FAI Sporting Code

Section 10 – Microlights and Paramotors

Class R

To Take Effect on 1st January 2009

Section 10 and General Section combined make up the complete Sporting Code for Microlights and Paramotors

FEDERATION AERONAUTIQUE INTERNATIONALE
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11 FAI Statutes, Chapter 1, para. 1.6
2 FAI Sporting Code, General Section, Chapter 3, para 3.1.3.
3 FAI Statutes, Chapter 1, para 1.8.1
4 FAI Statutes, Chapter 2, para 2.1.1; 2.4.2; 2.5.2; and 2.7.2
5 FAI Bylaws, Chapter 1, para 1.2.1
6 FAI Statutes, Chapter 2, para 2.4.2.2.5,
7 FAI Bylaws, Chapter 1, para 1.2.3
8 FAI Statutes, Chapter 5, para 5.1.1; 5.5; and 5.6
9 FAI Sporting Code, General Section, Chapter 3, para 3.1.7
10 FAI Sporting Code, General Section, Chapter 1, paras 1.2. and 1.4
11 FAI Statutes, Chapter 5, para 5.6.3
12 FAI Bylaws, Chapter 1, para 1.2.2

SPORTING CODE SECTION 10 - 2009 Edition

This document, the SPORTING CODE - SECTION 10, 2009 Edition, takes effect on the 1st January 2009
The 2009 edition differs from the 2008 edition in those paragraphs with a double vertical bar in the margin. A single vertical bar indicates changes to comply with the new 2009 wording requirements, Zigzag lines indicate just a change of provision numbering from the 2008 edition.

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ABBREVIATIONS
GS: FAI Sporting Code General Section A5: Sporting Code Section 10 Annex 5
BL: FAI By-Laws A6: Sporting Code Section 10 Annex 6
S10: Sporting Code Section 10 FR: GNSS Flight Recorder
A1: Sporting Code Section 10 Annex 1 TBD: to be decided
A2: Sporting Code Section 10 Annex 2 DNF: Did not fly
A3: Sporting Code Section 10 Annex 3 DSQ: Disqualified
A4: Sporting Code Section 10 Annex 4

WORDING
The use of “shall” and “must” implies that the aspect concerned is mandatory; the use of “should” implies a non mandatory recommendation; “may” indicates what is permitted and “will” indicates what is going to happen. Words of masculine gender should be taken as including the feminine gender unless the context indicates otherwise. Italics are

used for explanatory notes.

CHAPTER 1

1.1 SECTION 10 SCOPE OF WORK

Section 10 of the Sporting Code deals with records, proficiency badges, and world and continental Championships for Microlight and Paramotor aircraft.

1.2 SECTION 10 AUTHORITY

Section 10 is to be used in conjunction with the General Section of the Sporting Code.

1.2.1 The following subjects are detailed in the General Section:
FAI Authority and Responsibility Chapter 1
Classifications and Definitions Chapter 2
Drugs, Alcohol, Illness Chapter 3
Penalties, Protests Chapter 5
Sporting Licences Chapter 8
Appeals before FAI Chapter 9

1.2.2 The following chapters of the General Section contain general principles with the special information for Microlight and Paramotor aircraft in Section 10.
Sporting events Chapter 3
Observers and officials Chapter 4
World records Chapter 6
Flight measurement and control Chapter 7

1.3 DEFINITION OF A MICROLIGHT OR PARAMOTOR AIRCRAFT

1.3.1 A one or two seat powered aircraft whose minimum speed at Maximum Take Off Weight (MTOW) is less than 65 km/h, and having a MTOW of:
- 300 kg for a landplane flown solo
- 330 kg for an amphibian or a pure seaplane flown solo;
- 450 kg for a landplane flown with two persons
- 495 kg for an amphibian or a pure seaplane flown with two persons

Note. These definitions also apply to foot-launched Microlight and Paramotor aircraft.

1.4 TYPES OF MICROLIGHT AND PARAMOTOR AIRCRAFT

A microlight with movable aerodynamic control is a fixed wing powered aircraft with moveable aerodynamic surfaces for control.

A microlight with weight-shift control is a flexwing powered aircraft with pilot weightshift as primary method of control

A Paramotor is a powered aircraft which has a wing without any rigid structure and is controlled via movable aerodynamic surfaces and pilot weightshift.

A Landplane is an aircraft only capable of taking off and land on land, ice or snow.

A Seaplane is an aircraft only capable of taking off and landing on water.

An Amphibian is an aircraft capable of taking off and landing on water and land.

A foot-launched Microlight or Paramotor is an aircraft where the main undercarriage consists of the pilot and / or crews legs and is launched on foot without any external assistance during the takeoff run.

A thermal powered Microlight or Paramotor is one with an engine that converts thermal energy to mechanical output, typically by burning a hydrocarbon fuel.

An electrically powered Microlight or Paramotor is one powered exclusively by electricity, typically sourced from a battery, fuel cell or photo-voltaic cell. For the purposes of comparison with other fuel types, the source device shall be considered 'fuel' rather than a 'fuel tank'.

Note. According to the General Section of the Sporting code, Microlight and Paramotor Aircraft are defined as class R. To avoid the expression "sub-classes", which would be the correct definition when dealing with the various classes of aircraft in Section 10, the prefix "sub" has been omitted.

For the purposes of simplification within this document the R is also usually omitted from class names.

1.5 CLASSES OF MICROLIGHT AND PARAMOTOR AIRCRAFT

1.5.1 Organisation of class names.

First character: FAI class	Second character: Type of control system	Third character: Type of landing device	Fourth character: Number of persons	Fifth character: Power source	Sixth character: Gender
	A = Movable Aerodynamic Control System	**L** = Landplane			
		S = Seaplane	**1** = Flown solo	**E** = Electric engine	
R	**W** = Weight-shift Control System	**M** = Amphibian	**2** = Flown with two persons	**T** = Thermal engine	**m** = Male **f** = Female
	P = Paraglider Control System	**F** = Foot-launched			

1.5.2 Table of Microlight and Paramotor classes

Microlight description	Class name
Movable Aerodynamic Control / Landplane / Flown solo / Thermal engine	RAL1T
Movable Aerodynamic Control / Landplane / Flown solo / Electric engine	RAL1E
Movable Aerodynamic Control / Landplane / Flown with two persons / Thermal engine	RAL2T
Movable Aerodynamic Control / Landplane / Flown with two persons / Electric engine	RAL2E
Movable Aerodynamic Control / Seaplane / Flown solo	RAS1
Movable Aerodynamic Control / Seaplane / Flown with two persons	RAS2
Movable Aerodynamic Control / Amphibian / Flown solo	RAM1
Movable Aerodynamic Control / Amphibian / Flown with two persons	RAM2
Weight-shift Control / Landplane / Flown solo / Thermal engine	RWL1T
Weight-shift Control / Landplane / Flown solo / Electric engine	RWL1E
Weight-shift Control / Landplane / Flown with two persons / Thermal engine	RWL2T
Weight-shift Control / Landplane / Flown with two persons / Electric engine	RWL2E
Weight-shift Control / Seaplane / Flown solo	RWS1
Weight-shift Control / Seaplane / Flown with two persons	RWS2
Weight-shift Control / Amphibian / Flown solo	RWM1
Weight-shift Control / Amphibian / Flown with two persons	RWM2
Weight-shift Control / Foot-launched / Flown solo / Thermal engine	RWF1T
Weight-shift Control / Foot-launched / Flown solo / Electric engine	RWF1E
Weight-shift Control / Foot-launched / Flown with two persons / Thermal engine	RWF2T
Weight-shift Control / Foot-launched / Flown with two persons / Electric engine	RWF2E
Paraglider Control / Foot-launched / Flown solo / Thermal engine / male pilot	RPF1Tm
Paraglider Control / Foot-launched / Flown solo / Thermal engine / female pilot	RPF1Tf
Paraglider Control / Foot-launched / Flown solo / Electric engine	RPF1E
Paraglider Control / Foot-launched / Flown with two persons / Thermal engine	RPF2T
Paraglider Control / Foot-launched / Flown with two persons / Electric engine	RPF2E

Paraglider Control / Landplane / Flown solo / Thermal engine	RPL1T
Paraglider Control / Landplane / Flown solo / Electric engine	RPL1E
Paraglider Control / Landplane / Flown with two persons / Thermal engine	RPL2T
Paraglider Control / Landplane / Flown with two persons / Electric engine	RPL2E

Note: This table is not to be regarded as the final number of classes. If other types of aircraft appear that fulfil the requirements for being a Microlight or Paramotor, this table can be extended.

1.5.3 A microlight or paramotor class is always one where the full class name is used from 1.5.2. However, where it is convenient to refer to groups of classes it is acceptable to use a subset of the designation. *eg AL refers to all types of Microlights with movable aerodynamic control and are landplanes, or PF1 refers to all types of Paramotors which are foot-launched and flown solo.*

1.5.4 Male is an all male crew, or a mixed male & female crew. Female is an all female crew. Where no gender designation is given, the class is unisex.

CHAPTER 2, Diplomas and Badges

2.1 THE COLIBRI DIPLOMA (BL 12.11.1)

2.1.1 This diploma may be awarded each year by the FAI on a proposal from the FAI Microlight Commission (CIMA) to an individual who is considered to have made an outstanding contribution to the development of microlight flying by his action, work, achievements, initiative or devotion.

2.1.2 Each active member of FAI may submit the name of a candidate for consideration by the FAI Microlight Commission (CIMA) which must reach the FAI Secretariat at least 2 months before the FAI Microlight Commission meeting for inclusion in the agenda. Proposals cover time up to December 31 of the previous year. Only one diploma is awarded annually.

2.2 THE ANN WELCH DIPLOMA (BL 12.11.2)

2.2.1 Ann Welch, for many years FAI Vice President and Editor of the FAI Bulletin, played leading international roles in the development not only of microlight aviation, but also of gliding and hang-gliding. She was instrumental in creating the FAI Microlight Commission (CIMA) and formulating the microlight sporting code. She worked tirelessly for many years in the cause of microlight sport flying.

2.2.2 One Diploma may be awarded each year to the pilot or crew of a Microlight or Paramotor who in the opinion of CIMA made the most meritorious flight which resulted in a Microlight or Paramotor World record claim ratified in the year in question.

2.3 COLIBRI PROFICIENCY BADGES

2.3.1 The FAI Colibri badges are standards of achievement which do not require to be renewed. The qualifications are the same in every country.

2.3.2 Each NAC shall keep a register of badge flights which it has validated, and shall inform FAI of the names of pilots gaining the Gold badge. FAI shall maintain a register of Gold and Diamond awards on its website.

2.3.3 QUALIFICATIONS AND REQUIREMENTS

2.3.3.1 Bronze Colibri

a) 20 hours solo on Microlight or Paramotor aircraft including at least 50 flights.
b) 3 precision landings within 10 m of the centre of a given spot.
c) 1 precision landing within 20 m of the centre of a given spot from a height of 300 m (1000 ft) AGL with the throttle fully closed. Demonstration of correct go-around (overshoot) procedure.
d) Two cross country flights of distance dM x 1 over a triangular course, one with an outlanding at a designated point along the route.

2.3.3.2 Silver Colibri

a) 100 hours on Microlight or Paramotor aircraft including at least 200 logged flights.
b) 2 flights to approximately 300 m (1000 ft) AGL, stop engine(s) complete a 360° turn and land within 5 m of the centre of a given spot.
c) Four cross country flights of distance dM x 2 with any landing or turn points pre-declared. The courses may be straight, dog-leg (1 turn point), out and return, or triangular (2 turn points).

2.3.3.3 Gold Colibri

a) 300 hours on Microlight or Paramotor aircraft.
b) Have competed in two National or FAI recognised International Microlight or Paramotor competitions, as pilot-in-command.
c) Complete a tour of at least the distance dM x 14 to a pre-declared flight plan within 7 consecutive days. The route to contain at least 3 control points which the aircraft is observed to overfly or where a landing is made. Only the final landing of the tour may be made at the initial departure point.
d) Hold one of the following:
National Microlight or Paramotor instructor rating;
National Microlight or Paramotor record (or have held such a record);
National Microlight or Paramotor seaplane rating plus two 75 km cross country flights on a seaplane;
National Alpine rating;

Have participated in an FAI first category event, as pilot-in-Command.

2.3.3.4 Diamond Colibri

An FAI Microlight Commission (CIMA) award, with inauguration 1st January 1990, for an outstanding Microlight or Paramotor flying achievement. The following special conditions apply:
Applicants or nominees must be qualified to at least Silver badge standard.
In the case of two person crews, the pilots should have equal or equivalent aviation experience, and both should be necessary crew.

2.3.4 GENERAL CONDITIONS

2.3.4.1 All flights for Colibri Badges must be flown on microlight or Paramotor aircraft (S10 1.3).

2.3.4.2 A pilot must be alone in the aircraft on each flight, other than for the requirements for the Gold and Diamond.

2.3.4.3 A flight may count towards any badge or qualification for which it fulfils the requirement.

2.3.4.4 Badges may be awarded only in the correct order: Bronze, Silver, Gold. A Diamond may be awarded to Silver badge holders.

2.3.4.5 A precision landing is a touchdown and staydown landing with no damage to aircraft or pilot. Distance is measured from the touchdown/staydown point of the main wheels.

2.3.4.6 To count for badge each leg of a cross-country flight must be completed in not more or less than 15% of the pilot's properly calculated flight time for that leg.

2.3.4.7 Barographs are not required.

2.3.4.8 A Sporting Licence is not required for badge flights.

2.3.4.9 Only a single course may be declared for any flight.

2.3.4.10 dM is the distance the aircraft can fly in nil wind in one hour at the manufacturer's published cruise speed. Evidence of dM must be provided as part of the application for a Colibri award

2.3.5 CONTROL OF BADGE FLIGHTS

(See S10 5).

CHAPTER 3, Records

RECORDS CLASS R
General Section Reference Chapter 6.
S10 Chapter 5: Control and Measurement.

It is strongly recommended that CIMA type 2 flight recorders (S10 A6) are used in all record attempts except championship records as the evidence from these is much more easily substantiated than by any other method.

3.1 SUB CLASSES

Records are open to all aircraft classes listed in 1.5.2

3.2 RECORD CATEGORIES IN EACH CLASS

3.2.1 DISTANCE IN A STRAIGHT LINE WITHOUT LANDING

3.2.2 DISTANCE IN A STRAIGHT LINE WITHOUT ENGINE POWER

3.2.3 DISTANCE IN A STRAIGHT LINE WITH LIMITED FUEL

3.2.4 DISTANCE IN A CLOSED CIRCUIT WITHOUT LANDING

3.2.5 DISTANCE IN A CLOSED CIRCUIT WITHOUT ENGINE POWER

3.2.6 DISTANCE IN A CLOSED CIRCUIT WITH LIMITED FUEL

3.2.7 ALTITUDE

3.2.8 TIME TO CLIMB TO A HEIGHT OF 3,000 m

3.2.9 TIME TO CLIMB TO A HEIGHT OF 6,000 m

3.2.10 SPEED OVER A STRAIGHT COURSE

3.2.11 SPEED OVER A CLOSED CIRCUIT

3.3 AVAILABILITY OF RECORDS

3.3.1 Solo: The best performance by a solo pilot.

3.3.2 Multiplace: The best performance with two persons on board the aircraft. The age of the navigator shall not be less than 14 years.

3.3.3 There are no separate records for men / women.

3.4 GENERAL RULES FOR RECORDS

3.4.1 The weight of the aircraft at take-off, including the pilot, fuel and all auxiliary equipment shall not exceed the maximum permitted weight limit as defined in S10 1.3.1.

3.4.2 Landing or refuelling during a record attempt either on the ground or in the air is prohibited.

3.4.3 A new record must exceed the previous record by 1% for distance and speed records and by 3% for altitude and height records.

