HG not known. The turn points and hidden gates will have R=125 m, so the corridor between each turn points will have 250 m of width.

$$\text{Qh (HD - Hidden Gates)} = \text{H} / \text{NH x } 1500$$

Nh = Number of Gates used in the task
H = Number of Gates correctly crossed by the pilot

$$\text{Qt (TG - Gates Timing)} = \Sigma \text{ HI (Sum of points for each gate, zero to } 1500, 5 \text{ x } 300 \text{ Pts TG)}.$$

Hi = 300 - Ei (value from 0 to 300)
Ei = the absolute error in each gate in seconds with 5 seconds and a maximum tolerance of 300 sec (5 min). Difference between the stated time (ETA) and the one considered in the crossover point. Gates not crossed the score is zero at the gate.

$$\text{Qv (speed)} = \text{Tmin} / \text{T x } 750$$

T = TFIN - Tstart (Task time)

TFIN = FP crossing time
T start = SP crossing time
T min = Less evidence of a pilot time

$$\mathbf{Q = Qh + Qt + Qv} \quad (\text{Maximum } 3750)$$

At where:

Qh ranges from 0 to 1500 (40% of overall score)
Qt ranges from 0 to 1500 (40% of overall score)
Qv ranges from 0 to 750 (20% of overall score)

$$\boldsymbol{Pilot\ Score\ P = (Q\ /\ Qmax)x\ 1000}$$

Example:

Hidden Gates
N_{HG} = 10 Locations total of proof
H = 7 crossed locations within the pin defined by the radius
Qh = 7/10 x 1500 = 1050

Gates timing
N_{TG} = 5 Sites

GATES TIMING	DECLARED TIME (ETA)	MEASURED TIME	EI = TIME DIFFERENCE (SEC)	SCORE (HI = 300 - EI)
SP	T = 0	T = 0		
P1	T1 = 600 sec	540 sec	60	240
P2	T2 = 950 sec	1050 sec	100	200
P3	T3 = 1500 sec	1900 sec	400	0
P4	T4 = 2200 sec	2205 sec[1]	0	300
FP	PFF = 2800 sec	3000 sec	200	100
TASK	2800 sec	3000 sec	**Qt =**	840

Velocity
T = TFIN - Tstart = 3000 sec
Tmin = 2000 sec (best measured task time)
qv = 2000/3000 x 750 = 500

Final Score Pilot
Q = Qh + Qv = QT + 1050 + 840 + 500 = 2380
Qmax = 3300 (best sum of proof)
R = 2380/3300 x 1000 = 722 = 721.21 therefore **P = 722 points**

Penalties
100% penalty will be applied for:

- Flying in the opposite direction to the defined circuit;
- Backtracking
- Not crossing the SP or FP or crossing over into the wrong direction;
- Cross the SP or FP outside the task window;
- Take off or land outside the task window;
- Flying in prohibited airspace;
- Other foreseen in the Regulation, including disqualification.

20 % penalty will be applied for:

- Landing outside the airfield;

[1] 5 sec tolerance will be considered the same amount of time reported by getting maximum gate score.

N3. NAVIGATION IN CURVE - DECLARED TIME / ACCURACY

OBJECTIVE

This is a task in which the pilot must fly a combined path of linear and curved sections defined by an arbitrary line on the map, providing time estimates to fly specific stretches (linear) and collect the largest number of checkpoints (Hidden Gates) arranged along the curved sections and arbitrary. The pilot will also have to demonstrate skill in takeoffs.

Planning

A flight circuit is defined through the starting point (SP) and final (PF) with a line drawn on a map, with linear portions delimited by two waypoints (WPT) known for timming gates (TG) and a series of checking points over the curved sections not known (HG). The TG and HG has R=125m, and corridor between them with 250m width.

Pilots will fill a declaration sheet indicating the estimated times for each of the defined linear sections on the map. **The estimated time will be given in seconds between TG, but it is recommended that the pilot has the same time in HH: MM: SS to use your timer for the task.** Planning can be done in quarantine or not, according to the briefing. The pilots will deliver his statement to a marshals/judge immediately before takeoff or when the briefing indicate otherwise.

Take-off

Unless otherwise stated in the briefing, the pilots will perform a free take-off within the task window of time, but this will be scored. A takeoff at the first attempt considered clean receive 150 points, the second 100 points and 50 points on the third attempt. Zero in subsequent attempts.

Flight

The flight should take place within the defined time window at the briefing. The task will be considered open after passage through the SP. Pilots must remain precisely on the circuit in the order defined on the map. The timing will be computed in the points of opening and closing of each linear section (T1, T2 and T3). The proof will be finalized when the FP is crossed. The gates must necessarily be crossed in order and proper direction.

The time in this task will be measured at different rectilinear sections (Tn) and checked against the pilot's statements. If a waypoint time is crossed more than once, the time will be taken from the first intersection. There will be no penalty for passing on a WPT or HG more than once.

Landing

After crossing the finishing point (FP = Finish Point), the pilot must start your landing procedure. Unless otherwise briefed, pilots should make a close circuit with preset at the designated location and other visual security pilots. Immediately after landing and have their paramotors in a safe place pilots must take their tracking devices (GPS) properly sealed to the judge or Marshals Proof.

Score

Many TG points will be set in linear section, and several unknown HD over the curved sections. The HD result in a maximum of 400 points, the speed on linear section 450 points, and the take-off up to 150 points. The final score of the pilot will be normalized considering the best score 1000 points.

$$\boldsymbol{Pilot\ Score\ \ Q = (NBp/NBmax)x\ 400 + (450 - \sum Ei) + To}$$

NBp = Number of HG collected by the pilot in the task, less penalties.
NBmax = Highest number of HG collected by a rider in the task, discounted penalties.
∑Ei= Sum of differences of the stated times and measured in 3 sections (Maximum of 3 x 150 = 450).
To = Takeoff (maximum 150 points)

Σ Ei = Ei = the absolute error in each second portions 5 sec and a maximum tolerance of 150 sec (2 '30 "). Difference between the stated time (ETA) and the one determined by the intersection of the start and end points of each section. Gates not crossed the score is zero in that stretch.
Ei = (declared time - measured time) in each section being 150 at the maximum.