3.4.4 In the measurement of record distance, the error must not exceed 0.5% and for altitude and height records 1%.

3.4.5 No fuel, ballast or other disposable items may be jettisoned after take-off or prior to the completion of the record attempt.

3.4.6 A foot launched Microlight or Paramotor must be foot launched from a surface which has no slope greater than 1% over a radius of 100 m from the take off point.

3.4.7 To obtain a record with an amphibian, it must take-off from land and land on water or vice-versa.

3.4.8 A serviceable barograph and/or a GNSS flight recorder shall be carried.

3.4.9 The pilot and crew must hold a FAI sporting licence.

3.5 Special rules for distance in a straight line without landing.

3.5.1 The distance shall be measured as the geodesic joining the take-off point and the landing point.

3.6 Special rules for distance in a straight line without engine power.

3.6.1 A barograph or GNSS flight recorder shall be carried which records any use of engine.

3.6.2 The aircraft must have its engine stopped prior to crossing the start line and it must not be re-started until after crossing the finish line.

3.6.3 The altitude of the aircraft at the finish line shall not be less than the altitude of the aircraft at the start line.

3.6.4 The distance shall be measured as the geodesic joining the point the start line was crossed and the point the finish line was crossed.

3.7 Special rules for distance in a straight line with limited fuel.

3.7.1 The aircraft must carry no more than 7.5 kg of fuel which may be used as required.

3.7.2 The altitude of the aircraft at the finish line shall not be lower than the takeoff point.

3.7.3 The distance shall be measured as the geodesic joining the take-off point and the point the finish line was crossed.

3.8 Special rules for closed circuits.

3.8.1 The start and finish lines of a closed circuit course must share a single point which is the start point and finish point of the circuit.

3.8.2 Closed circuits of less than or equal to 100 Km shall be achieved over an out and return or triangular course. Closed circuits of greater distances shall consist of between three and six legs.

3.8.3 All legs of closed circuits must be of equal length with the following permitted deviation:
- 3 legs: all legs must be between 28% and 38% of the total length.
- 4 legs: all legs must be between 20% and 30% of the total length.
- 5 legs: all legs must be between 15% and 25% of the total length.
- 6 legs: all legs must be between 11% and 27% of the total length.

3.8.4 In closed circuits of three or more legs the change in course direction must not exceed 145 deg. at each turnpoint.

3.8.5 The length of a closed circuit shall be measured as the sum of the geodesics joining the start point with the finish point, via the turnpoints in the order flown by the aircraft.

3.8.6 A closed circuit may only be flown once.

3.8.7 A turn point is reached when a photo is taken of the turnpoint from the correct photo sector (S10 5.8.4) or the FR trace is observed to pass through that sector.

3.9 Special rules for distance in a closed circuit without landing.

3.9.1 The altitude of the aircraft at the finish line shall not be less than the altitude of the aircraft at the start line.

3.10 Special rules for distance in a closed circuit without engine power.

3.10.1 The barograph or GNSS flight recorder used must be capable of recording any use of engine.

3.10.2 The aircraft must have its engine stopped prior to crossing the start line and it must not be re-started until after crossing the finish line.

3.10.3 The altitude of the aircraft at the finish line shall not be less than the altitude of the aircraft at the start line.

3.11 Special rules for distance in a closed circuit with limited fuel.

3.11.1 The aircraft must carry no more than 7.5 kg of fuel which may be used as required.

3.11.2 The altitude of the aircraft at the finish line shall not be less than the altitude of the aircraft at the start line.

3.12 Special rules for altitude records.

3.12.1 A barograph or GNSS flight recorder capable of recording atmospheric altitude must be used and a valid calibration certificate for it must be included with the record claim.

3.12.2 The altitude achieved shall be the true altitude measured from sea level as defined by the national survey in the relevant country.

3.13 Special rules for time to climb records.

3.13.1 A barograph or GNSS flight recorder capable of recording atmospheric altitude must be used and a valid calibration certificate for it must be included with the record claim.

3.13.2 The time measured shall be that from a standing start on a horizontal runway to reaching the designated height above takeoff altitude as defined by the national survey in the relevant country.

3.14 Special rules for speed over a straight course.

3.14.1 The course shall be straight with a minimum length of 15 kilometres.

3.14.2 Before crossing the start line the aircraft shall fly level for the last 1,000 metres within a tolerance of 100 metres.

3.14.3 The altitude of the aircraft at the finish line shall not be less than its altitude at the start line.

3.14.4 The speed adopted shall be the average of the two speeds from two consecutive runs over the same course in opposite directions. The two runs must be completed within a maximum elapsed time of 1 hour with no landing between runs.

3.14.5 The altitude at which the aircraft crosses the start line on the second run must be within 100m of the altitude at which it crossed the start line on the first run.

3.15 Special rules for speed over a closed circuit.

3.15.1 Records may be claimed for speed over closed circuits of 50, 100, 500 and 1000 Km.

3.15.2 The length of the closed circuit shall not be less than the record distance being claimed.

3.15.3 Before crossing the start line the aircraft shall fly level for the last 1,000 metres within a tolerance of 100 metres.

3.15.4 The altitude of the aircraft at the finish line shall not be less than its altitude at the start line.

3.15.5 The speed adopted shall be calculated as the speed over the record distance being claimed, not the length of the closed circuit flown.

3.16 RECORD CLAIM PROCEDURE

The procedure for making World record claims is detailed in FAI General section, chapter 6.

3.16.1 A record file shall be compiled for each record claimed. It must consist of the CIMA approved declaration form for the type of record being claimed, fully completed and containing as attachments all additional information necessary to substantiate the flight and the claim. The forms are available at http://www.fai.org/microlight/documents/sc10

3.16.2 All forms and certificates must be signed or countersigned by the official observer(s) controlling the record attempt.

3.17 CHAMPIONSHIP RECORDS

3.17.1 If performance in a task in championship can be directly compared to the performance in a task at a different championship, then World championship records in class may be established for that performance.

3.17.2 Championship records for Microlights and Paramotors can only be established during valid competition tasks by bona-fide competitors at a FAI category 1 Microlight or Paramotor championships or a FAI World Air Games.

3.17.3 A championship record can only be claimed for performances where no penalties or other adjustments were applied to the competitor's task score.

3.17.4 It is the responsibility of the claimant to complete the record claim on the official claim forms. The forms are available at http://www.fai.org/microlight/documents/sc10

3.17.5 If the value of the championship record is an elapsed time normalized to ISA sea level conditions then the elapsed time flown shall be normalized according to the following formula:
Elapsed time normalized to ISA sea level conditions, in seconds =

3.17.6 Elapsed times (after normalization, if required), if less than five minutes shall be rounded ~~down~~ to the nearest 0.01 second (0.005 is 0.01), otherwise to the nearest second. Distances shall be rounded down to the nearest
0.01 Km. A new championship record must simply exceed the previous record.

3.17.7 When a change to the championship rules prevents an equal comparison to a performance in a previous championship then a new record shall be created and the old record retired.

3.17.8 Available Championship records

3.17.8.1 DISTANCE WITH LIMITED FUEL

- May be established in any task in the task catalogue where the fuel is measured before takeoff.
~~- Fuel load at takeoff must not exceed:~~
~~Classes PF1 & PL1: 1.5 Kg~~
~~Classes WL1, AL1, PF2 & PL2: 4 Kg~~
~~Classes WL2 & AL2: 6 Kg~~
- Distance measured is from start gate to the point of maximum distance from start gate before first landing.
- Pilot performance is expressed as a distance in Km.

3.17.8.2 ENDURANCE WITH LIMITED FUEL

- May be established in any task in the task catalogue where the fuel is measured before takeoff.
- Fuel load at takeoff must not exceed:
Classes PF1 & PL1: 1.5 Kg
Classes WL1, AL1, PF2 & PL2: 4 Kg
Classes WL2 & AL2: 6 Kg
- Time measured is from start gate to finish gate or, if this is not defined in the task description, the time at point of maximum distance from start gate before first landing.
- Pilot performance is expressed as an elapsed time.

3.17.8.3 PRECISION CIRCUIT IN THE SHORTEST TIME ('Clover leaf slalom')~~Task 3.C7~~ as defined in the current task catalogue.

- The square pattern of the task must not be less than:
70.71m for classes PF1 and PL1
100m for classes PF2 and PL2
- Whilst the pilot is in the course the local wind speed must not have exceeded an average of 10Kt (18 Km/h)
- A pilot only qualifies for a record if his scoring in the task includes NQ = 9.
- Pilot performance is expressed as an elapsed time normalized to ISA sea level conditions.

3.17.8.4 PRECISION CIRCUIT IN THE SHORTEST TIME ('Japanese slalom')~~Task 3.C8~~ as defined in the current task catalogue.

- The grid pattern of the task must not be less than:
50m for classes PF1 and PL1
70.71m for classes PF2 and PL2
- Whilst the pilot is in the course the local wind speed must not have exceeded an average of 10Kt (18 Km/h)
- A pilot only qualifies for a record if his scoring in the task includes NQ = 9.
- Pilot performance is expressed as an elapsed time normalized to ISA sea level conditions.

CHAPTER 4, Championships

WORLD AND CONTINENTAL CHAMPIONSHIPS

4.1 GENERAL RULES

Sporting Code General Section References:
Chapter 1: FAI Authority
Chapter 3: Sporting Events
Chapter 4: Control of Sporting Events
Chapter 5: Protests, penalties.
Note that GS reference covers World Air Games etc.

4.2 PURPOSE

The purpose of the Championships is to provide a good and satisfying contest, to determine the World or Continental Champion in each class and to reinforce friendship amongst pilots of all nations.

4.3 VALIDITY OF A CHAMPIONSHIP

4.3.1 World and Continental Championships may be organised only by a NAC accepted by the FAI Microlight Commission (CIMA) as competent to run the event.

4.3.2 For a World or Continental Championship to be valid there must be competitors from no less than 4 countries in a class, ready to fly the first task.

4.3.3 The title of Champion shall be awarded only if there have been at least 6 separate valid tasks in the class.

4.4 CHAMPIONSHIP BIDS

A preliminary bid should be received by CIMA three years before the event, with the detailed bid including the Local Regulations (S10 A3) receiving acceptance by CIMA if possible not less than one year before. As soon as possible after acceptance an invitation requesting a reply giving intention to enter should be circulated to all NACs.

4.4.1 **PREPARATION MONITOR**

At the time a bid is accepted CIMA shall nominate a monitor to ensure preparations are complete and on time. The monitor shall be a Jury member, Steward, or person with specialised knowledge of championships. The monitor shall be invited to visit the championship site approximately 6 weeks before the start of the event and any prior rehearsal competition held prior to the event.

4.4.2 **COMPETITION DIRECTOR**

Where the candidate competition director for a Cat. 1 championship has not previously organized a successful FAI Category 1 Microlight or Paramotor championship he/she must as a minimum:

1) Have actively participated in an FAI Category 1 Microlight or Paramotor championship as a competitor, team leader or a key person listed in the Local Regulations, and;

2) Have organized national competitions.
Evidence of this experience shall be provided to CIMA in the form of a comprehensive CV supported by the National Aero Club presenting the bid and verified by the CIMA Bureau or a nominated CIMA representative.

4.5 GENERAL ORGANISATION

4.5.1 Championship flights shall be controlled in accordance with the regulations contained in the Sporting Code, (General Section and Section 10) and the published local regulations for the event. (Refer Master Local Regulations, S10 A3)

4.5.2 The total period of the Championships shall not exceed 14 days including the opening and closing ceremonies.

4.5.3 An official practice period of not less than 2 and not more than 5 days immediately preceding the opening of the Championships shall be made available to all competitors. All the infrastructure for the competition (camping, maps, offices, scoring...) shall be ready for the first day of the official practice period. If practicable, on at least one practice day a task should be flown under competition conditions to test the integrity of the organisation. The scores thus generated shall not be counted.

4.5.4 To count as a Championship task, all competitors in the class shall have been given the opportunity of having at least 1 competition flight in time to carry out the task.

4.5.5 There will normally be a rest day only after 6 consecutive days flying, unless this day is the last one of the Championships. The policy for rest days shall be declared by the Director at the first Briefing.

4.5.6 FAI medals will be awarded to the first, second and third in each class with FAI Diplomas for those placed first to tenth. FAI medals will be awarded to national teams placed first, second and third. The organisers may award prizes at their discretion.

4.6 STATUS AND TIMING OF LOCAL REGULATIONS

4.6.1 Local regulations are the rules for a specific event prepared by the organisers for submission to CIMA for approval at least one year before the event. They must use the master document format in S10 A3 with any modification being approved by CIMA. The Local Regulations and entry form shall be sent to NACs not less than 6 months before the event stating the amount of the entry fee and what it covers.

4.6.1.1 ENTRY FEE

As a minimum the following should be included in the entry fee:
- Use of airfield and task area during the event.
- One copy of official competition map for each pilot and team leader.
- Contest numbers, identity badges, Opening and Closing Ceremonies, and all championship information.

4.6.1.2 The organisers may supply competitors with a document of supplementary information upon their arrival at the Championships site. Any matter intended to have the force of a competition rule must have been approved, as a minimum, by the FAI Microlight Commission Bureau. Only minor matters may be approved by this method. Local regulations and supplementary information must not conflict with the General rules.

4.6.1.3 Teams wishing to take advantage of the official practice period shall be able to register and get all items mentioned in 4.6.1.1 at least the day before the first official practice starts.

4.6.2 Once competition flying on the first contest day has started, no rules or regulations may be changed. Any additional requirements within the rules needed during the event must not be retrospective.

4.6.3 INTERNATIONAL JURY

There shall be a nominated jury of 3 persons of different nationalities excluding that of the organisers. The president of the jury shall be appointed by the FAI Microlight Commission. The two other jury members shall be confirmed by the FAI Microlight Commission.

4.7 RESPONSIBILITIES OF THE ORGANISER AND THE DIRECTOR

4.7.1 The NAC organising the Championships shall appoint a Championships Director acceptable to the FAI Microlight Commission not later than 6 months prior to the event. Any change of Director must be approved by the FAI Microlight Commission Bureau.
The Director shall take overall operational responsibility for the event, including the programme of tasks to be flown. He is also responsible for publishing a final entry list and the names of key officials by the start of Briefing on the first flying day, for issuing the daily results with minimum delay and on demand, make public all the circumstances that have had any bearing on the scoring for the tasks, including the coordinates for turn points, hidden gates, ground markers, etc. and for reporting the full results, including details of protests or serious problems encountered, to his NAC with copies to FAI and the FAI Microlight Commission President (S10 A5, Notes for Directors).

4.7.2 The Director or his named deputy shall be available at the Championship site at all times during the contest flying period. If a championship class is to be flown from a separate site, a Director shall be nominated for this class (eg PF Director).

4.8 PROGRAMME AND FACILITIES

4.8.1 The organisers shall provide all facilities necessary for the satisfactory operation of the Championships, and circulate to each Team Leader the following information as a minimum, as far in advance as possible (S10 A2 & A3).
- Programme of the Championships with dates and times.
- Names of the Director, chief officials, jury and stewards.
- General operational information including meteorological and safety arrangements, repair facilities and communication information.
- Information on likely tasks, and airspace and any hazardous considerations.
- Accommodation and food arrangements including facilities for press and visitors.
- Plans of airfields or sites to be used showing flying layout, and location of entrances and administrative and domestic buildings, vehicle parks and campsites.

- Full list of documents and equipment to be provided by competitors.
- A provisional entry list on request.
- Any extra language or interpreting facilities.
- The number of specialists, if any, that may be brought by competitors in addition to the official team crew members.

4.9 STEWARDS

4.9.1 The organisers shall appoint not less than 2 stewards. If microlights and paramotors are competing in the same venue at the same time, there will be a minimum of 3 stewards.
All stewards will be of different nationalities excluding that of the organiser, except that in the event of a last minute failure to attend a replacement steward of any nationality and acceptable to the other stewards may be invited.
Stewards must be able to speak a common language, preferably English, and have extensive experience of international Microlight or Paramotor or other FAI competitions.
One steward should if possible be able to speak the language of the organisers.
One steward should if possible be a pilot of the type of aircraft being flown in the championships preferably with experience as a competitor in that type at an international level.

4.9.2 At least 1 steward shall be present at each Championship site or contest area throughout all operational activities (GS 4.3.4.2).

4.10 NATIONAL TEAMS

4.10.1 The organizers shall state in the Local Regulations the maximum number of Microlight and Paramotor aircraft which may be entered by a NAC and the maximum number a NAC may enter in any class. Each National Team shall have a nominated Team Leader.

4.10.2 A change from one class to another is not permitted after the closing date unless the entry is restricted or the Championship is not held in a class.

4.10.3 Each NAC shall select its own Team Leader, deputy team leader, competitors and crews, provided that they qualify under the rules. No more than 1 pilot or 1 crew is permitted for each competing aircraft. Ground crews may be of any nationality. (S10 A3, entry form).

4.10.4 The Team Leader may be a competitor or crew but it is strongly advised that he/she should be additional to them. If not a competitor the team leader may be of any nationality. If a class is to be flown separately, a Deputy Team Leader should be nominated for it.

4.10.5 NAC's may enter one extra all female team crew per class above the maximum number stated by the organizer in the local regulations.

4.10.6 NAC's may enter one extra disabled (wheel chair bound) team pilot in the PL1 class above the maximum number stated by the organizer in the local regulations.

4.11 TEAM LEADER RESPONSIBILITIES

4.11.1 The team leader is the liaison between the organisers and his team and is responsible for the proper conduct of his team members, for ensuring that competitors do not fly if ill or suffering from any disability which might endanger the safety of others and that they have read and understand the rules.

4.12 PILOT AND NAVIGATOR QUALIFICATIONS

4.12.1 A competing pilot shall be of a sufficient standard to meet the demands of an international Championship and hold a valid pilot licence or certificate.

4.12.2 Each competing pilot and navigator shall hold a valid FAI sporting licence issued by his own NAC. A navigator shall have reached the age of 14 years.

4.13 AIRCRAFT AND ASSOCIATED EQUIPMENT

4.13.1 Aircraft and other equipment which are provided by the competitors must be of a performance and standard suitable for the event. An aircraft that does not comply with the Microlight or Paramotor aircraft definition (S10 1.3) may not fly in the competition.

4.13.2 Each competing aircraft must possess a valid certificate of airworthiness or permit to fly not excluding competition flying. This document must be issued or accepted by the country of origin of the aircraft, or the country entering the aircraft or the country of the organisers.

4.13.3 An aircraft shall fly throughout the Championships as a single structural entity using the same set of components used on the first day. However, propellers may be changed to enhance performance providing that the weight limit of the aeroplane is not exceeded, and that the certificate of airworthiness is not prejudiced.

4.13.4 An emergency parachute is excluded from the aircraft gross mass requirements and in the case of a PF or PL aircraft is not to be considered as a part of the structural entity and may be removed or added during a competition.

4.13.5 All aircraft must be made available to the organisers during the period of registration for an acceptance check in the configuration in which they will be flown.

4.13.6 The organizers have the right to inspect for airworthiness and if necessary, ground for safety reasons, any competing aircraft at any time during the Championships.

4.13.7 Competing aircraft in classes AL and WL shall have a still air range of not less than 250 km. Classes WF and PF and PL shall have a still-air range of not less than 100 km.

4.13.8 A WF and PF must be foot launched for all tasks.

4.13.9 If there is no separate class for aircraft with electric engines there shall be no fuel limit for them in any task.

4.14 INSURANCE

Documentary proof of insurance as specified by the organiser on the entry form or in the local regulations shall be made available to the organisers before starting to fly from the competition site(s).

4.15 CONTEST NUMBERS

4.15.1 The organisers shall allocate numbers or letters to each competing aircraft which shall normally be displayed on the underside of the right wingtip with the top of the numbers or letters towards the leading edge. The same numbers or letters should also be displayed on the pilot's helmet. For PFs, and PL's the number shall be placed centrally on the underside of the canopy, top towards the leading edge.

4.15.2 The size of the figures and the area on the wing to be kept clear for this purpose shall be not less than 0.5m tall. National registration letters or numbers shall not be obscured.

4.16 REGISTRATION

4.16.1 On arrival at the Championships site each team leader and the team members shall report to the Registration Office to have their documents checked and to receive any supplementary regulations or information.
After Registration no changes of crew member or aircraft may be made (see 4.19.4: damage to an aircraft). The Local Regulations shall state the times of the Opening and Closing of the Registration Office.

4.16.2 Registration information may be available to team leaders on request until the start of flying on the first

contest day.

4.17 BRIEFING

4.17.1 The organisers shall hold a briefing for team leaders and/or competitors as a minimum on each flying day at which full meteorological and operational information concerning the tasks shall be given. Task, weather, airspace information and any special requirements shall be in writing either on a large permanent display briefing boards or as printed handouts to Team leaders, Jury members and Stewards

4.17.2 Briefings shall be recorded by notes, tape recorder or similar. Recordings shall be kept intact for not less than 6 months.

4.17.3 Flight safety requirements given at briefing shall carry the status of regulations.

4.17.4 Briefing may be postponed from the set time in the event of bad weather and further briefings given. This information must be prominently displayed.

4.18 TEAM LEADERS' MEETINGS

4.18.1 Communication between the organisers and competitors is, in addition to daily briefing, normally through team leaders' meetings. These shall be held at the Director's initiative but shall also be held within 18 hours if 5 or more team leaders request a meeting.

4.19 OPERATIONAL REGULATIONS

4.19.1 **Compliance with the law**. Each competitor is required to conform to the laws and to the rules of the air of the country in which the Championship is held.

4.19.2 **Airworthiness**. Each aircraft shall be flown within the limitations of its certificate of airworthiness or permit to fly. Any manoeuvre hazardous to other competitors shall be avoided. Jettisonable ballast is prohibited on PFs and PLs.

4.19.3 **Preparation for flight**. Each aircraft shall be given a daily pre-flight check by its pilot and shall not be flown unless it is serviceable.

4.19.4 **Damage to a competing aircraft**. Any damage shall be reported to the organisers without delay and the aircraft may then be repaired. Any replacement parts must be replaced by an identical part, except that major parts such as a wing for a paraglider controlled aircraft may be replaced by a similar model or one of lesser performance.
Note. Change of major parts may incur a penalty.

4.19.5 **Replacing of an aircraft**. An aircraft may only be replaced (temporarily or permanently) if damage has resulted through no fault of the pilot. If permission is given to replace the aircraft it may be replaced only by an identical make and model or by one of similar performance and eligible to fly in the same class.

4.20 FLIGHT SAFETY

4.20.1 **Safety systems**. A protective helmet must be worn on all flights unless this restricts vision from within an enclosed cockpit canopy with supine seating. An emergency parachute is highly recommended.

4.20.2 **Other safety systems**. Other safety systems may be detailed in the Local Regulations. These shall be complied with unless they invalidate the airworthiness certification of the aircraft.

4.20.3 **Fitness**. A pilot shall not fly unless he is fit. Any injury, drugs, or medication which might affect the pilot's performance in the air must be reported to the Director before flying.

4.20.4 **Collision Avoidance**. Circuit and landing patterns shall be complied with and a proper look out kept at all times. An aircraft joining another in a thermal shall circle in the same direction as that established by the first regardless of height separation.

4.20.5 **Collision**. A competitor involved in a collision in the air must not continue the flight if the structural integrity of his aircraft is in doubt.

4.20.6 **Cloud flying**. Cloud flying is prohibited and aircraft shall not carry gyro instruments or other equipment permitting flight without visual reference to the ground. The organisers may include special instruments by type or name under this prohibition.

4.20.7 **Aerobatics**. Unauthorised aerobatics are prohibited.

4.20.8 Any infringement of any safety rule shall result in penalty.

4.21 TEST OR OTHER FLYING

4.21.1 No competitor shall take off during a competition day from the competition site without the permission of the Director. This may be given for test flying except that if the task for that class has started the pilot must land and make a competition take-off on the task. Practising prior to a precision landing task is forbidden.

4.22 EXTERNAL AID TO COMPETITORS

4.22.1 The following limitations are so that, as far as possible, the contest shall be between individual competitors, neither helped nor controlled by external aids.

4.22.2 Any help in navigation or thermal location by any non-competing aircraft including competing aircraft not in the act of carrying out the task of their own class, is prohibited.

4.22.3 Pilots must be qualified for flight planning in navigation or economy tasks. Competition directors are encouraged to run some of the navigation or economy tasks in a way that pilots must prepare their flight plans individually.

4.22.3 ELECTRONIC EQUIPMENT

CIMA approved GNSS flight recorders and ELT's without voice transmission capability are permitted and may be carried. Sealed mobile phones may be carried for use after landing or in an emergency. All other electronic devices with real or potential communication or navigation capabilities must be declared and approved for carriage by the Championship Director. Failure to declare such devices or misuse of this rule may result in disqualification.
The director will establish a document-based method for sealing and unsealing that will enforce seal checking after each task.

4.23 CHAMPIONSHIP CLASSES

4.23.1 The Championships shall be held in one or more of the Championship classes (S10 1.5) as approved by the FAI Microlight Commission.

4.23.2 If a Championship is held in more than one class, each class shall be regarded as a Championship in its own right and the organisers must, as far as possible, avoid interference of one class by another.

4.23.3 Each competing aircraft will be subject to inspection for compliance with class rules at any time during the Championships.

4.24 CHAMPIONSHIP TASKS

4.24.1 On each flying day a task shall be set chosen from A4, unless prevented by the weather. A precision task may be combined with a cross-country task or set separately as specified at briefing. If possible, two tasks should be set on each day for each class.

4.24.2 The tasks to be used shall be approved by the FAI Microlight Commission (S10 A4) and precisely set out in the Local Regulations together with the method of scoring.

4.24.3 Tasks shall, as far as practicable, conform to the following guidelines in standard championships:
For Microlight aircraft classes AL, WL and WF

A Tasks for flight planning, navigation, etc with no fuel limit: 50% of the total value of the tasks flown.
B Tasks for fuel economy, speed, duration, etc with limited fuel: 20% of the total value of the tasks flown.
C Precision tasks: 30% of the total value of the tasks flown.

For Paramotor aircraft classes PF and PL

A Navigation: 33% of the total value of the tasks flown.
B Economy: 33% of the total value of the tasks flown.
C Precision: 33% of the total value of the tasks flown.
In "Precision Championships" for aircraft classes PF and PL, 100% of the tasks will be Precision tasks.

4.24.4 The task for each class may be different and a task may be set for one class only.

4.24.5 The Director shall state at Briefing the times of take-off, and the times at which any turn points or finish line closes and the time at which aircraft must land, as appropriate. If a start is delayed, given times for turn points or finish lines will be delayed a corresponding amount, unless specifically briefed to the contrary.

4.24.6 The Director may set an alternative task at Briefing for use, should the weather change.

4.25 START OF A TASK

4.25.1 The order in which competitors shall take-off shall be given at briefing or may be left free within an Open Window period. Take Offs shall normally be made from the marked deck.

4.25.2 A competitor shall be permitted more than one start for a task if specified in the Task Description however each task may be flown only once. A failed take-off shall count as one of the permitted number of starts unless the cause was the fault of the organisers. In this case the Director shall authorise a further start. A competitor may return to the airfield within 5 minutes of take-off for safety reasons or in the event of a

GNSS flight recorder failure. In this case a further start may in principle be made without penalty but equally the competitor must not benefit in any way from restarting. Exceptions and penalties will be specified in the Task Description.
Pilots in PFs and PLs may have 3 attempts at take-off in tasks where the take-off order is given.

4.25.3 After take-offs have started the organisers may suspend flying if to continue is dangerous. If the period of suspension is sufficiently long to give an unfair chance to any competitor the Director shall cancel the task. Once all competitors in a class have taken off, or had the opportunity to take off, the task may not be cancelled other than for reasons of force majeure.

4.26 FLYING THE TASK

4.26.1 Fuelling arrangements shall be given to competitors at first Briefing.

4.26.2 A set course shall be flown in the direction specified at Briefing.

4.26.3 Control at turn points should normally be by GNSS flight recorder or photographic evidence.

4.26.4 A speed task, or speed section of a task, shall be timed from take-off or by a line on the ground using official observers, or by a timed touch and go, or from GNSS flight recorder evidence as given at briefing.

4.26.5 All take-off and landing for all tasks, concerning classes, AL, WL, other than emergency provisions specified at briefing, shall be completed within a 100 x 25 m landing deck, or for the task “Short take off and landing over obstacle”, within decks 150 m times 25 m. An aircraft not capable of taxiing unaided from the deck after landing scores zero. Landing provisions at a case of an emergency shall be specified at briefing. Failure to comply with instructions regarding emergency shall involve a penalty.

4.26.6 Precision landing tasks and their control shall be detailed in the Local Regulations.

4.27 OUTLANDINGS

4.27.1 Outlandings shall be scored zero, unless specifically stated at briefing. If a pilot lands away from the designated goal for the task for any reason, he must inform the organisers by telephone, with the minimum

delay and at latest by closing time for the task. He may break the fuel tank seal and fly home or return by road.
Evidence of the landing place must be obtained from photographs and the name and address of a witness other than a member of the pilots' national team or from GNSS flight recorder evidence. On return to base he must go immediately to Control with his evidence. Failure to follow this procedure without good reason may result in the pilot not being scored for the task, or charged for any rescue services which have been called out, or disqualification.

4.27.2 After landing, a Paraglider canopy must be folded to indicate that the pilot does not need help.

4.28 FLIGHT BOUNDARIES

4.28.1 Flights terminating beyond the boundaries of the organiser's country shall score only to the point where a straight line between the start point or last turn point and the landing place last cuts the boundary, unless permission is given to cross such boundaries in the Local Regulations.

4.28.2 The organisers shall specify in the Local Regulations or at Briefing controlled airspace or other areas where flight by competing aircraft is prohibited or restricted. Such areas shall be precisely marked on competition maps.

4.29 SCORING

4.29.1 The scoring system to be used shall be approved by the FAI Microlight Commission and attached to the Local Regulations.
Score sheets shall state the date when the task took place, and the date and time when the score sheet was issued, the task number, classes involved in the task, competitor names, country, competitor number and score.
Score sheets shall be marked Provisional, and Official, or if a protest is involved, Final. A Provisional score sheet shall only become Official after all complaints have been answered by the Director. Scores shall not be altered when the Provisional sheet is made Official.
The time of issue is the moment when a score sheet is posted on the official score board and carries the time when this is done, together with the signature of the Championship Director.
The Provisional Score sheet must be posted within 6 hours after finishing the task. The Official score sheet must be posted as soon as possible thereafter. In the case of the last task, the time limit is ~~2~~ 1 hours after the posting of the Provisional score sheet.
Overall scores will be posted as soon as the provisional scores for the second task are available.
Team scores will be posted as soon as the provisional scores for the first task are available.
Overall scores and team scores will be updated at least:
- When the first provisional scores for a new task are posted.
- When a task scoring goes official or final.
- Once a day if there are changes in provisional scores.

Overall scores will reflect the status of each individual task (provisional, official, final).

4.29.2 The overall results shall be computed from the sum of the task scores for each competitor, the winner having the highest total score in the class.

4.29.3 The team score shall be computed from the sum of the scores of the top three pilots of each country in each class in each task grouped together in:
- Classes AL1, AL2, WL1, and WL2
- Each valid paramotor class which has a minimum of 8 pilots.