To Takeoff Value =

150 points	1a. Attempt;
100 points	2a. Attempt;
50 points	3a Attempt;
Zero	> 3 Attempt.

$$\boldsymbol{Final\ Score\ of\ the\ Pilot\ P = (Q\ /\ Qmax)x\ 1000}$$

Example:

Hidden Gates (HG)

N_{HG} = 40 HG full on task
NBP = 14 HG crossed within the pin of R = 100 m
NBmax = Maximum number of HG collected by a pilot within the pin R=100m; = 28

NBP / NBmax x 400 = 14 / 28 x 400 x 200 points (maximum 400 points)

Gates timing

N_{TG} = 3 Gates Section's

TIMING LINES	DECLARED TIME (ETA)	MEASURED TIME	EI = TIME DIFFERENCE (SEC)	SCORE (HI = 150 - EI)
T1	T1 = 540 sec	580 sec	40	110
T2	T1 = 600 sec	540 sec	60	90
T3	T2 = 950 seconds	1150 sec	150 *	0
			250	**200**

- Maximum value = off 150 sec (2.5 min)

450 - ∑Ei = 450-250 = 200 points (maximum 450 points)

Take-off
Took off on 2nd try **To = 100 points** (Maximum 150 points)

Pilot Score
Q = 200 + 200 + 100 Q = 500 points

Maximum Pilot Score in Task
Q max = 800 pontos

Final Scoring of Pilot

P = 500 / 800 x 1000 = 625 pontos

Penalties

100% penalty will be applied for:

- Fly in the opposite direction to the defined circuit;
- Backtracking
- Not cross the SP or FP or crossing over into the wrong set;
- Cross the SP or FP outside the task window;
- Take off or land outside the task window;
- Fly in prohibited place;
- Other foreseen in the Regulation, including disqualification.

20% penalty will be applied for:

- Land outside the airfield;

N4. PURE NAVIGATION – Maximum Distance Travelled

Objective

This is a limited task of time in which the pilot must fly a path of your choice from a given set of turnpoints, in order to cover as much distance as possible within the stipulated time limit for the task. The pilot must cross the starting gate (SP) and a final gate (FP) which can be set to one of turnpoints, and may also be necessary to pass certain intermediate gates during the task, as specified in the briefing. There are no pre-declaration elements. The linear distance between turnpoints will not be informed in advance. Unless otherwise indicated, the pilots will perform free takeoff from your deck and within the designated time frame of the task.

Score

$$\boldsymbol{Pilot\ Score\ =\ (NBp\ /\ NBmax\ )x\ 1000}$$

At where
NBp = Sum of linear distances between points collected by the pilot in the task
NBmax = Largest sum of linear distances between points collected by the task pilot

Penalties

- 100% penalty will be applied for:
  - Passing out of the PF task time with T> 5 min (SP-FP);
  - Not cross the SP or FP or crossing over into the wrong set;
  - Take off outside the task window;
  - Flying in prohibited airspace;
  - Other foreseen in the Regulation, including disqualification.

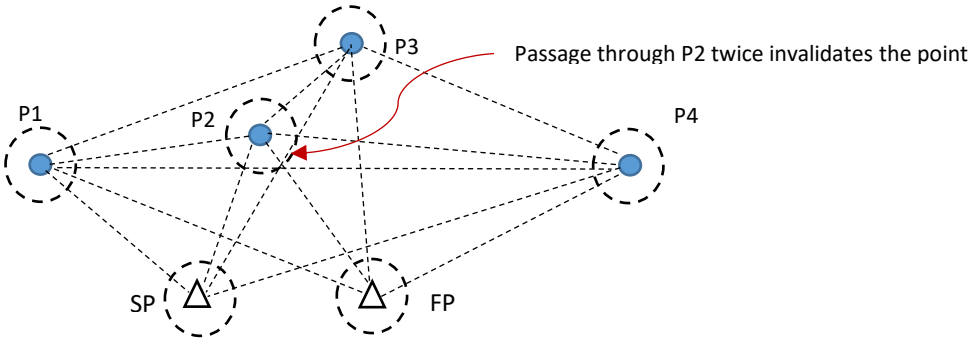
- 20% penalty will be applied for:
  - Land outside the airfield;

- Passing through a point that has already been collected invalidate this point

Example:

Takeoff time window:	3 pm
Maximum Time of proof between SP and FP (T):	1:30 pm (tolerance +5 min)
Time held between SP and FP (T):	1: 32 pm (ok)
Total waypoints and turnpoints the task =	5 locations (SP, P1, P2, P3, P4, FP)
And path points collected (within the pin of R = 150 m) =	SP-P4-P2-P3-FP
distance traveled ($D_{sp-4} + D_{4-2} + D_{2-3} + D_{3-FP}$) =	3.800 m
Distance Traveled most of the trial by a pilot =	4.200 m
Pilot Score = 3800/4200 x 1000 = 904.76	905 points

Passing through a point that has already been collected invalidate this point. Ex .: SP-2-3-4-2-1-FP will result in SP-3-4-1-FP.



Precautions

Maintain eye contact with other pilots who may be in separate traffic of your. Do not focus only on the map and on the ground because there are other pilots in navigation. Give preference to those who are lower. As it is free to prioritize circuit turns the left and at most 90 degrees. Fly predictably. Overtaking in free circuit must be made by the pilot's right to be exceeded, and never underneath.

Landing

After crossing the finishing point (FP = Finish Point), the pilot must start your landing procedure. Unless otherwise briefed, pilots should make a close circuit with preset at the designated location and other visual security pilots. Immediately after landing and have their paramotors in a safe place pilots must take their tracking devices (GPS) properly sealed to the Judge or Marshals Proof.

5.2. ECONOMY

E1. PURE ECONOMY

Objective

Take off from the launch area with a limited amount of fuel (Ex .: 1.5 kg)[2]and fly close to the airfield as much time as you can and land on the landing area (deck) before the window ends. The takeoff and landing time will be noted by field marshals at the time that pilots and passengers remove the last leg from the floor or the last wheel paratrike on takeoff until the first contact with the ground. The accuracy of this task will be minutes, disregarding the seconds[3].

According to new rules in S.10 2020, PL2 class will be excluded from this task.

Description

The flight will take place around the airfield. The pilots will wait for their turn to take off in the launch area. You receive a green flag Marshals indicating that it is allowed to take off. Your departure time will be noted (or the timer triggered). Groups will be made 4-5 pilots for judge / marshalls and takeoffs will be made in simultaneous batteries of the same number of pilots with time intervals to release the airspace.

Score

$$\boldsymbol{Score\ of\ the\ Pilot\ \ P = (Tp\ /\ Tmax)x\ 1000}$$

At where
Tp = pilot flight time
Tmax = Maximum time obtained in the task for a pilot

Example:

Window Proof:	2 pm
Takeoff Time:	13 hours 14 '50 "
Landing time:	14 hours 05' 10 "
pilot in flight time = 13 x 60 min + 14 '=	794 min
Maximum time of task = 14 x 60 min + 5 '=	845 min
Time Pilot = 845-794 =	51 min
Maximum time of task =	85 min
Pilot Score = 1000 x 51/85 =	600 points

Penalties

100% penalty will be applied for:

- Take off outside the task window or without notice of the Marshals / Judge;
- Flying in prohibited airspace or out of view of marshals;
- Landing outside the airfield or without prior notice to the Supervisor Marshal of his landing;;
- Other foreseen in the Regulation, including disqualification.

20% penalty:

- Land off the deck (landing and takeoff area, but within the airfield and visually Marshals / Judge)

Precautions

Maintain eye contact with other pilots who are on the same circuit around the runway. Give preference to those who are lower. As this brief circuit defined in performing maximum in the curves 90 degrees to the direction of the circuit. Fly predictably. Overtaking must be performed on the opposite side to the circuit.

Landing

Unless otherwise briefed, pilots must approach in a pre-established circuit at the landing area and visually secure to other pilots.

[2] If the rule of the 5 min is used, the pilot can take off again but can not replenish starting from scratch.
[3] If the time interval is obtained by direct timing or passing sensor, the second will be valid for score.

E2. ECONOMY WITH NAVIGATION

Objective

Take off from the launch area with a limited amount of fuel (Ex .: 1.5 kg)[4] and fly to a predetermined maximum possible distance toward judged return and land inside the landing area before expiration of the window.

Description

The flight will be carried out on the right side of the reference line (departure hall) as far as the pilot deems safe, cross the reference line, and return to the airfield from the left of the reference line (return corridor). The point of the pilot crossing the reference line will be considered for scoring. The distance between the intersection point and the starting point is multiplied by 2 (total distance traveled along the reference line). The distance d is rounded to 5 m each (ex.: 625 m = 620m; 612 m= 610 m; 12.358 m = 12.360 m) expressed in meters, and then multiplied by 2. The pilot can take off at any time within the flight window.

Score

$$\boldsymbol{Pilot\ Score\ \ P = (Dp\ /\ Dmax)x\ 1000}$$

At where

D = Distance between the starting point and the closest point of pilot crossing in meters
dp = Distance traveled by the pilot in flight (Dp = dx 2) in meters
Dmax = Maximum distance obtained in the task for a pilot (Dmax = dx 2) in meters

Penalties

100% Penalty will be applied for

- Take off outside the task window;
- Flying in prohibited airspace or out of view of marshals / judges when requested;
- Land outside the airport area or without notice to the Marshals their landing;
- Not crossing the scoring line (no distance can be calculated)
- Other foreseen in the Regulation, including disqualification.
- To fly over line or in the opposite direction in the corridor for **more than 5 seconds.**

"20% penalty":

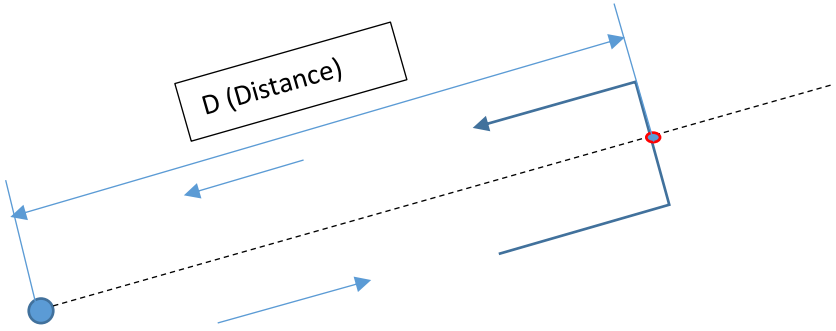
- Land off the deck (landing and takeoff area, but within the airfield and visually Marshals / Judge)

Precautions

Maintain eye contact with other pilots who are on the same circuit around the reference line. Give preference to those who are lower. As this brief circuit defined in performing maximum in the curves 90 degrees to the direction of the circuit. Fly predictably. Overtaking must be performed on the opposite side to the circuit.

Landing

Unless otherwise briefed, pilots should make a close circuit with preset at the designated location and other visual security pilots.



[4] If the rule of the 5 min is used, the pilot can take off again but cannot replenish starting from scratch.

E3. ECONOMY WITH DISTANCE

Objective

Take off from the launch area with a limited amount of fuel[5] (Ex .: 1.0 kg for Paramotor and 1.5 kg Paratrike) and fly the largest possible number of passages around the airfield and landing on one of the decks allowed.