4.29.4 The task score for which a pilot was disqualified shall not count for team scoring. Other valid tasks flown by this pilot are not affected.

4.29.5 A score given to a competitor shall be expressed to the nearest whole number, 0.5 being rounded up.

4.29.6 All distances not obtained from GNSS shall be calculated from the official map and rounded up to the next 0.5 km.

4.29.7 A pilot who did not fly scores zero and is indicated DNF or "Did Not Fly" on the score sheet. A pilot who is disqualified will be indicated DSQ or "Disqualified" on the score sheet.

4.29.8 Deduction of penalty points for a task shall be made after scoring is completed.

~~4.29.9 In the PF and PL classes, if less than 50% of pilots in class start a task then after all penalties have been applied each pilot score for the task will be reduced on a pro-rata basis according to the following formula: Pilot final task score = Ps*(MIN(1,(Ts/Tc)*2))~~

~~Where~~
~~Ps = Pilot task score after all penalties Etc are applied.~~
~~Ts = Total started; Total number of pilots in class who started the task (ie properly, beyond 5 minute rule).~~
~~Tc = Total class; Total number of pilots in class.~~

4.29.10 If a pilot's score is for any reason negative, including penalties, his score for that task shall be taken as zero. Negative scores shall not be carried forward.

4.29.11 If a failure in GNSS flight analysis or scoring is discovered before the end of the championship and the failure is due to a technical error which emanates from either the Competition Director, or the scoring staff, or the equipment being used for the GNSS flight analysis or scoring, this failure must be corrected regardless of time limits for complaints and protests in S10 and the Local Regulations.

4.30 COMPLAINTS

(Ref. GS, Chapter 5)

4.30.1 A competitor who is dissatisfied on any matter may, through his team leader, make a complaint in writing to the Director.

4.30.2 Complaints must be presented not later than ~~6~~ 1 hours after the respective Provisional Score sheet has been published, not counting the time between 22:00 and 07:00~~, except for the tasks of the last competition day, or for Provisional Score sheets published on or after the last competition day, when the time limit is 2 hours~~

4.30.3 Complaints shall be made and dealt with without delay. A complaint that could affect a task result, must be dealt with and answered in writing before any Official score sheet is issued.

4.31 PROTESTS

(Ref. GS, Chapter 5)

4.31.1 If a competitor is dissatisfied with the decision about its Complaint, the Team Leader may make a protest to the Director in writing and accompanied by the protest fee. The fee is returnable if the protest is upheld or withdrawn before the start of the proceedings. A protest may be made only against a decision of the Championship Director.

4.31.2 A protest must be presented not later than ~~6~~ 1 hours after the respective Official score sheet has been published, ~~except for the tasks of the last competition day, or for Official Score sheets published on or after the last competition day, when the time limit is 2 hours.~~ The night time between 22:00 and 07:00 is never included.

4.31.3 The amount and currency of the Protest fee shall be stated in the local regulations.

CHAPTER 5, Control & Measurement

CONTROL AND MEASUREMENT OF FLIGHTS
Sporting Code General Section References:
Chapter 4 - Observers, Officials
Chapter 7 - Measurement Requirements.

5.1 CONTROL OF FLIGHTS

Control of flights shall be effected by official observers (GS 4.2).

5.1.2 For Records, evidence of the landing place shall include signatures and addresses of at least two independent witnesses, or flight recorder evidence. (S10 A6).

5.1.3 In Championships, verification of outlanding places may be made by independent witnesses or by photographs or flight recorder evidence.

5.1.4 In championship precision tasks, any conclusive video evidence may be used to verify a pilot's performance.

5.2 MEASUREMENT

5.2.1 **Weighing equipment.** The scales used to establish the weight of an aircraft entering a competition, shall have an accuracy of not less than 0,2% when weighing up to 450 kg. The calibration of the scales shall have taken place within a year from the date of the weighing. All scales used shall carry a certificate indicating weighing accuracy and the time of the latest calibration of the scales. For records it is sufficient that the weighing rules of the airworthiness certifying body, of the country where the aircraft is registered, are followed.

5.2.2 Weighing. When an aircraft is up on the scales for weighing, the reading of the scales give the weight of the aircraft. No deduction of the figures is allowed.

5.2.3 **Distance.** All distances shall be measured by determining the geodesic between each point, based on the WGS84 ellipsoidal world model (GS 7.3.1.1).

5.2.4 **Map.** In championships the scale of the official map will be stated in the local regulations.

5.2.5 **Speed.** The average speed of a flight is the total course distance divided by the elapsed time from Departure Point to Finish Point.

5.2.6 **Standard units of measurement.** The unit system used in championships for any purpose (eg Task definition, pilot estimations, etc.) shall be as follows:

- Time: UTC adjusted to local time - HH:MM:SS
- Time interval: hours, minutes and seconds - HH:MM:SS
- Date: Day, Month, Year - DD:MM:YY
- Distance: Kilometres to two decimal places, meters and centimetres.
- Speed: Kilometres per hour to two decimal places.
- Altitude and Height: Metres and centimetres, or feet.
- Vertical Speed: meters per second or feet per minute.
- Heading: Degrees and decimal degrees geographic (measured on the official map) - DDD[ddd]
- Direction: Degrees and decimal degrees true - DDD[ddd]
- Latitude: Degrees, minutes and decimal minutes with N,S designators - DDMMmmmN

- Longitude: Degrees, minutes and decimal minutes with E,W designators - DDDMMmmmE
- Pressure: Millibars or Hectopascal to two decimal places.
- Weight: Kilograms to two decimal places and grams.
- Volume: Litres to two decimal places.
- Temperature: Degrees Celsius.

Any other unit shall conform to FAI GS 7, the ICAO units system and the International Metric System in this order of relevance.

5.2.7 Exceptional units of measurement.

Timed precision tasks in championships shall be rounded ~~down~~ to an accuracy of 1/10th of a second if manual timing is used (0.05 is 0.1), or rounded ~~down~~ to an accuracy of 1/100th of a second if an approved electronic timing system is used. (0.005 is 0.01) in case of manual timing 3 times are requested, both extremes are removed and the tird time is retained.

5.4 WEIGHT

5.4.1 The empty weight of the aircraft is its weight ready to fly except for the pilot, fuel and supplementary items.

5.4.2 The take-off weight is the weight of the aircraft ready to fly including pilot, fuel and any supplementary equipment.

5.4.3 Items included in the empty weight:
Flight and engine control instruments and associated equipment including batteries, essential to their operation;
- Fixed ballast;
- Canopies, fairings and pilot harness.

5.4.4 Supplementary items are items not fixed to the aircraft such as:
- Cushions, maps, hand held computers, food and drink, extra clothing;
- Parachute and its activating devices;
- Barograph or flight recorder;
- Reserve fuel, lubricants and cooling liquids which are not connected to the motor and which cannot be connected in flight.

5.4.5 An emergency parachute is treated as if it has no weight

5.5 FUEL

5.5.1 The maximum amount of fuel, which may be carried for records, is stated in S10 Chapter 3. Fuel shall be measured by mass, or volume. For Championships, the maximum amount of fuel permitted for limited fuel consumption tasks is 15 kg for aircraft flown solo and 22 kg for aircraft flown with two people, or the equivalent in litres, although lesser amounts may be stated at briefing.

5.5.2 The permitted amount of fuel shall be put into the aircraft tank when it is empty. An official observer must control fuelling and seal the tank.

5.6 BAROGRAPHS AND FLIGHT RECORDERS

5.6.1 A serviceable barograph or GNSS Flight Recorder (S10 A6), must be used for record flights. They are not required for a record claim based on a task score in a World or Continental championship.

5.6.2 The barogram or print-out must show that no intermediate landing was made and must generally substantiate the flight.

5.6.3 It must not be possible to adjust the recording function of the barograph or GNSS Flight Recorder without this being apparent to the observer.

5.6.4 The barograph or GNSS Flight Recorder must be sealed and unsealed only by an official observer. The print-out must be observed.

5.6.5 Where no height or altitude performance is involved no barograph calibration is required.
Where height or altitude performance is involved, an atmospheric altitude calibration certificate for the Barograph or FR is required. It must be dated within the period 24 months prior to the flight to 2 months after the flight and show corrections to the ISA standard atmosphere across the full range of altitude relevant to the performance.

5.7 START AND FINISH GATES

5.7.1 Start and Finish lines are gates of maximum 1 km in width and of unlimited height. For Championships any dimension or orientation shall be detailed in the Local Regulations or given at briefing.

5.8 PHOTOGRAPHIC EVIDENCE

5.8.1 **Status of evidence.** If a barograph and photographic evidence is used in records no other evidence is admissible except that evidence of crossing a start or a finish line may be from ground observers.

5.8.2 The camera must be of focal length between 30-60 mm and take 35 mm film. A digital camera of equivalent focal length is permitted in championships provided it is said so in the local regulations. A film used for evidence must remain uncut. A digital camera must be handed over to the marshals immediately after finishing the task.

5.8.2.2 Data back cameras should be used, and sealed.

5.8.2.3 If it is possible to alter the order in which exposures are made or change the time shown on the pictures during the flight, the camera must be sealed before take-off.

5.8.2.4 Two cameras may be used, but only one set of pictures from one of the cameras will be used to verify the flight. Both films (digital camera see above) shall be handed in after landing, marked 1 and 2.

5.8.3 **Photos.** The photographic evidence on each film (set of pictures) must show as a minimum:
1) For records and badges; the declaration board showing date, pilot's name, place, time and flight declaration.
For championships; the complete task board showing date, task, official clock and pilot's competition number. Alternatively the pilot's number can be shown on the wing on the following photo.
2) Photograph of the start point or clock if applicable.
3) Photographs of turn points or control points in the correct or pre-declared sequence.
4) Photograph(s) of the same aircraft after landing with its number or identity together with identifiable evidence of the landing place.

5.8.4 **Photo Sector.** The photo sector is a quadrant (90°degree sector) o n the ground with its apex at the turn point and orientated symmetrically to and remote from the two legs of the course which meet at the turn point. In Championships the Director may vary the sector centreline at the briefing to lie between two unmistakable linear surface features on the ground provided that the sector is not extended beyond 150 degrees.
The photograph may be taken from higher or lower than the turn point provided that the turn point feature is clearly visible in the picture.

5.9 GNSS FLIGHT RECORDERS IN CHAMPIONSHIPS

5.9.1 Only CIMA approved GNSS flight recorders may be used and they must be operated in strict accordance with their approval documents. (S10 A6)

5.9.2 The status of GNSS flight recorder evidence relative to other forms of evidence (eg. from photos or observers) must be detailed in the local regulations.

5.9.3 The scoring sector for GNSS flight recorders is independent of any other sector (eg. photo sector). The size shall be stated in the local regulations and task briefing sheets. At the scale of the official map the minimum size of scoring sectors shall be 1mm radius for circular sectors and 2mm width for gates.

Annex 1 to SECTION 10

For MICROLIGHTS

CONFORMATION REQUIREMENTS

Aircraft shall be demonstrated to comply with the Microlight and Paramotor definition (S10 1.3) as follows:

1. AIRCRAFT MINIMUM SPEED

1.1 The aircraft may be required to demonstrate the minimum level speed at MTOW by a flight demonstration over a 500 m course. The aircraft must be flown level at a safe height in opposite directions. The speed will be measured during each run by the use of GNSS and the average of the two speeds shall be calculated. The component of the wind perpendicular to the course must not exceed 10 km/h. The measured speed will be corrected for air density (15°C, 1013.2 hP, AMSL)
Note: Pilots wishing to attempt Records or compete in championships should obtain a minimum speed declaration for their aircraft (sample on following page).

1.2 Correction to standard conditions is calculated as follows.
Speed in Km/h normalized to ISA conditions =
Where
D_0 = Leg length in metres
T1 = Actual leg time in seconds
P1 = Ambient pressure at test altitude in Mb
t1 = Ambient temperature at test altitude in degrees Celsius

MICROLIGHT ~~& PARAMOTOR~~ PERFORMANCE DECLARATION

MINIMUM FLYING SPEED AT SPECIFIED MTOW

NATIONALITY OF MANUFACTURER: .....
NAME OF MANUFACTURER: .....
ADDRESS OF MANUFACTURER: .....
.....
.....
.....
MICROLIGHT OR PARAMOTOR TYPE: .....
MODEL OR SERIES Nº: .....

MANUFACTURER'S DECLARATION OF MINIMUM FLIGHT-SPEED CHARACTERISTICS OF THE MICROLIGHT ~~OR PARAMOTOR~~

The above type of aircraft, of our design and manufacture, has been flight tested and has demonstrated the following minimum flight-speed characteristics:

Minimum Flying Speed: ..... Km/h
MTOW: ..... Kg

Air temperature ..... °C
Altitude: ..... m
Signed: .....
Name (in print): .....
Position in above-named manufacturing Organisation: .....
Date:.....
Checked and accepted
on behalf of CIMA by: .....
Name (in print): .....
Date:.....

Annex 2 to SECTION 10

GUIDE FOR CHAMPIONSHIP ORGANISERS - CHECKLISTS FOR BID PREPARATION

1 THE PRELIMINARY BID

1.1 A preliminary bid should be made to CIMA if possible 3 years ahead and contain the following information:

1.1.1 Title of championship and proposed classes.

1.1.2 Assurance that the event will be open to any FAI Member.

1.1.3 Proposed dates: year and month in that year.

1.1.4 Location or choice of locations with general terrain; and

1.1.5 Airspace information.

1.1.6 Availability of enough money or sponsorship to run the event.

1.1.7 Indication of entry fees and costs to competitors generally.

2. THE FIRM BID

2.1 A firm and detailed bid should follow as near as possible to two years ahead. Copies of the firm bid should be sent to the CIMA Bureau in advance of the meeting. Copies should be available for all delegates at the CIMA meeting. A firm bid is considered a commitment to organise the championship properly and to be ready on time. The firm bid should contain the following information:

2.1.1 Local Regulations (S10 A3) with dates etc. completed and marked clearly with any modifications proposed by the organisers.

2.1.2 Entry form with conditions of entry completed.

2.1.3 Airfield. Suitability and availability, buildings, facilities. Large scale maps/diagrams to be provided.

2.1.4 Airspace limitations over expected task area, danger and prohibited areas, frontier arrangements (if any). Airspace map to be provided.

2.1.5 Task area. Suitability for outlandings. Maps to be used by competitors.

2.1.6 Weather. Expected temperatures, rainfall etc. Provision of forecasts during championships. On site meteorologist?

2.1.7 Medical services and rescue. Availability of doctor, ambulance, helicopter. Distance to hospital. On site First Aid.

2.1.8 Championships HQ. Description of building and location. Briefing room, offices for admin, scoring etc. Office equipment (telephones, TV video, PCs, copiers, email, Internet access etc.) A room shall be provided for the Jury member meetings.

2.1.9 Finance. Championship budget, sponsorship details.

2.1.10 Insurance. Arrangements for organisers, competitors, public liability.

2.1.11 Local facilities. Hotels, campsites, restaurants, shops, workshops, garages, liaison with local tourist board. For security reasons the aircraft parking shall, as far as possible, be adjacent to the camping site.

2.1.12 Staff and helpers. Names of key officials, helper availability, accommodation for staff and helpers, including International Officials (preferably in same building and on or close to the airfield).

2.1.13 Time scale. Preparation schedule with completion dates.

3. CHAMPIONSHIP STAFF STRUCTURE

3.1 General:

To have any chance of success, a championship organisation must have sufficient staff/officials in place in time to carry out the large amount of essential work. This means at least 6 months before competitors arrive. Staff/officials should be given their own work and responsibilities in writing by the Director. They should preferably find their own helpers according to their needs.