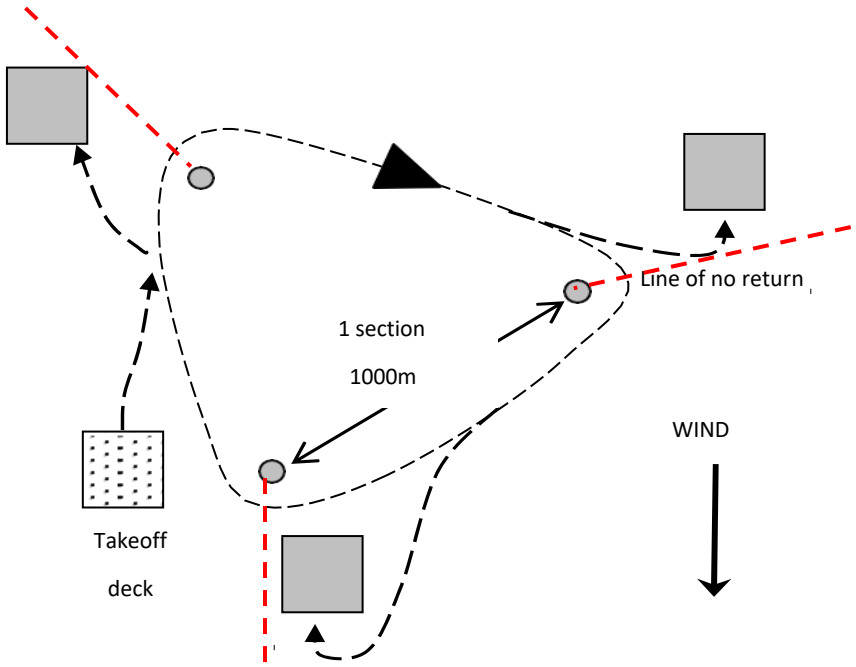
Description

Each section will have about 1 km and a landing area. no return lines will be marked to prevent any attempt to paramotor flying in the opposite direction of the circuit. The pilot will wait for their turn to take off in the launch area. You receive a green flag Marshals indicating that it is allowed to take off. In this task, the record of the passages will be performed by GPS. The flight height should be of the order of 200 m with a variation of +/- 50 m, and can be changed by the director in the competition briefing.

Score

$$\boldsymbol{Pilot\ Score\ P = (NBp\ /\ NBmax)x\ 1000}$$

At where
NBP = Number of turnpoints collected by the pilot in the task
NBmax = Increased number of turnpoints collected by a pilot in the task



Example:

Points collected by the pilot =	15 pylons
Most points collected in the task by a pilot =	30 pylons
Pilot Score = 1000 x 15/30 =	500 points

[5] If the rule of the 5 min is used, the pilot can take off again but cannot replenish and lose the points made in these five minutes, starting from scratch.

penalties

100% penalty will be applied for:

- Take off without authorization of the Marshals / Judge;
- Landing outside the airport area or without notice to the Marshals;
- Flying in a direction opposite to the circuit crossing the lines of non-return
- Flying aggressively around the markers or touch them at any time
- If any part of your body or paramotor touches the ground or take off again
- Make dangerous overtaking and below the aircraft ahead.
- Other foreseen in the Regulation, including disqualification.

"20% penalty":

- Land off the deck (landing and takeoff area, but within the airfield and visually clear to the Marshals / Judge)
- Flying height outside the established limits.

Precautions

Maintain eye contact with other pilots who are on the same circuit around the runway. Give preference to those who are lower. As this brief circuit defined in performing maximum in the curves 90 degrees to the direction of the circuit. Fly predictably. Overtaking must be done on the opposite side to the circuit, and always level or above, never beneath another pilot.

Landing

Unless otherwise briefed, pilots must approach in a pre-established circuit at the landing area and visually secure to other pilots.

E4. ECONOMY, DISTANCE AND ACCURACY OF TAKE-OFF

Objective

Take off properly take-off area with a limited amount of fuel (Ex .: 1.5 kg)[6] and fly the longest distance you can and land on the landing area (deck) before the window ends. The takeoff and landing time will be noted by Marshals at the time that pilots and passengers remove the last leg from the floor or the last wheel paratrayk on takeoff until the first contact with the ground. The distance is measured in number of pylons collected (E3) or maximum distance (E2) obtained in a direction defined, and the accuracy of takeoff is measured in bonus. The rules of evidence E2 and E3 remain valid for this task.

Description

The flight will take place around the airport or at a predetermined area. The pilot will choose the best time to take off. You receive a green flag Marshals indicating that it is allowed to take off.

Special rules

- Clean off at the first attempt[7]: 250 points;
  Clean takeoff at the second attempt: 200 points;
  Clean off at the third attempt: 100 points;
  Other attempts 0 points

Score

$$(E2) - \textbf{Pilot Score } Q = (Dp/Dmax)\,x\,750 + Bto$$

At where

D	=	Distance between the starting point and the closest point of pilot crossing in meters
dp	=	Distance traveled by the pilot in flight (Dp = d x 2), in meters
Dmax	=	Maximum distance obtained in the task for a pilot (Dmax = d x 2), in meters
Bto	=	takeoff bonus (maximum 250 points)

OR

$$(E3) - \textbf{Pilot Score } Q = (NBp/NBmax)\,x\,750 + Bto$$

At where

NBP	=	Number of turnpoints collected by the pilot in the task
NBmax	=	Increased number of turnpoints collected by a pilot in the task
Bto	=	takeoff bonus (maximum 250 points)

Example (E2):

Distance Pilot =	5.570 m
Maximum distance obtained in task =	12,500 m
Takeoff bonus (2nd try) =	200 points

Pilot Score = 5570/12500 x 750 +200 = 534.20 (534,20 points)

Penalties

100% penalty will be applied for:

- Take off outside the task window or without notice of the Marshals / Judge;
- Fly in prohibited place or out of view of judges when requested;
- Land outside the airport area or without notice to the Marshals;
- Flying in a direction opposite to the circuit crossing the lines of non-return (E3)
- Flying aggressively around the markers or play them at any time (E3)
- If any part of your body or paramotor touches the ground or take off again (E3)
- Make dangerous overtaking and below the aircraft ahead;
- Fly in the opposite direction to the departure or return corridor for more than 10 seconds (E2)
- Other foreseen in the Regulation, including disqualification.

[6] If the rule of the 5 min is used, the pilot can take off again but can not refuel and will feature the first takeoff bonus.

[7] Takeoff evaluation occurs from the time that the pilot intends to fly and carries out inflation.

"20% penalty":

- Land off the deck (landing and takeoff area, but within the airfield and visually clear to the Marshals / Judge)
- Flying height outside the established limits.