3.2 Championship Director:

Carries overall responsibility for the event on behalf of his/her NAC and FAI. The Director has to be involved in planning and layout of the championship site, then in briefing officials and following up their preparation progress and in planning the task programme. This includes being responsible for the tasks set during the event.

3.3 Deputy Director:

Must be able to take over any work or responsibility at short notice in support of the Director. He should have some special responsibilities, such as arranging the opening and closing ceremonies, organising Jury meetings etc.

3.4 Key Officials:

A specialist key official is needed to take charge of the following departments:

- Completion of flying operations
- The airfield and ground services
- Office administration, including accounts
- Public relations and publicity
- Construction of championship equipment prior to the championships
- Safety Officer

However the work is divided up, the key officials' responsibilities have to be covered. They include:

3.5 Competition Flying Manager / Chief Marshal:

Responsible for airfield layout, decks and markings, task arrangements, time keepers, video operators, assistant marshals, windsocks, compliance by competitors with flying regulations etc., etc. Liaison with meteorologist, chief scorer, FR data analyist, medical services and airfield manager.

3.6 Airfield Manager

The work and responsibilities will depend on whether or not there is an existing airfield management structure in operation but none the less is responsible for liaison between the championship organizer and the airfield operator and with police and local authorities. He will, need to liaise on matters such as hangar and workshop space, camp sites and car parks.

3.7 Administration Manager:

Responsible for processing all paperwork generated by the championships. This includes registration of competitors, briefing and score sheets, official entry list including aircraft type and number, display lists of officials and team leaders, organisation of notice boards, pigeon holes for teams, jury and stewards, lost and found, name tags, etc. Liaison with Treasurer/Accountant and NAC. Responsible for office equipment (PCs, copiers, fax, telephones and office supplies generally). Also rotation of helpers as this office is open for long hours.

3.8 P R & Publicity Manager:

Responsible for presentation of the events to the public and aviation press, to the competitors and visiting VIPs. Issue of invitations, social arrangements, flags, anthems, public face of opening ceremony and prize-giving, programme brochure, mementoes. Liaison with local tourist board, assistance to visiting reporters. Liaison with Championship Director over arrangements.

3.9 Construction Department:

Responsible for constructing large briefing boards for airfield layout, tasks and weather. Also task boards and any other similar equipment required for the event. This work can, and should, be completed well before it is needed, even during the previous winter.

3.10 Safety Officer

Responsible for the security of the facilities and for the safety of all ground and flight operations. Liaison with the Airfield Manager in matters such as airfield security, public access and control, signposts and safety notices and with the Competition Director and Chief Marshal in matters such as aircraft movement around the airfield, deck operations, and everything else concerning the safety of competitors, team members, officials or spectators.

3. 11 Conclusion:

Circumstances may dictate different arrangements from the above. The essential points are that the preparatory work is always greater than expected and failure to get a championships ready on time is the most common reason for a badly run or failed championship.

4. INFORMATION DOCUMENTS TO BE PROVIDED DURING THE EVENT

4.1 CONFIRMED ENTRY LIST and LIST OF TEAM LEADERS

To contain:
- Competitor(s) name
- Nationality abbreviation
- Competition number
- Type of aircraft and engine
- class entered
- Age (optional)

To be given to Team Leaders, Jury Members and Stewards within 24 hours of close of Registration, together with list of Team Leaders

4.2 SCORE SHEETS

Must satisfy all the requirements of S10 4.29.1 plus:
- Heading with CHAMPIONSHIP, DATE OF TASK, TASK details and distance, CLASS , TASK NUMBER and time and date when the score sheet was issued.
- Scores to be given in descending order in all score sheets.

When a task includes navigation, the Directors task map should be posted adjacent to the task score sheet. Pictures of turnpoints, ground markers and photos to be identified etc. should be included.

~~It is strongly recommended that no~~ score sheet shall not be issued earlier than 0700 in the morning and not later than 2200 in the evening.

4.3 DAILY BRIEFING SHEET

TASK: To include:

- Name, date and reference number (if any) of the Task

- Task description and details

- Take-off window, control point, closing times, etc.

- Last landing time

- Special instructions, penalties, etc.

WEATHER: To include as much relevant information as can be provided, with information on updates.

AIRSPACE RESTRICTIONS: This sheet is required only for special or complicated restrictions or prohibitions, and should include map or diagram. Any STANDING airspace restrictions should be displayed throughout the event.
Briefing sheets to be handed to Team Leaders, as a minimum, by start of Briefing. Copies to be available for Jury Members and Stewards.

5. DOCUMENTS AND FORMS

The following need to be prepared or obtained well ahead of the event. There are too many other matters to attend to in the last few preparatory weeks.

5.1 REGISTRATION FORMS

To check that all items in the Local Regulations Master Document, 3.1 are present and valid for each competitor.

5.2 IDENTITY TAGS FOR COMPETITORS AND OFFICIALS

These should be of different colour for each function. Tags should contain name, nationality and function (Steward, Marshall, Director, Visitor, Press etc;). Their attachment should be good enough to last through the competition period.

5.2.1 A printed request in the local language requesting help for competitors may be useful, including telephone number.

5.3 MAPS

All pilots must be supplied with air maps of between 1:100,000 and 1:250,000 scale (microlights) or between 1:50,000 and 1:100,000 scale (paramotors) to cover the whole task area. Jury Members and Stewards need copies of the same maps. A wall map of the same scale should be on permanent display.
The organisers should have larger scale maps for use in locating outlanding pilots.
A glossary in English including frequent terms found on the official map is highly recommended.

5.4 TIME SHEETS

The following are required as a minimum:

- Take-off order/time sheets.

- Finish/landing time sheets.

- Pilot flight report forms.

- FR flight analysis assessment forms.

5.4.1 All these forms must have space for date and compiler's name. Start and Finish forms are easier to use if compiler writes the competition number and time in order of appearance of the aircraft instead of searching a pre-printed list to find the correct competition number.

5.4.2 Officials compiling time sheets must have clocks or watches corrected to the Official Time clock.

5.4.3 Timekeepers should be equipped with good clipboards and pens, chair and weather protection.

5.5 REPORTING

The officially accepted entry list and results of a First Category Event shall be sent electronically to the FAI Secretariat if possible before the prize-giving and in any case within 24 hours of the end of the event. (GS3.16.2.1)
The results of any FAI air sport event shall be given in writing to the host NAC, all competitors and the NACs they represent and for First Category Events to the FAI Secretariat without delay. (GS 3.16.2.2)
A final report giving results of the championships, with note of any protests or problems must be sent to FAI Secretariat, the Organiser's NAC and the Microlight Commission President within 48 hours of the end of the event.

Annex 3 to SECTION 10

MASTER LOCAL REGULATIONS

FOR THE ….th
MICROLIGHT / PARAMOTOR CHAMPIONSHIPS

Place ..... Country..... Date ..…….....

ORGANISED BY : .....

ON BEHALF OF THE FÉDÉRATION AÉRONAUTIQUE INTERNATIONALE

Organizer Address:

Tel:

FAX:

E-mail

Official Web Site

AUTHORITY

These Local Regulations combine the General Section and Section 10 of the FAI Sporting Code with regulations and requirements specific to this championship. The FAI Sporting Code shall take precedence over the Local Regulation wording if there is omission or ambiguity.

CLARIFICATION

Classes AL1, AL2, WL1 and WL2 are "Microlights" and classes PF1, PF2, PL1 and PL2 are “Paramotors”

CONTENTS

Annex 3, Part 1. Applies to all classes

1 PART FOR ALL CLASSES

1.1 GENERAL

The purpose of the championships is to provide good and satisfying contest to determine the champion in each class and to reinforce friendship amongst pilots and nations (S10 4.2).

1.2 PROGRAMME DATES

Training, aircraft inspection, registration: .....

Opening Ceremony: .....

First Competition briefing: .....

Contest Flying Days .....

Closing Ceremony, Prize-giving .....

1.3 OFFICIALS

Director .....

Deputy Director .....

Paramotor Director (if any) .....

International Jury : .....(President), ..., ...

Stewards : ....., ..., ...(Give nationality of Jury and Stewards)

1.4 ENTRY

The Championships are open to all Active Member and Associate Member countries of FAI who may enter :
For Microlight championship ..... *(put number)* pilots plus one all-female crew in each microlight class
For Paramotor championship ..... (*put number*) pilots plus one all-female crew in the PF & PL classes, plus one wheelchair bound pilot in class PL1.

- Entries must be made on the official Entry Form.
- If applications, with fees paid, are not received by .....*(date)*, the entry may be refused.
- The entry fee is:

..... *(currency & value)* for pilot in each class except *(write the exception if any)*

..... *(currency & value)* for each co-pilot (navigator)

..... *(currency & value)* for each Team Leaders and accompanying persons.

..... *(currency & value)* Other *(if any)*.

The entry fee includes: *(add or delete as appropriate)*:

- Competition operations (setting, controlling and evaluating the tasks)
- All competition materials (maps, task descriptions, control point atlases, etc.)
- Free use of the airport and free entry to all official events.
- Camping place for each team with water, electricity and one tent
- Preferential prices to eat

The entry fee is to be transferred before ..... *(date)* to .....*(Bank details)*

1.5 INSURANCE

Third party insurance of minimum ..... *(currency & value)* is obligatory. Personal accident insurance for team members and insurance against damage to aircraft are highly recommended. Documentary proof of insurance as specified on the Entry Form must be presented to the Organizers at Registration. (GS. 3.9.6)

1.6 LANGUAGE

The official language of the Championships is English.

1.7 MEDALS AND PRIZES

FAI medals will be awarded to:

- Pilots placed first, second and third in each class ~~(including PF1f if in compliance with S10 4.3.2).~~
- National teams placed first, second and third.
- FAI Diplomas will be awarded for those placed first to tenth.

Other trophies *(if any)* will be also awarded for ..... *(describe)*.

1.8 CHAMPIONSHIP CLASSES

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

WL1, WL2, AL1, AL2, PF1m, PF1f, PF2, PL1 and PL2

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

1.8.1 CLASS VIABILITY

For the championships to be valid there must be competitors from no less than 4 countries in a class, ~~ready to fly the first task. (S10 4.3.2)~~ All pilot must be ready at the first task and must start a minimum of one task.

1.8.2 CHAMPIONSHIP VALIDITY

The title of Champion in any class shall be awarded only if there have been at least 6 separate tasks.

1.9 GENERAL COMPETITION RULES

1.9.1 REGISTRATION

On arrival the team leader and members shall report to the Registration Office to have their documents checked and to receive supplementary regulations and information. The following documents are required:

- Pilot License and qualifications
- Evidence of competitor's nationality
- Valid FAI Sporting License for pilot and navigator
- Aircraft Certificate of Airworthiness or Permit to Fly and minimum speed declaration
- Evidence of conformity to class rules
- Certificate of Insurance
- Receipt for payment of entry fees.

The Registration Office will be open as indicated on the information board.

Registration forms may be inspected by Team Leaders on request prior to the start of competition flying

1.9.2 PILOT AND NAVIGATOR QUALIFICATIONS

A competing pilot shall be of sufficient standard to meet the demands of an international competition and hold a valid pilot license or equivalent certificate. Both pilot and navigator must hold an FAI Sporting License issued by his own NAC. The navigator must have reached the age of 14 years.

1.9.3 AIRCRAFT AND ASSOCIATED EQUIPMENT

Aircraft and equipment provided by the competitor must be of a performance and standard suitable for the event.

Each aircraft must possess a valid Certificate of Airworthiness or Permit to Fly not excluding competition flying. This document must be issued in or accepted by the country of origin of the aircraft or the country entering it or the country of the organisers. The aircraft must comply with the FAI definition of a Microlight or Paramotor at all times (S10 1.3).

The aircraft shall fly throughout the championships as a single structural entity using the same set of components as used on the first day except that propellers may be changed provided that the weight limit is not exceeded and the Certificate of Airworthiness or Permit to Fly is not invalidated. (S10 4.13.2)

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

All aircraft must be equipped with a simple method of sealing the fuel tank.

1.9.4 TEAM LEADER RESPONSIBILITIES

The team leader is the liaison between the organisers and his team. He is responsible for the proper conduct of his team members, for ensuring that they do not fly if ill or suffering from any disability which might endanger the safety of others and that they have read and understand the rules.

1.9.5 STATUS OF RULES AND REGULATIONS

Once competition flying on the first day has started no rules or regulations may be changed. Any additional requirements within the rules needed during the event will not be retrospective. Competitors may not be substituted, change to another class nor change their aircraft (S10 4.6.2 & 4.10.2).

1.9.6 PRACTICE & REST DAYS

An official practice period of not less than 2 and not more than 5 days immediately preceding the opening of the Championships shall be made available to all competitors. All the infrastructure for the competition (camping, maps, offices, scoring...) shall be ready for the first day of the official practice period. If practicable, on at least one practice day a task should be flown under competition conditions to test the integrity of the organisation. The scores thus generated shall not be counted. (S10 4.5.3)

Rest days will only be held on account of bad weather or unforeseen emergency.

1.9.7 COMPLAINTS

A competitor who is dissatisfied on any matter may, through his team leader, make a complaint in writing to the Director.

Complaints shall be made, and dealt with, without delay but in any case must be presented not later than ~~6~~ 1 hour after the respective Provisional Score sheet has been published, not counting the time between 22:00 and 07:00, ~~except for the tasks of the last competition day, or for Provisional Score sheets published on or after the last competition day, when the time limit is 2 hours~~

A complaint that could effect a task result must be dealt with and answered in writing before any official score sheet is issued. (S10 4.30) The answered must be published on the official board

1.9.8 PROTESTS

If the competitor is dissatisfied with the decision about its Complaint, the Team Leader may make a protest to the Director in writing and accompanied by the protest fee of ..... *(currency & value)*. The fee is returnable if the protest is upheld or withdrawn before the start of the proceedings. A protest may be made only against a decision of the Championship Director.

A protest must be presented not later than ~~6~~ 1 hour after the respective Official score sheet has been published, ~~except for the tasks of the last competition day, or for Official Score sheets published on or after the last competition day, when the time limit is 2 hours.~~ The night time between 22:00 and 07:00 is never included. (S10 4.31)

1.10 FLYING AND SAFETY REGULATIONS

1.10.1 BRIEFING

Briefings will be held for team leaders and/or competitors on each flying day. The time and place for briefing meetings and any postponements will be prominently displayed.

All briefings will be in English and be recorded in notes, by tape recorder or video. A Full task description, met information, flight safety requirements, penalties and details of any prohibited or restricted flying areas will be given in writing, as a minimum, to team leaders, Jury members and Stewards. (S10 4.17.1)

Procedures for flight preparation, takeoff, flying the task, landing and scoring together with any penalties will be specified in each task description. (S10 4.17)

Flight safety requirements given at briefing carry the status of regulations. (S10 4.17.3)

Team Leaders' meetings, in addition to briefings, may be called by the Director, but shall be held within 18 hours if requested by five or more team leaders. (S10 4.18)

1.10.2 COMPLIANCE WITH THE LAW

Each competitor is required to conform to the laws and to the rules of the air of the country in which the championships are held. (S10 4.19.1)

1.10.3 PREPARATION FOR FLIGHT

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

1.10.4 FLIGHT LIMITATIONS

Each aircraft shall be flown within the limitations of its Certificate of Airworthiness or Permit to Fly. Any manoeuvre hazardous to other competitors or the public shall be avoided. Unauthorised aerobatics are prohibited.(S10 4.19.2)

1.10.5 DAMAGE TO A COMPETING AIRCRAFT

Any damage shall be reported to the organisers without delay and the aircraft may then be repaired. Any replacement parts must be replaced by an identical part, except that major parts such as a wing for a paraglider

controlled aircraft may be replaced by a similar model or one of lesser performance. Note. Change of major parts may incur a penalty. (S10 4.19.4)

An aircraft may be replaced by permission of the Director if damage has resulted through no fault of the pilot. Replacement may be only by an identical make or model or by an aircraft of similar or lower performance and eligible to fly in the same class.(S10 4.19.5)

1.10.6 TEST AND OTHER FLYING

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

1.10.7 FITNESS

- A pilot may not fly unless fit. Any injury, drugs or medication taken, which might affect the pilot's performance in the air, must be reported to the Director before flying.
- Every nation has the full responsibility to fight against doping. Anti doping control may be undertaken on any competitor at any time.
- The decision to impose anti doping controls may be taken by the FAI, the organiser or the organiser's national authority.
- All relevant information can be found on the FAI Web site: www.fai.org/medical

1.10.8 AIRFIELD DISCIPLINE

Marshalling signals and circuit and landing patterns will be given at briefing and must be complied with. Non compliance will be penalised.

1.10.9 COLLISION AVOIDANCE

A proper look-out must be kept at all times. An aircraft joining another in a thermal shall circle in the same direction as that established by the first regardless of height separation.

A competitor involved in collision in the air must not continue the flight if the structural integrity of the aircraft is in doubt. (S10 4.20.5)

1.10.10 CLOUD FLYING

Cloud flying is prohibited and aircraft shall not carry gyro instruments or other equipment permitting flight without visual reference to the ground. (S10 4.20.6)

1.10.11 ELECTRONIC EQUIPMENT:

CIMA approved GNSS flight recorders and ELT's without voice transmission capability are permitted and may be carried. Sealed mobile phones may be carried for use after landing or in an emergency, the director must be immediately informed if the seal is broken. All other electronic devices with real or potential communication or navigation capabilities must be declared and approved for carriage by the Championship Director. (S10 4.22.3)

Before each task the Director will ask marshals to check for infringements. The penalty is disqualification from the competition.

A document describing the device will be signed by the competitor when it is being sealed, and the document will be retained by the organization. After the task, provided the seal is not broken, documents will be returned to each competitor when he comes to unseal the device. If a document is still in the possession of the organization at the time of issuing the scores, the competitor will get a 100% task penalty.

1.10.12 EXTERNAL AID TO COMPETITORS

Any help in navigation or thermal location by non-competing aircraft, including a competing aircraft not carrying out the task of their own class is prohibited. This is to ensure as far as possible that the competition is between individual competitors neither helped nor controlled by external aids. (S10 4.22)

1.11 CHAMPIONSHIP TASKS

1.11.1 GENERAL

To count as a valid championship task all competitors in the class concerned will be given the opportunity to have at least one contest flight with time to carry out the task.

A task for each class may be different and a task may be set for all classes. (S10 4.24.4)

A competitor will generally be allowed only one take-off for each task and the task may be flown once only. A competitor may return to the airfield within 5 minutes of take-off for safety reasons or in the event of a GNSS flight recorder failure. In this case a further start may in principle be made without penalty but equally the competitor must not benefit in any way from restarting. Exceptions and penalties will be specified in the Task Description. (S10 4.25.2)

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

1.11.2 TASK PERIOD

Times for take-off, closing of take-off windows, turn points and last landing will be displayed in writing. If the start is delayed, given times will be correspondingly delayed unless specifically briefed to the contrary.

1.11.3 TASK SUSPENSION OR CANCELLATION

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

1.11.4 TYPES OF TASKS

Only tasks approved by CIMA or listed in S10 A4 will be used:

A Flight planning, navigation estimated time and speed. No fuel limitation.

B Fuel economy, speed range, duration, with limited fuel.

C Precision

A catalogue of tasks (and their scoring systems) to be implemented during the championship is attached to these local regulations.

1.11.5 FLYING THE TASKS

Any part of a competition task may be flown either

a along a set course in the direction specified at the briefing,

b along an in flight decided course in the direction selected by the pilot,

c according to a local pattern specified at the briefing.

The resulting complete task is the combination of the above.

Order of take off may be

- a scheduled take off order, balloted by the Organiser,
- open window,
- current championship or reverse championship order

The actual scheduled take off order is annexed to the relevant Task Description.

If a touch and go is required in order to separate parts of a task, details will be given in the Task Description and at the briefing.

1.11.6 OUTLANDINGS

Outlandings shall be scored zero, unless specifically stated at the briefing. If a pilot lands away from the goal field or from base he must inform the organisers by telephone, with the minimum of delay and at the latest by the closing time of the task. He may break the fuel tank seal and fly home or return by road. Evidence of the landing place must be obtained from photographs and the name and addresses of a witness other than the pilot's national team or from GNSS flight recorder evidence. On return to base the pilot must go immediately to Control with his evidence. Failure to follow this procedure without good reason may result in no score for the task, charges for any rescue services called out, or disqualification. (S10 4.27)

1.11.7 FLIGHT BOUNDARIES

Flights terminating beyond the boundaries of the organiser's country shall score only to the point where a straight line between the start point or last turn point and the landing place last cuts the boundary, unless permission is given at briefing to cross such boundaries.(S10 4.28)

1.11.8 EMERGENCIES

A competitor landing to help an injured pilot shall not, at the discretion of the Director, be disadvantaged by this action.

1.11.9 THE SECURE AREA

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

1.11.10 QUARANTINE

This is a clearly marked area to which aircraft and crew must go from time to time as instructed by the director, usually for the purposes of scoring, fuel measurement and scrutineering of fuel tank seals, fuel systems, telephone seals etc. Once in the Quarantine and without the expressed permission of the Quarantine Marshal, the crew may not communicate with anyone else and may not modyfy or otherwise change the configuration of their aircraft and items carried. Competitors who do not respect the rules of the Quarantine area may be liable to penalty.

1.12 CONTROL OF TASK FLIGHTS.

1.12.1 TIMING

All times are given, taken and calculated in local time or simple elapsed time, rounded ~~down~~ to the most accurate permitted precision. (0.5 is 1) (S10 5.2.6 and 5.2.7)

1.12.2 FUELLING

Fuel will be measured by weight or volume but will be consistent for any given refuelling session. Measured fuel quantities include oil where it is mixed with petrol. Fuel measured by volume shall be within ± 10°c of the ambient temperature.

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

Official observers will collect documentary evidence that all competitor's fuel systems are sealed immediately after fuelling, and that all competitor's fuel systems seals have been inspected after landing.

If there is no separate class for aircraft with electric engines there shall be no fuel limit for them in any task. (S10 4.13.9)

1.12.3 ACCURACY

Landing accuracy will be verified by video cameras.

1.12.4 GATES, TURNPOINTS AND MARKERS

Gates are normally a straight line 250m wide perpendicular to the briefed track.

Gates may be:

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

Proof of passing a gate and it's timing will be by Marshals report or GNSS flight recorder evidence, as briefed.

Control points may be: A geographical point, a ground marker, a landing marker or a kicking stick.

Control points may be:

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

Proof of reaching a control point may be:

- by photography
- by the competitor recording the symbol and position on the declaration sheet
- by a Marshall's report.
- by flight recorder evidence

The precise requirements will be described in the Task Description.

1.13 GNSS FLIGHT RECORDERS

1.13.1 The status of GNSS flight recorder evidence relative to other forms of evidence is as follows: *(delete as applicable)*

- All aircraft shall carry a FR which will be used as primary evidence.
- In the event of a failure of the primary FR, a second FR, photographic evidence or observers report may be used as secondary evidence.

1.13.2 Only CIMA approved FR may be used and they must be operated in strict accordance with their approval documents. (S10 A6)

1.13.3 The FR to be used by a pilot in a championship will be supplied by the pilot. The FR case must be clearly labelled with the pilots name and competition number and (if applicable) this information must be entered into the memory of the FR.

1.13.4 The pilot must make a data transfer cable and a copy of the transfer software on 1,44Mb floppy disk available to the organization if required.

Before the championship starts each FR must be presented together with its CIMA approval document to the organization for inspection and recording of type and serial number. The pilot must be sure it fully complies with any requirements in the approval document e.g. that manufacturer's seals are intact and it is equipped with a data-port sealing device if it is required or it will be rejected by the organization.

Once the championship has started the pilot must always use the same FR. In the event of a permanent failure, another FR may be used after it has been presented together with its CIMA approval document to the organization for inspection and recording of type and serial number.

All FR's must be presented to the organization for inspection immediately before the start of each task. If secondary evidence is presented then both sets must be clearly marked 1 and 2. Only one set of evidence will be used to verify the flight.

1.13.5 It is the pilots responsibility to ensure that he is fully aware of the functions and capabilities of his FR eg. how to operate the PEV marker button, that it has sufficient battery power and that the antenna is correctly positioned etc.

1.13.6 Where FR data is to be used for scoring, the organizer must have visited every location which could affect the scoring and got a GNSS fix of that position. E.g. turnpoints, hidden gates etc. It is not acceptable to extract positions from a map in any circumstances. Points that will not require FR evidence for scoring (eg. because a marshal is taken times at a hidden gate) must be specifically briefed.

1.13.7 The scoring zone for FR's is independent of any other zone or sector (eg. photo sector). A scoring zone will normally be a cylinder of 200 m radius and of infinite height.

To score a fix point must either be within this circle, or the line connecting two sequential track fixes must pass through the circle. Additionally the task may require one of these fixes to be associated with a pilot event mark (PEV).

Complaints about the physical mis-positioning of a scoring zone relative to a turnpoint will not be accepted unless it can be shown that the physical position of the location is outside a circle of radius R= Rp/2 where Rp= Radius or size of the scoring zone defined by the Organizers (ie the physical location must lie inside an inner circle half the width of a gate or radius of a scoring zone).

1.13.8 Gate or point time is taken from the fix immediately before it is crossed.

1.14 SCORING

1.14.1 GENERAL

The overall results will be computed from the sum of the task scores for each competitor, the winner having the highest total score in the class. (S10 4.29.2)

~~A score given to a competitor shall be expressed to the nearest whole number, 0.5 being rounded up. (S10 4.29.5)~~

All distances not obtained from GNSS shall be calculated from the official map and rounded up to the next 0.5 km. (S10 4.29.6)

A pilot who did not fly scores zero and will be marked DNF or "Did Not Fly" on the score sheet. A pilot who is disqualified scores zero and will be marked DSQ or "Disqualified" (S10 4.29.7)

Deduction of penalty points shall be made after scoring for that task is completed.(S10 4.29.8)

If a pilot's score is for any reason negative including penalties his score for the task shall be taken as zero. Negative scores shall not be carried forward. (S10 4.29.10)

The following standard symbols will be used for scoring:

V = Speed, D = Distance, T = Time

The scoring system to be used shall be approved by the FAI Microlight Commission and attached to the Local regulations.

Score sheets shall state the Date for the task and the date and the time when the score sheet was issued, the Task number, Classes involved, Competitors name, Country, the Competitors Number and Score.

Score sheets shall be marked Provisional, and Official, or if a protest is involved, Final. A Provisional score sheet shall only become Official after all complaints have been answered by the Director. Scores shall not be altered when the Provisional sheet is made Official. (S10 4.29.1)

If a failure in GNSS flight analysis or scoring is discovered before the end of the championship and the failure is due to a technical error which emanates from either the Competition Director, or the scoring staff, or the equipment being used for the GNSS flight analysis or scoring, this failure must be corrected regardless of time limits for complaints and protests. (S10 4.29.11)

1.14.2 PENALTIES

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

Actions which will normally result in disqualification:

a. Bringing the event, its organisers, the FAI or the sporting code into disrepute.
b. The use of banned substances.
c. Unauthorised interference with an aircraft in a Secure Area.
d. Flight outside the specified flight envelope of the aircraft or dangerous flying.
e. Flight or attempted flight with prohibited equipment.
f. Unauthorised assistance during a task.
g. Interference with the firmware or software of a CIMA approved GNSS flight recorder

Annex 3, Part 2. Applies to Microlights

2.1 GENERAL REMARKS

2.1.1 RANGE

All aircraft will be expected to have a still air range of 250 km.

2.1.2 TAKE-OFF AND LANDING

Unless it is stated differently in the task description - all competition take-offs and landings must be completed within a deck 100m x 25m. The penalty for failing to take off or land entirely within the deck will be 20% - 50% of pilot score, as briefed.

2.1.3 CONTROL OF CLASS CONFORMITY:

All aircraft will be weighed before the event, and any aircraft may be weighed again at any time in the championships. The take-off weight is the weight of the aircraft ready to fly including pilot(s), fuel, and any supplementary equipment, but excluding an emergency parachute.The take-off weight must not exceed the FAI definition of a microlight for the class in which it is flown.

2.1.4 CONTEST NUMBERS

The numbers or letters supplied by the organisers shall be displayed on a suitable space on the underside of the wing with their top towards the leading edge The underside wing number shall be of a colour contrasting to the background. . Identification may also be required on other parts of each microlight (e.g. fin, cockpit side or pilot's helmet).

2.1.5 PROTECTIVE EQUIPMENT

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

2.2 FLIGHT CONTROL

2.2.1 FUEL

Prior to fuelling for economy tasks competitors must be able to demonstrate that their aircraft tanks are empty and that the engine cannot run in either the ground or in-flight attitude of the microlight. The engine will then be run for 60 seconds to ensure all systems are free of air. Where possible this process will take place immediately prior to the task to enable engines to be warmed up. When tanks are required to be sealed before a task the penalty for returning to the Quarantine area with a broken or a missing seal will be 100% of the pilot score.

2.2.2 DISTANCE MEASUREMENTS

Distance will be measured for all competitors on the same official map, of a scale of 1:250 000. Measurement will be made to the nearest 0,5 km.

2.2.3 KNOWN GATES

When competitors prior to take off are informed of the location of a timing gate, the approach to that gate may be between 500 and 1000 feet height and in a straight line for the final 1 km. Any deviation from this approach may incur a penalty

2.3 SCORING

2.3.1 The total value of tasks flown in each class during the Championships must as far as possible be very close to:

A Tasks for flight planning, navigation, etc with no fuel limit: 50% of the total value of the tasks flown.

B Tasks for fuel economy, speed, duration, etc with limited fuel: 20% of the total value of the tasks.

C Precision tasks: 30% of the total value of the tasks flown.

2.3.2 The winner of each class shall be the pilot or crew gaining the highest total points in the class.(S10 4.29.2)

2.3.3 The team prize shall be computed from the sum of the scores of the top three pilots from each country in each class in each task. The task score for which a pilot was disqualified shall not count for team scoring. Other valid tasks flown by this pilot are not affected (S10 4.29.3)

2.3.4 CROSS COUNTRY TASKS

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

P = Q/Qmax x 1000

where: Q = pilot score, Qmax = best score for the task, P = Total score

2.3.5 PRECISION TASKS

The scoring formula for each precision task is to be found in A4, the task catalogue.

2.4 GENERIC TASKS

2.4.1 FLIGHT PLANNING, NAVIGATION TASKS

2.4.1.1 OBJECTIVES

The objectives of a flight planning navigation task include testing the competitors' ability to:

plan a flight from information provided

follow an accurate course in the prevailing conditions

maintain a given or predicted ground speed

2.4.1.2 SUMMARY

Competitors are required to fly accurately along a course provided by means of :

a straight line, an arc, a circle, a polygon, an irregular line or any combination of these drawn on a map.

a line with beginning and end points marked on a map or provided as map references with geometric instructions specifying the line between them.

a line start point marked on the map or provided as a map reference with geometric instructions specifying the route to be followed.

A start point located on the ground with a true or magnetic heading or geometric instructions specifying the route to be followed.

The task may consist of one or several legs, each using any of the above. In addition competitors may be required to fly all or part of the course at a given or predicted ground speed.