Precautions

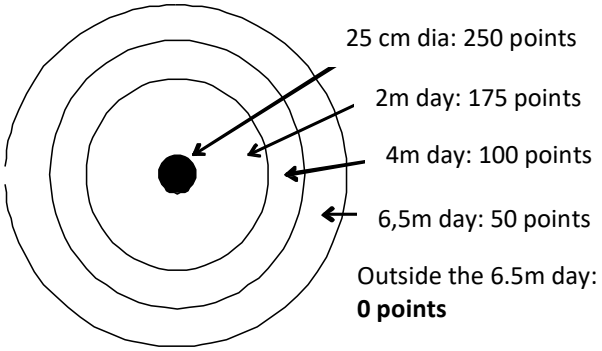
Maintain eye contact with other pilots who are on the same circuit. Give preference to those who are lower. As this brief circuit defined in performing maximum in the curves 90 degrees to the direction of the circuit. Fly predictably. Overtaking must be performed on the opposite side to the circuit and always at the same height or above. They are not allowed overtaking under another aircraft;

Landing

Unless otherwise briefed, pilots must approach in a pre-established circuit at the landing area and visually secure to other pilots.

5.3. PRECISION

P1. ACCURACY ON TARGET



Objective

Land with the engine off as close as possible to the target.

Description

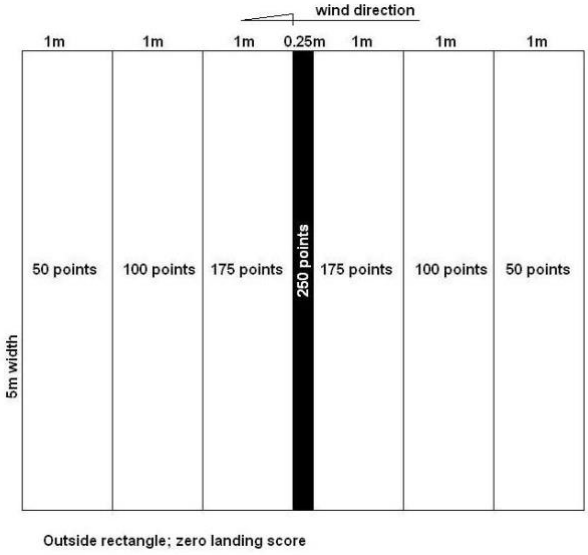
The pilot will enter the circuit designated as soon as authorized by the Marshals or judge reaching at least 150 m in height. A green flag will indicate that the target is released to the task.

In about 60 seconds after the green flag the engine must be turned off and the pilot goes to perform his first touch in the center of the target.

The point of touch will be considered the foot of the pilot or the first wheel. Two wheels or legs are at the same time will be considered the closest in favor of the pilot.

The pilot must quickly leave the target area to a safe place. If so briefed the pilot is already aware of your score and signs the score sheet/app of the judge.

If during the pilot's navigation red flag is raised the pilot should abandon the procedure and wait for flight to new instructions. If the pilot is approaching with engine off must land off target, leaving accuracy.



Penalties

- Engine off in less than **45 seconds** before the first ring clears the task;
- First touch off target results in 0 points;
- Fall during landing or two knees on the floor (PF) or roll over (PL) clears the task;
- There is no penalty if any part of the paramotor touches the ground before the first valid touch, since the landing is considered "GOOD"

Score

$$\boldsymbol{Pilot\ score\ P = (Np/Npmax)x\ 1000}$$

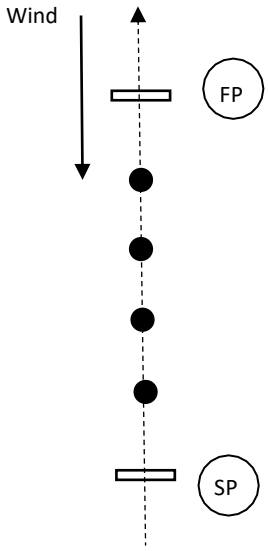
At where

np = Pilot Rating
Npmax = Highest score obtained by a pilot

P2. SLOW AND FAST SPEED

Objective

Flying a stretch as fast as possible and then fly as slow as possible, or vice versa order to be set at the briefing.



Description

The circuit will be formed by 4 apart sticks 50 – 100 m from each other and two distant gates 25 – 50 m of the last stick on each side forming an outlet and an inlet with electronic sensors, or timing collected by the marshals/judges when the pilot kicks the sticks. The distances between sticks should be change by the director.

There may be two courses but they must be of equal dimensions and orientation and separated by at least 200m flying distance.

The pilot must make a slow pass, return to the entrance gate and perform a fast pass in the same direction. At the discretion of the task director, entry into the gate and the type of passage may be free for both passes, provided that this is true for all pilots.

Special rules

- A valid kick is considered when the pilot's body or any part of his aircraft clearly touches the stick.
- The pilot will have 3 chances to pass the entrance gate or kick the first stick that starts the timing.
- The maximum time allowed to complete the task will be **3 min after the first pass through SP**.
- The task will be started by the slow pass, unless otherwise defined in the briefing.

Penalties

100% penalty will be applied for:

- Enter the circuit out of order when an order stipulated;
- Losing the SP or FP in one of the two compulsory passages;
- Touch the ground at any point between the start point and finish point;
- Any anomaly in the wing caused by aggressive piloting as collapse, stall, and partial closure.

If the pilot loses some sticks between SP and FP will receive 50% penalty on your score.

Score

$$Q = (T\,Slow / T\,Fast)\ x\ 1000$$

$$Qpen = Q\ x\ Penalty\ (100\%, 50\%\ or\ zero)$$

$$\boldsymbol{Pilot\ Score\ P = (Qpen/Qmax)x\ 1000}$$

At where:

T slow =l	Pilot measured time in slow circuit (seconds)
T Fast=	measured time pilot in the fast circuit (seconds)
Q =	Pilot's score on the task
Qpen =	Pilot's score on the task after applying the penalty
Qmax =	Highest score of a pilot after applying penalties

Example:

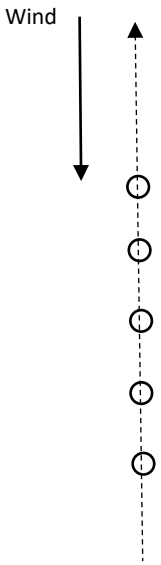
Tslow =	45 sec
T fast =	28 sec
Q = 45/28 x 1000	1607,14
Qpen =	1607,14 x 50% = 803.57 (not kick one of the stiks)
Qmax =	2200,35

P = 803,57/2200,35 x 1000 = 365,20 = 365 therefore, **P = 365 points**

P3. TAKEOFF AND LANDING PRECISION IN BOWLING

Objective

Perform a clean take-off and landing perform with the engine off, reaching as many pins as possible.