2.4.1.3 EVIDENCE

Evidence of the accuracy with which the competitors have flown may be provided by means of:

- photographs taken by competitors of on-track ground features
- marks made by competitors on a map indicating the location of on-track ground features identified from photographs provided
- successful navigation by competitors to the next waypoint or turnpoint
- marshals observing and recording the time that aircraft pass through on-track gates or pass over waypoints or turnpoints
- a GNSS record of the flight

Competitors may be required to provide a pre-flight declaration which may include:

- a list of waypoints or turnpoints to be visited
- the order in which waypoints or turnpoints are to be visited
- the time a waypoints or turnpoints is to be visited

the predicted groundspeed over any part or parts of the course

2.4.2 FUEL ECONOMY, SPEED RANGE, DURATION TASKS

2.4.2.1 OBJECTIVES

The objectives of a fuel economy task include testing the competitors' ability to:

- maximise aircraft fuel performance
- predict aircraft fuel consumption
- use prevailing weather conditions to supplement fuel

2.4.2.2 SUMMARY

Competitors are required to fuel their aircraft with a measured volume or weight of fuel, or with the amount of fuel they predict they will need to fly a given task in the prevailing conditions, to seal their fuel tanks and then:

- fly as far as possible before landing at a designated landing area
- fly for as long as possible before landing at a designated landing area
- fly a multi-leg task in which each leg may have different performance objectives, or

- fly a planned task before landing in a designated landing area

or any combination of these. Competitors may be permitted to fly to empty tanks or may be required to return with a specified safety quantity of fuel.

2.4.2.3 EVIDENCE

Evidence of competitors' performance may be provided by means of:

- photographs taken by competitors of ground features
- marks made by competitors on a map indicating the location of ground features identified from photographs provided to prove distance traveled
- marshals observing and recording the time that aircraft pass through gates on or off the airfield to prove distance or time traveled
- a GNSS record of the flight

Evidence of fuel consumption may be provided by:

- verifying that the competitors' fuel tanks and systems are empty before fueling
- measuring the fuel with which the tank is filled
- sealing the fuel tank before the flight
- verifying after the flight that seals on the fuel tank are intact

2.4.3 PRECISION TASKS

2.4.3.1 OBJECTIVES

The objectives of a precision task involve testing the competitors' ability to handle their aircraft, where possible in circumstances similar to those that may be encountered during normal or emergency flying activity.

2.4.3.2 SUMMARY

Competitors are required to demonstrate:

- normal takeoffs
- short takeoffs
- powered landings
- engine-off landings
- short landings

2.4.3.3 EVIDENCE

Evidence of competitors' skill may be provided by means of:

- observation recorded by marshals with reference to marks or measurements on or near the ground
- tapes, ribbons, balloons or other items that may be cut or broken by an aircraft without causing damage to the aircraft or injury to the crew or observers
- electrical or electronic equipment that records the passage of the aircraft using a pressure detector, photo cell or similar device

2.4.4 COMPOSITE OR SEQUENTIAL TASKS

2.4.4.1 OBJECTIVES

The objective of a composite task, which may combine any of the above, is to make the competition more demanding and more interesting for the competitors. The objective of a sequential task, in which any of the above tasks may follow another without a break, is to enable a competition director to run two tasks in a shorter time than would otherwise be possible.

2.4.4.2 SUMMARY

Composite tasks may combine any or all of the Navigation, Economy & Precision tasks, although such tasks must be carefully designed in order to ensure that one aspect of the task does not compromise another. For example, precision tasks may usefully be combined sequentially with Navigation or Economy or other Precision tasks. Care must be taken to ensure that a problem in the first task does not invalidate the next task in sequence. A timed economy task that ends with an engine off precision landing may be compromised by congestion around the landing deck

Annex 3, Part 3. Applies to Paramotors

3.1 GENERAL REMARKS

3.1.1 RANGE

All aircraft will be expected to have a still air range of 100 km.

3.1.2 THE SECURE AREA

Is a clearly marked area where aircraft must be placed from time to time as instructed by the director. Once in the Secure Area and without the express permission of the director, no aircraft may be touched for any reason other than to remove it from the Secure Area.

Competitors who do not respect the rules of the Secure Area may be liable to penalty.

3.1.3 A "CLEAN" TAKE OFF

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

3.1.4 THE LANDING DECK

- A landing deck is a clearly marked area, defined at the briefing a minimum of 100m x 100m is required
- There will be one landing deck provided for every 30 competitors.
- A landing deck will have a windsock within 100m of its boundary.
- There will be no significant obstacles within 200m of the boundary of a landing deck.
- Unless otherwise briefed, penalties will be awarded to Pilots or any part of their ~~PF's~~ Paramotor's touching the ground anywhere outside the landing deck during a task.

3.1.5 CONTEST NUMBERS

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

3.1.6 EMERGENCY EQUIPMENT

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

3.1.7 PROTECTIVE EQUIPMENT

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

3.1.8 PROHIBITED EQUIPMENT

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

3.2 FLIGHT CONTROL

3.2.1 TIMINGS

Normally, take-off times are taken at the moment a pilot's feet leave the ground Or cross a start gate

Normally, landing times are taken at the moment a pilot's feet or any other part of the pilot or ~~PF~~ ~~Paramotor~~ touch the ground.

Timings may also be taken when the pilot kicks a stick or flies overhead an observer as briefed for the task in question.

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

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

3.2.2 DISTANCE MEASUREMENT

Distance will be measured for all competitors on the same official map, of a scale not smaller than 1:100 000. Measurement will be made to the nearest 0.5 km.

3.2.3 FUEL MEASUREMENT

Fuel will be measured by weight or volume but will be consistent for any given refuelling session. Refuelling will be in the order and in accordance with the instructions given at briefing. Failure of the aircraft to be present on time may result in penalty for the pilot.

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

3.2.4 FLIGHT ACCURACY MEASUREMENT

Ground markers

- Certain ground markers may be designated as "Landing markers", where a bonus score may be available in the task for landing on the marker. Landing markers are min. 4m x 4m.

Kick sticks

- Some tasks may involve the use of "Kicking sticks". A valid strike on a stick is one where the pilot or any part of the ~~PF~~ ~~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 stick should be approx. 2m in height, visible from a range of at least 250 meters, and of a construction such that it is unlikely to enter a PF's propeller once struck. (Standard ski slalom posts are recommended).
- One or more sticks may be used in a task for the purposes of separating elements of that task (e.g. to take a time) and a bonus score may be available for successfully kicking a sequence of sticks in a given order and/or time.

3.3 FLYING THE TASKS

3.3.1 PROPORTIONS

The proportion of the tasks accumulated during the Championships is approximately A: B:C = 1/3:1/3:1/3

3.3.2 ASSISTANTS

3.3.2.1 GENERAL

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

3.3.2.2 PL1 WHEEL-CHAIRED DISABLED PILOT

A disabled pilot flying in PL1 class may be assisted in pre-launch preparation by one authorized person. Once the pilot is ready to launch the assistant shall report that fact to the marshal, and will not help any more in the launch procedure. Either holding any part of paramotor or wing canopy, or giving information about a canopy inflation is considered as a help.

3.3.3 TAKE-OFF

A PF must be foot launched for all tasks.

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

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

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

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

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

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

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

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

3.3.4 FLIGHT LIMITATIONS

Aerobatics and manoeuvres such as stalls, B-line stalls, deep stalls and spins are prohibited. 'Big ears' is accepted.

3.3.5 LANDING

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

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

~~For PF :~~ In tasks where pilots are asked to make a precision landing or to land on a marker, the objective is for the pilot to make a good landing on his own two feet without falling over. "Falling over as a result of the landing" will be interpreted as:

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

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

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

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

3.3.6 EMERGENCIES

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

3.4 SCORING

3.4.1 ALL TASKS

All scores are explained on the Task Catalogue.

After having applied the penalties, the best pilot score 35 points, the second : 30 points, the tird: 27 points, the fourth: 25 points, the sixth: 24 points ..... the twenty fiveth: 4 points and after all pilots who flew the task score 2 points

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

~~P = Q/Qmax x 1000~~

~~Where: Q = pilot scores, Q max = best score for the task, P = Total score~~

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

~~e.g.: P = Q/Qmax x 750 + y (where the maximum value of y would be 250)~~

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

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

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

The paramotor team prize is computed from the sum of the scores of the top three pilots of each country in each task in each valid class which has minimum of : For PF1 : ~~8 pilots~~. 4 nations with 3 pilots. For PF2, PL and PL2 : 4 nations with 2 pilots or crews

The task score for which a pilot was disqualified shall not count for team scoring. Other valid tasks flown by this pilot are not affected (S10 4.29.3)

~~In the PF and PL classes, if less than 50% of pilots in class start a task then after all penalties have been applied each pilot score for the task will be reduced on a pro-rata basis according to the following formula:~~

~~Pilot final task score = Ps*(MIN(1,(Ts/Tc)*2))~~

~~Where~~

~~Ps = Pilot task score after all penalties Etc are applied.~~

~~Ts = Total started; Total number of pilots in class who started the task (ie properly, beyond 5 minute rule).~~

~~Tc = Total class; Total number of pilots in class.~~

ENTRY FORM EXAMPLE

ENTRY FORM FOR .....

(Title of Championships, Dates, Location, Country)

Name of National Aero Club ....

Address ....

Tel .....fax .....

E-mail ....

We wish to enter the following competitors who qualify under the FAI Nationality or Residence Rules (GS 3.7):

Name	Age	Gender	Comp. class	P1 NAV ASS TTL	Sporting Licence Nº	Pilot Licence Nº

Note : The maximum number of aircraft which may be entered is ……. with not more than …….. in any class.

Name of Team Leader .....

Names/number of Assistants if known .....

.....

.....

Names/number of accompanying technical officials if known .....

.....

.....

ENTRY FEES

	Fee	Number	Total Entry fee
Pilot / Nav			
Assistant			
Team Leader			
Technical Official			

This amount is enclosed/will be paid by _____ *(date)* in the form of _____ *(currency)*

Note : The closing date for the receipt of entry fees is 28 days before the start of the event. Late entries may not be accepted.

We declare that the above information is true.

Signed : .....Position in NAC.....

Print Name ..... Date .....

INSURANCE:
Each competing aircraft shall be covered for public liability risk to the value of _____ *(value & currency)*. Proof of cover must be provided at Registration and before the aircraft is flown. Competitors are strongly advised to take out personal accident cover.

PUBLICITY:
A passport type photograph and a short biographical note for each pilot and the team leader should be provided either with this Entry Form or at latest at Registration.

Annex 4 to SECTION 10, Task Catalogue

TASK CATALOGUE for MICROLIGHT AND PARAMOTOR CHAMPIONSHIPS

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.

CLARIFICATION

Classes AL1, AL2, WL1 and WL 2 are "Microlights" and classes PF1, PF2, PL1 and PL2 are “Paramotors”

CONTENTS

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

Initial or Start point

Initial or Start point with time gate

Finish point

Finish point with time gate

Marker identity given before takeoff

Home airfield

Outlanding airstrSP

Direction of landing

Left hand circuit

Right hand circuit

Circuit height above ground in feet

Windsock

Landing direction indicator

Road or track

Marke Symbols

H I K L N T U X O = Π Δ

Annex 4, Part 1. Applies to All classes

1.1 INTRODUCTION

This catalogue describes tasks which may be set in FAI World and Continental championships. It does not preclude new tasks provided they have been tried out satisfactorily in national competitions and are clearly described and accepted when the FAI Microlight Commission (CIMA) approves the Local regulations.

Good tasks make for good championships, but tasks also drive the design direction for the aircraft. For example, microlights would soon lose their short field capability if no more precision landing tasks into a 100m deck were given.

Flight planning and navigation tasks develop good pilot skills but they, too, affect the characteristics of competition aircraft so a Director must try to set a reasonable balance between tasks where ultimately speed is the advantage and economy is the advantage. These tasks should be as long as possible, so that pilot skills are tested by having to fly over new and different country.

Competition Directors are cautioned against setting a few complicated tasks in favour of lots of simple ones. It is all too easy for a Championship to end with the minimum of tasks required (S10 4.3.3) and there is nothing more likely to upset pilots than if they think they have not flown enough in a championship to properly demonstrate their skills.

1.2 TASK TYPES

1.2.1 GENERAL

Tasks fall into Three Categories:

A Flight planning, navigation estimated time and speed. No fuel limitation.

B Fuel economy, speed range, duration. ~~Fuel limited to 15 kg or less.~~

C Precision

The proportion of each task to be used is stated in S10, 4.24.3

Any task may be set more than once, either identically or with variations.

Distances should be as long as possible referring to the recommended still air range of the competing aircraft stated in S10 4.13.7.

In any task requiring pre-declaration of speed or elapsed time the Director may set up hidden gates through which the pilot would fly if on the correct flight path. Pilots failing to be checked through such gates or who are observed flying a devious path to adjust timing/speed errors may be penalised. No information will be given at briefing on the existence or whereabouts of hidden gates, or the method by which they are controlled.

The Director may set a time period for completion of a task in addition to the last landing time.

1.3 EXAMPLE TASKS

The following tasks are examples of the tasks described above. Their purpose is to show the way in which real tasks have been designed using the generic principles outlined earlier. However, this is not an exhaustive set of tasks and others may be designed using these principles. Certain aspects of the scoring have been included in the task descriptions, in particular a schedule of penalties. However, the specific scoring for photos, markers and turnpoints etc to be used in the competition will be briefed prior to the task being flown.

Annex 4, Part 2. Tasks for Microlights

2.A1 CURVE NAVIGATION WITH TIME ESTIMATION

Precisely fly the course defined by an arbitrary line drawn on the map, with time estimations and a time limit.

Description

Pilots will receive a course drawn on a map. There will also be a number of known time gates where pilots will estimate their crossing time, counted from the start point.

Before take-off, pilots will hand their declarations to a marshal.

They will take off from their designated deck and fly to the start point, where time will start. Then they will precisely fly the course trying to cross the time gates in order at their estimated times.

Navigation and timing end at the finish point.

There will be an undetermined number of hidden gates to validate the course. Gates must be crossed in order and proper direction. Crossing the same gate more than once in any direction invalidates the gate. Example: The sequence 1-2-4-3-5-6-5-7 will be evaluated as 1-2-4-6-7, a total of five correct gates.

Time will be measured at the known time gates and checked against pilot declarations. If a time gate is crossed more than once, time will be extracted from the first crossing.

There will be a maximum flight time – Tmax – between crossing the start and finish points. No pilot may declare an estimated time beyond this limit.

SP	→	HG	→	TG1	→	HG	→	...	→	TG2	→	HG	→	...	→	FP
T = 0	Nav	+1	Nav	T1	Nav	+1	Nav		Nav	T2	Nav	+1	Nav		Nav	T < Tmax

Scoring

Spatial precision

Nh = Number of hidden gates in the task
H = Number of hidden gates correctly crossed (crossed once, in order and proper direction)
Qh = 1000 x H / Nh

Time precision

Nt = Number of time gates.
Emax = Maximum error (in seconds) in each time gate (typically 180).
Et = Sum of absolute errors in time gates.
Maximum error of Emax seconds in each point.
Emax seconds error is applied if point not flown.
Qt = Emax * Nt – Et

Total: Q = Qh + Qt P = 1000 x Q / Qmax

Comments

An additional penalty may be established for an excessive delay to cross SP since take-off.

An additional penalty may be established for an excessive delay to cross FP since crossing SP.

The task can also be run without the time precision part (no known time gates). Then Qt is dropped from the scoring formula.

2.A2 PRECISION NAVIGATION

Fly a circuit at a constant speed in each straight leg, estimating arrival times to known turn points.

Description

A circuit will be defined by a start and finish points, with a number of intermediate turn points. All points will be known before take-off.

Before take-off, competitors will hand a declaration of their estimated times of arrival to every turn point in the circuit, including the finish point.