Description

5 pins are arranged along a line in the wind direction at equal intervals 1 to 2 m. The pilot will enter the circuit designated as soon as authorized by the Marshals reaching at least 150 m in height. A green flag will indicate that the target is released to the task. In about 60 seconds after the green flag the engine must be turned off and the pilot goes to perform his touch over the pins. The pins are simply placed on the ground and will be considered valid when they are overthrown. The pilot should remain in flight with the engine turned off at least **45 seconds before reaching any pin**. Only pins overturned before the pilot touches the ground will be considered valid pins to score.

The pilot must quickly leave the target area to a safe place. If so briefed the pilot is already aware of your brand and signs the score sheet/app of the judge.

If during the pilot's navigation red flag is raised the pilot should abandon the procedure and wait for flight to new instructions. If the pilot is approaching with engine off must land outside the pins, leaving accuracy.

Penalties

100% penalty will be applied for

- Engine off in less than 45 seconds before the first pin;
- Falling during landing or on both knees (PF), or roll over (PL);
- Touch the ground before the first pin and not score in the first pin.

There is no penalty if any part of the paramotor touches the ground before the first valid pin, since the landing is considered "GOOD"

Special Rules

- Clean takeoff at the first attempt[8]: 250 points; clean takeoff at the second attempt:200 points; Clean takeoff at the third attempt: 100 points; Other attempts 0 points
- Each pin is properly knocked down 50 points, totaling 250 points.

Score

$$\boldsymbol{Pilot\ Score\ Q} = (\boldsymbol{Np/Npmax})\boldsymbol{x}\ \mathbf{750} + \boldsymbol{Bto}$$

At where

Np = Pilot score per pins
Npmax = Highest score obtained by a pilot per pins
Bto = *Takeoff bonus*

Example:

Np = 200 (4 pins)
Np max = 250 (5 pins)
Bto = 100 (3a try)
Q = 200/250 x 750 + 100 = 700 therefore, Q = 700 points

[8] Takeoff evaluation occurs from the time that the pilot intends to fly and makes the inflation of the wing.

P4. PRECISION WING CONTROL (LANDING AND RELAUNCH)

Objective

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

Description

This task is usually flown in appropriate wind conditions. A linear path comprises two sticks aligned with the wind direction (considered appropriate maximum variation of 30 degrees to each side) is arranged with a minimum distance of 100 m from each other.

The pilot must enter the circuit into wind. Must pass through the entrance gate (SP) to open your time, or by kicking the first stick. Then the pilot must land between the sticks, leaving the wing touching the ground, so that the trailing edge is clearly seen to touch the ground. When marshal / judge confirmed that the wing touched the ground, a green flag will be waved indicating that the pilot can take off again. They must then kick the second stick and/or go through the exit gate (FP) to close their time.

Special Rules and Penalties

- 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.

Score

$$\boldsymbol{Pilot\ Score} = (\boldsymbol{Tbest/Tpil})\boldsymbol{x}\ \mathbf{1000}$$

At where:

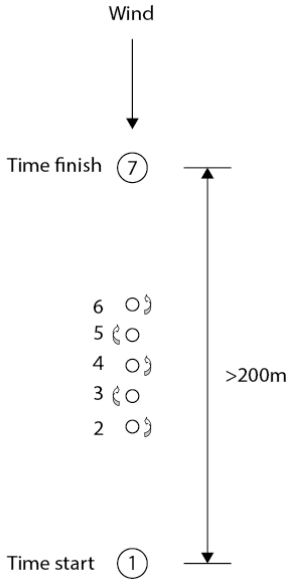
Tpil = measured time pilot (seconds)

Tbest = shorter time of the pilot in the task after penalties have been added.

P5. PRECISION WING CONTROL – GROUND ZIG-ZAG

OBJECTIVE

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



Description

This task is usually set during wind conditions in which a reverse take-off 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 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

Penalties

100% penalty will be applied for:

- Enter the circuit out of order;
- Failed to kick the first and last sticks;

15 seconds penalty (Vpen) will be added to the pilot:

- It takes longer than 60 seconds between communication or green flag and the entry gate;
- For each invalid pin;
    - Touch with the body, wing or equipment pins will be considered invalid pin;
    - Each pin that is touched by the body of the pilot in the course counts as a invalid pin.
    - Each time the pilot fails to turn outside the line of pins it counts as a invalid pin.

Score

$$\boldsymbol{Pilot\ Score} = (\boldsymbol{Tbest/Tpen})\boldsymbol{x}\ \mathbf{1000}$$

$$TPen = Tpil + M\,Vpen$$

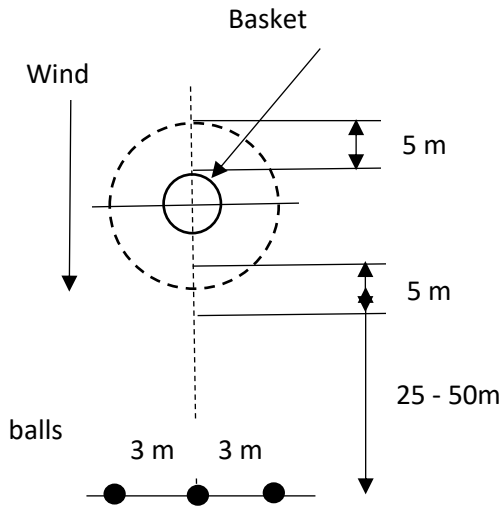
At where:

Tpil =	measured time pilot (seconds)
M =	number of invalid pin
Vpen =	penalty for each invalid pin (15 seconds)
TPen =	pilot time after addition of penalties
Tbest =	shorter a pilot in the task after increases in penalties.

P6. PARABALL

Objective

Deliver balls to a target (basket) or as close to the target as possible, either by carrying or hitting with feet, as quickly as possible..



Description

The target is a basket between 1-2m diameter and 0.5 to 1.0 m in height. A distance of 5m circle is marked on the ground around the target. 3 soft balls are placed in a line 25-50 m downstream of the target in marked initial positions, spaced 3 m from each other.

The pilot flies to the circuit designated area and waits to start the task as reported. A green flag will be waved to indicate that the pilot must start the task. A good start is when the when the line where the balls are is crossed within 60 seconds of the first green flag being waved.

The time starts when the line on which the balls are aligned was crossed (if the ball has been touched or not). The pilot approaches a ball, collect them with their feet and takes it to the target or kick the ball to the target. This is repeated until all the balls are in the target or the 3-minute time limit is reached.

The score is based on the time spent since the start of the task until all balls are on target and the number of balls in the basket. If the maximum time limit is reached, the number of balls at the target is counted and the distance of the target remaining balls are checked. The balls must stay on target. **The balls in the basket worth 200 points, and those inside diameter of 5 m from the basket rim 50 points**. The balls out of 5m diameter has no validity to score.

There are no limitations on the number, angle, speed or height of the approaches to the balls, the number of times a ball may touch or technique to beat or carry the balls. The pilot can touch and move on the ground, but the wing must not touch the ground during the task. If the wing touching the ground the score is zero for the task

If a pilot is carrying a ball in the air when the time limit is reached, it will take extra time to complete the delivery of the ball to the target. This extra time ends when the ball touches the ground or after 30 seconds, whichever occurs first. A red flag is waved when the time runs out. The results are then measured in this state, **but the portion of timing in score is disregarded.**

Penalties

100% penalty will be applied for

- Enter the circuit out of order;
- Wing touches the ground during the task

15 seconds penalty will be added to the pilot, or missed one ball inside the basket in case the pilot don't score timing if:

- It takes longer than 60 seconds between the green flag and the entry gate;

Score

$$\boldsymbol{Pilot\ Score} = (\boldsymbol{Tbest/Tpil})\boldsymbol{x}\ \mathbf{400}^{9} + \left(\frac{\mathbf{Bn}}{\mathbf{Bnmax}}\right)\boldsymbol{x}\ \mathbf{600}$$

At where:

Tpil = measured pilot time after penalty increases (seconds) (≤ 180 seconds) [10]
Tbest = shorter time for a pilot in task after penalties (seconds)

Bn = *Pilot Points with the balls in the basket or 5m area*
BN max = *maximum score of a pilot in the task with the balls in the basket or 5m area (max 600)*

[9] The portion of time is recognized only if the three balls have been scored in the basket or inside the adjacent area at the end of 180 seconds.

[10] If the sum of the pilot time exceeds 180 seconds after the penalties applied, the portion of time will be discarded from the score.

Specific rules

- Balls into the basket 200 points / ball
- Balls the basket, but within the area of 5 m from the basket rim 50 points / ball
- Balls will stand up to a total of 600 points (in the basket balls 3 x 200 points) 60% of the task

- Time will be worth a maximum of 400 points - 40%. The time will be counted only in if the score 3 balls have been scored (in the basket or within the 5 m), and the final time of the pilot, plus penalties, is less than or equal to 180 seconds (3 minutes). Otherwise this portion will be eliminated from the pilot's score, with your valid proof up to 600 points.

- Maximum Task Score 1000 points.

Example:

(1) Pilot made in 150 seconds, 2 balls in the basket and a ball 5m area. Best pilot made circuit 100 seconds and put the 3 balls in the basket.

T Pilot = 150 sec

T Best = 100 sec

Bn = 2 x 200 + 1 x 50 = 450

Bnmax = 600

P = (100/150) x 400 + (450/600) x 600 = 266,67 + 450 = 716,67 **= 717 points.**

(2) Pilot one ball placed in the basket and one in the area of 5 m. Best pilot made circuit 100 seconds and put the 3 balls in the basket.

T best / T pilot x 400 = “zero” (not scored 3 balls)

Bn = 1 x 200 + 1 x 50 = 250

Bn Max = 600

P = “zero” + (250/600) x 600 = 250 points

(3) Pilot three balls placed in the basket in 200 sec (the rule used for the last 30 sec ball). Best pilot made circuit 100 seconds and put the 3 balls in the basket.

T best / T pilot x 400 = “zero” (Exceeded 180 seconds)

Bn = 3 x 200 = 600

Bn Max = 600

P = "zero" + (600/600) x 600 = 600 points

P7. SHORT TAKE-OFF

Objective

Take off in the shortest possible distance. This task is intended to be included as a small element of another task.

Description

Takeoff permission is granted after the pilot has indicated he is ready to take off. The maximum distance on the ground, from where the pilot's feet or aircraft wheels have been since the start signal, to where the pilot's feet or aircraft wheels permanently leave the ground will be measured and scored. (permanently is defined as aircraft is airborne for more than 10 sec.)

Special rules

There will be limits on time and distance established in brief according to the weather conditions. If not otherwise stated, the time limit for this task is 1 min. No restriction on the number of attempts takeoff within the time limit is applied. There are no penalties for the wing touching the ground on each trial. If not otherwise stated, the distance limit is 50 m. Beyond the limits of time or distance will be indicated with the red flag and results in zero score.

Score

Pilot Score = 1000 x (Smin / Sp)

At where

Sp = pilot's takeoff distance.

Smin = The shortest distance in meters for a takeoff.

Score

Mark steps or pilot wheels on the ground can be a complicated task for the marshals. The use of sticks or ground marks 2-3 m in length (or similar slats) has proven effective to help secure the results of visual observation on the ground before being measured.

Alternative methods can be developed and used for more accurate measurements, but distances will be rounded up every 2 m, the pilot to leave before 3 m receive 3m, 6m receive before 6 m, and so on.

Example:

Sp = 24 m

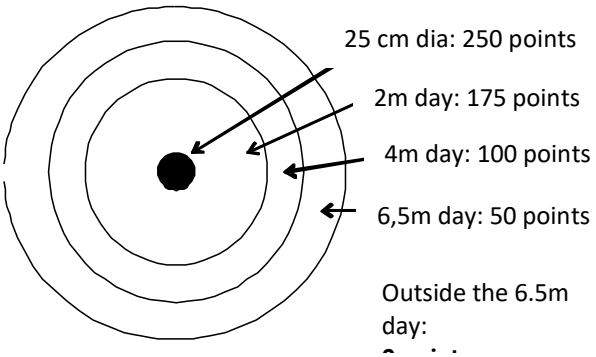
S min = 12 m

P = 12/24 x 1000 = 500 points **Points P = 500**

P8. TAKEOFF AND LANDING PRECISION IN TARGET

Objective

Properly take off and land with the engine off as close as possible to the target.



Description

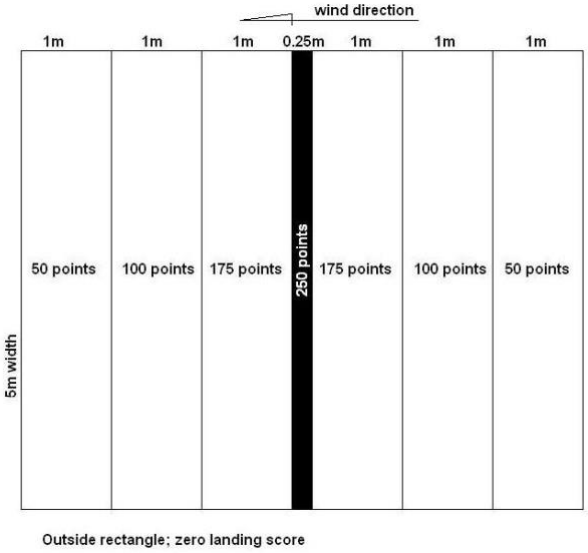
The pilot will be evaluated for its takeoff and flight then will enter the circuit designated as soon as authorized by the Marshals or judge reaching at least 150 m in height. A green flag will indicate that the target is released to the task.

In about 60 seconds after the green flag the engine must be turned off and the pilot goes to perform his first touch in the center of the target.

The point of touch will be considered the foot of the pilot or the first wheel. Two wheels or legs are at the same time will be considered the closest in favor of the pilot.

The pilot must quickly leave the target area to a safe place. If so briefed the pilot is already aware of your brand and signs the score sheet of the judge.

If during the pilot's navigation red flag is raised the pilot should abandon the procedure and wait for flight to new instructions. If the pilot is approaching with engine off must land off target, leaving accuracy.



Penalties

- Engine off in less than **45 seconds** before the first ring incurs 100% penalty;
- First touch off target results in 0 points;
- Fall during landing or two knees on the floor (PF) or roll over (PL) clears the task;
- There is no penalty if any part of the paramotor touches the ground before the first valid touch, since the landing is considered "GOOD"

Special rules

- Clean takeoff at the first attempt[11]: 250 points; clean takeoff at the second attempt:200 points; Clean takeoff at the third attempt: 100 points; Other attempts 0 points

Score

$$\boldsymbol{Pilot\ Score\ Q\ =\ (Np/Npmax)x\ 750 + To}$$

At where

Np = Pilot score
Npmax = Highest score obtained by a pilot
To = *Takeoff Score*

$$\boldsymbol{Pilot\ Final\ Score\ P\ =\ (Q\ /\ Qmax)x\ 1000}$$

At where

Q = Pilot score as above item
Q max = Highest score obtained by a pilot in this task

[11] Takeoff evaluation occurs from the time that the pilot intends to fly and makes the inflation of the wing.

Example:

Np =	100	(4m diameter)
Np max	250	(target)
TO =	100	(3a Try)

Q = 100/250 x 750 + 100 = 400 therefore, Q = 400 points

Q max = 1000 points

P = 400/1000 x 1000 = 400 **P = 400 points**

P9. SHORT TAKEOFF AND PASS SLOW / FAST

Objective

Take off in the shortest possible distance and fly a stretch as fast as possible and then fly as slow as possible, or vice versa to be set at the briefing.

Use the rules of tasks P2 e P7 for details.

Score

$Q_{12} = Qv + Q\,d$

At where:

Qv = Score for the slow and fast task
Qd = Score on short takeoff task
Q = Final Score

(1) $\boldsymbol{Pilot\ Score\ \ Qv = (Qvp/Qvmax)x\ 750}$

$Q = (T\ Slow\ /\ Fast\ T)\ x\ 1000$

$Qvp = Q\ x\ Penalty\ (100\%,\ 50\%\ or\ zero)$ [12]

At where:

T Slow =	Pilot measured time in slow circuit (seconds)
T Fast =	measured time pilot in the fast circuit (seconds)
Q =	Pilot's score on the task
QVP =	Pilot's score on the task after applying the penalty
Qvmax =	Highest score of a pilot after applying penalties

(2) $\boldsymbol{Pilot\ Score\ Qd = (Smin/Sp)x\ 250}$ [12]

At where:

S min =	Minimum distance achieved by a pilot in the task
Sp =	Distance obtained by the pilot, rounded every 3m up

[12] Arredondamento até a segunda casa decimal após a virgula.

$$\boldsymbol{Pilot\ Final\ Score}\ \ \boldsymbol{P} = (\boldsymbol{Q} \,/\, \boldsymbol{Qmax})\boldsymbol{x}\,\boldsymbol{1000}$$[13]

At where
Q = Pilot score accord to above numbers
Q max = Highest score obtained by a pilot in this task

Example:

T slow =	45 seg		
T fast =	28 seg		
Q = 45/28 x 1000 =	1607,14		
Qpen =	1607,14 x 50% = 803,57	(DO NOT KICK THE STICK)	
Qmax =	2200,25		
Qv =	803,57/2200,25 **x 750**	= 273,91	
Smin =	6,0 m		
Sp =	21,0 m		
Qd =	6/21 **x 250**	= 71,42	
Q =	71,42 + 273,91	= 345,33	
Q max =		= 853,25	
P =	345,33 / 853,25 x 1000 = 404,72	= 405	**P = 405 pontos**

[13] Rounding nearest whole number.