Competitors will take-off from their designated decks and fly to the START point where navigation and timing start. They will fly each leg at a constant speed that should be consistent with their declarations. The speed in each leg may be different, but it must be constant along the leg.

There will be hidden time gates along the corridors.

Navigation and timing end at the FINISH point. Then they will proceed to land at their designated decks.

START	→	AA	→	BB	→	CC	→	DD	→	FINISH
T = 0	Nav	Ta	Nav	Tb	Nav	Tc	Nav	Td	Nav	Te

Scoring

Each hidden gate crossed scores 180 points. A gate crossed twice or crossed in the opposite direction will be invalidated.

An estimated time for crossing each gate will be calculated by the organization. Crossing time will be checked against this estimation. Each second of error will score one negative point. If a gate is crossed twice, time will be extracted from the first crossing.

Spatial precision:

Emax = Maximum error (in seconds) in each time gate (typically 180).
Ng = Number of gates correctly crossed
Qp = Emax * Ng

Time precision:

Ei = Absolute error in seconds in gate i.
Maximum error is Emax. Time gates not crossed score Emax seconds error.
Qt = ∑ Ei (sum of errors in all time gates)

Total: Q = Qp + Qt P = 1000 * Q / Qmax

Penalties

An additional penalty may be established for a delayed crossing of SP from the take-off time.

2.A3 CONTRACT NAVIGATION WITH TIME CONTROLS

Fly a course between a combination of declared turn points, flying over some of them at a specified time.

Description

Pilots will receive a catalogue of turn points. Three of them, the start point SP, a middle point MP and the finish point FP, are mandatory and will be crossed at designated times.

Before take-off, pilots will declare the sequence of turn points they will fly.

They will take off and fly to the START point where navigation begins. Then they will fly the sequence of declared points in order, including the mandatory MIDDLE POINT and FINISH POINT. These two points will be flown a the specified time. Upon reaching the finish point, navigation ends.

Turn points may only be visited once.

Time starts counting at the start point (SP). Competitors will fly over the middle point (MP) exactly T seconds after SP and will fly over the finish point (FP) exactly 2T seconds after SP.

Pilot's declaration will include MP. Points declared to be flown after MP can't be flown before the established time for MP. Otherwise those points will be invalid.

SP	→	P1	→	...	→	MP	→	Pn	→	...	→	FP
Time = 0 s	Nav		Nav		Nav	Time = T s	Nav	Nav			Nav	Time = 2T s

Scoring

Turn-points

N = Number of turn-points declared and flown in order (different from SP, MP and FP).
Ep = Number of declared points that were not flown (or not in order), including SP, MP and FP.
V = N – Ep
Qp = 1000 * (V / Vmax)

Time estimation:

Emax = Maximum error (in seconds) in each time gate (typically 180).
Et = Sum of absolute errors in SP, MP and FP.

Maximum error of Emax seconds in each point.
Emax seconds error is applied if point not flown.
Qt = Emax * 3 – Et

Total: Q = Qp + Qt P = 1000 * Q / Qmax

Comments

An additional penalty may be established for a delayed crossing of SP from the take-off time.

2.A4 NAVIGATION OVER A KNOWN CIRCUIT

Follow a known circuit, finding markers or identifying ground features from photographs and locating their positions on a map or crossing hidden gates.

It may be required to distinguish between on-track and off-track markers and ground features.

There may be timing gates to take times if part of the task must be evaluated for time precision or for speed.

The task may finish with an outlanding.

Summary

Competitors will be given:

A series of headings to follow or lines drawn on a map or a description of the procedure to draw them.

The location of a start point (SP) before which no markers, ground features or gates will be found.

The time at which they must overfly the start point.

The location of a finish point (FP) after which no markers or ground features will be found.

Photos of any ground features or description of canvas markers to be identified.

If the task is to contain a speed prediction element before takeoff the competitor must either:

Declare the ground speed at which he plans to fly, or

Select a ground speed from those specified at the briefing, or

Declare crossing times at certain turn points.

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 scoring.

Safety

During the task competitors must not back track along the track line against the direction of the task. If there is a need to backtrack competitors must leave the track line and fly back well clear of it before rejoining the track line at an earlier point.

Scoring

Spatial precision:

Vh = Value assigned to crossing a hidden gate or properly placing a mark on the map (e.g. 100)
Nh = Number of hidden gates correctly crossed or
properly placed marks on the map (less than 2 mm error).
Markers placed between 2 and 5 mm error score ½ point.
More than 5 mm score zero.
Out of track marks score zero.
Qh = Vh * Nh

Time precision (when included in the task):

Vt = Gate value (e.g. 180)
Ei = Absolute error in seconds in gate i.
Maximum error is Vt.
Time gates not crossed do not add error.
Qt = $\sum$ (Vt - Ei) (sum of gate value minus time error each gate crossed)

Speed (when included in the task):

Vs = Relative value for the speed term
S = Pilot's speed in the speed section
Qv = Vs * S / Smax

Total: Q = Qh + Qt + Qv P = 1000 * Q / Qmax

Penalties

Each photo or marker correctly identified and located on the map to within 2mm and any ground speed element will score as briefed. The following penalties will apply:

Takeoff deck penalty: 20%

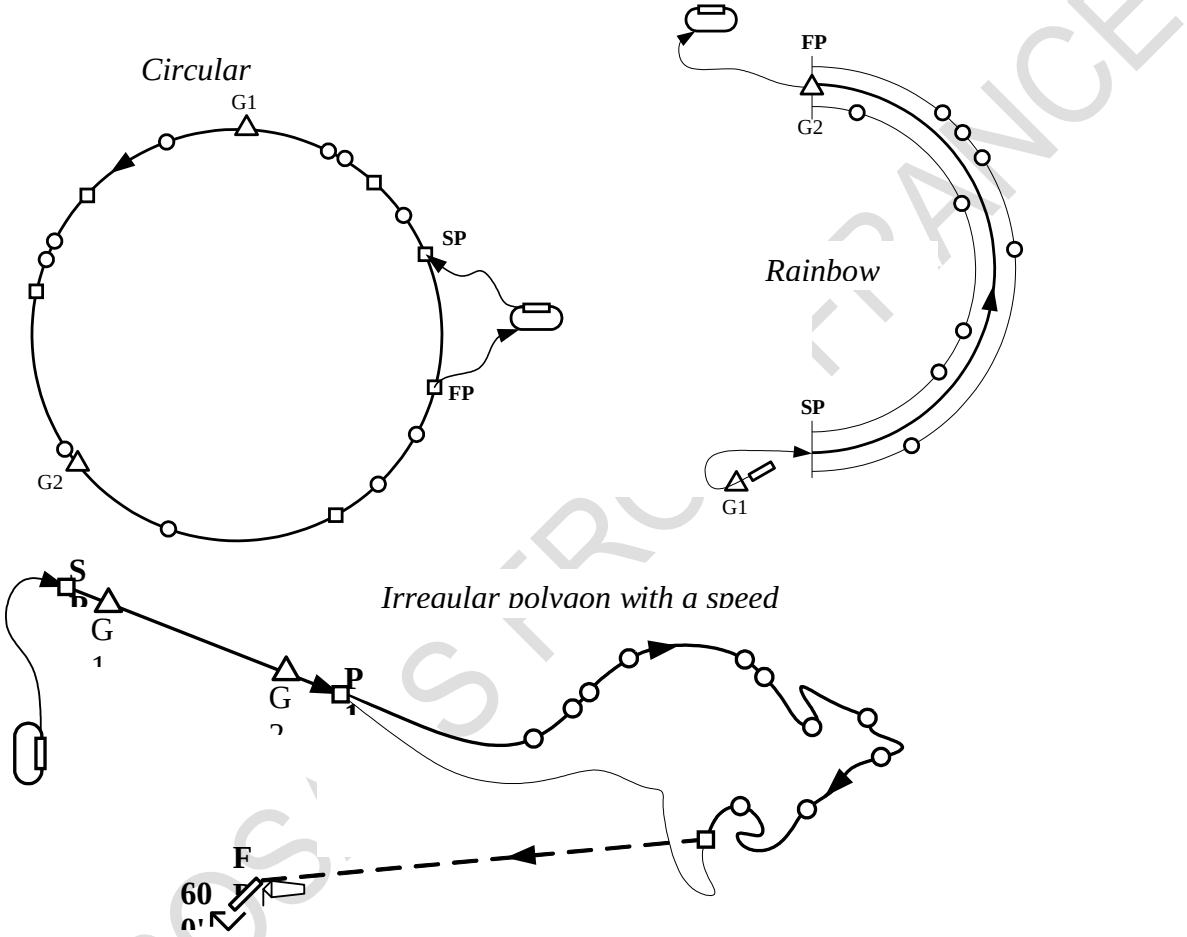
Landing deck penalty: 20%

Backtracking against the task direction or crossing a hidden gate backwards: 100%

Breach of Quarantine: 100%

Crossing a hidden gate twice invalidates the gate.

Examples



2.A5 NAVIGATION WITH UNKNOWN LEGS

Follow a series of headings or known lines, finding markers and identifying ground features from photographs, and locating their positions on a map or crossing hidden gates.

It may be required to distinguish between on-track and off-track markers and ground features.

Certain of the ground features or markers will indicate a change of heading or the start of a leg to another point.

There may be timing gates to take times if part of the task must be evaluated for time precision or for speed.

The task may finish with an outlanding.

Summary

Competitors will be given:

A series of headings to follow or lines drawn on a map or a description of the procedure to draw them.

The location of a start point (SP) before which no markers, ground features or gates will be found.

Details of which markers or ground features indicate a point from which a new line must be drawn.

The location of a finish point (FP) after which no markers or ground features will be found

Depending on the specific task design, competitors may be given:

Sealed instructions giving the location of next turn points or outlanding sites.

The time at which they must overfly the start point.

Photos of any ground features or description of canvas markers to be identified.

If the task is to contain a speed prediction element before takeoff the competitor must either:

Declare the ground speed at which he plans to fly, or;

Select a ground speed from those specified at the briefing.

Declare crossing times at certain turn points.

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 scoring.

Safety

During the task competitors must not back track along the track line against the direction of the task. If there is a need to backtrack competitors must leave the track line and fly back well clear of it before rejoining the track line at an earlier point.

Scoring

Spatial precision:

Vh = Value assigned to crossing a hidden gate or properly placing a mark on the map (e.g. 100)
Nh = Number of hidden gates correctly crossed or
properly placed marks on the map (less than 2 mm error).
Markers placed between 2 and 5 mm error score ½ point.
More than 5 mm score zero.
Out of track marks score zero.
Qh = Vh * Nh

Time precision (when included in the task):

Vt = Gate value (e.g. 180)
Ei = Absolute error in seconds in gate i.
Maximum error is Vt.
Time gates not crossed do not add error.
Qt = ∑ (Vt - Ei) (sum of gate value minus time error each gate crossed)

Speed (when included in the task):

Vs = Relative value for the speed term
S = Pilot's speed in the speed section
Qv = Vs * S / Smax

Total: Q = Qh + Qt + Qv P = 1000 * Q / Qmax

Penalties

Each photo or marker correctly identified and located on the map to within 2mm and any ground speed element will score as briefed. The following penalties will apply:

Take-off deck penalty: 20%.

Landing deck penalty: 20%.

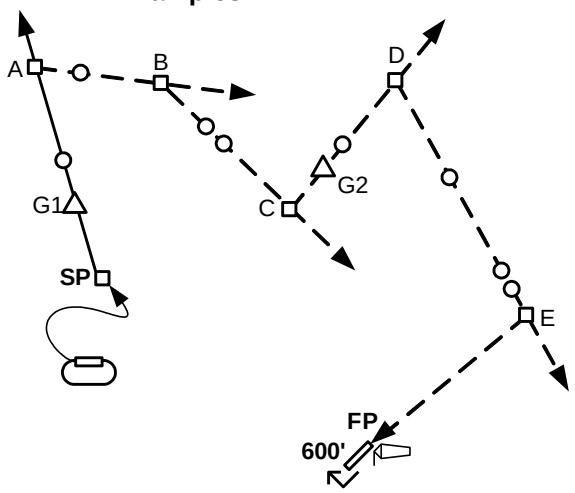
Backtracking against the task direction or crossing a hidden gate backwards: 100%

Breach of quarantine: 100%

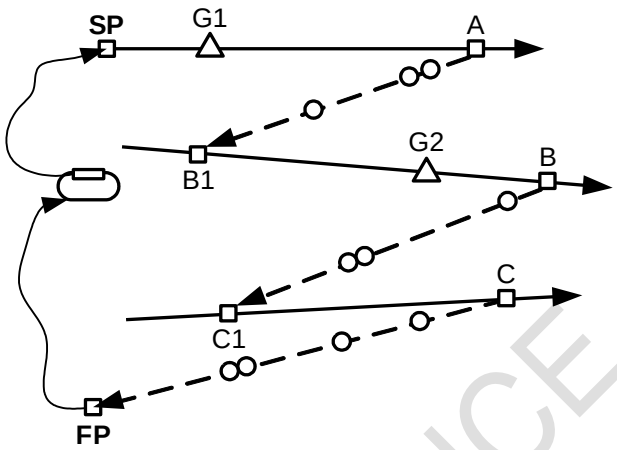
Crossing a hidden gate twice invalidates the gate.

A penalty will be specified for braking an envelope seal.

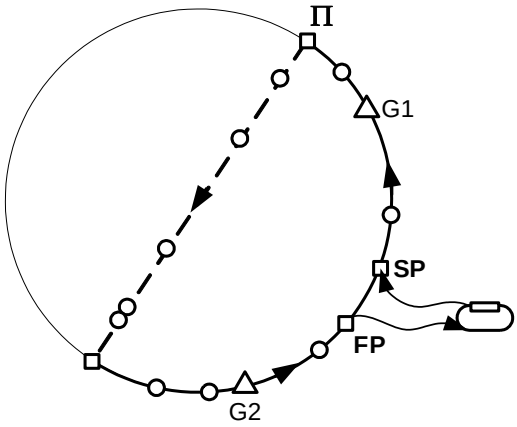
Examples



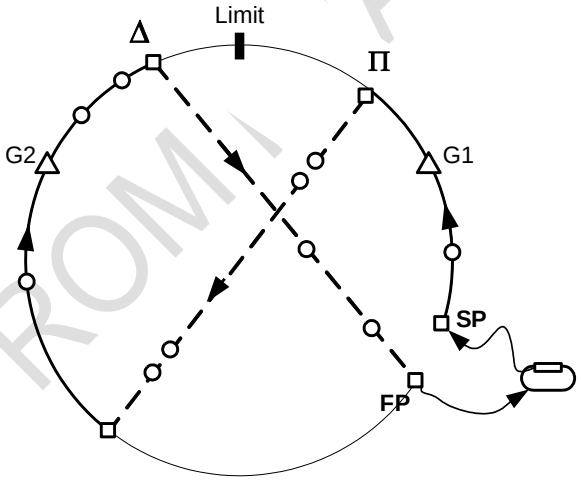
Sequential navigation



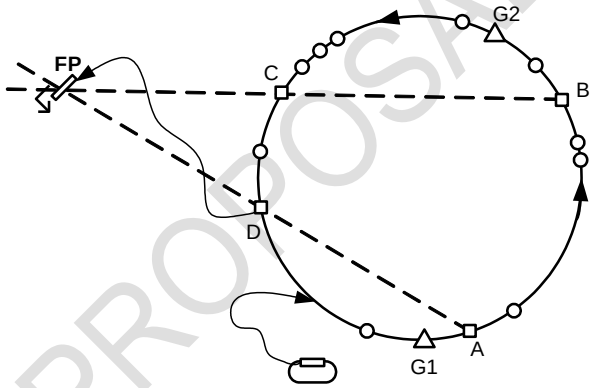
Linear navigation



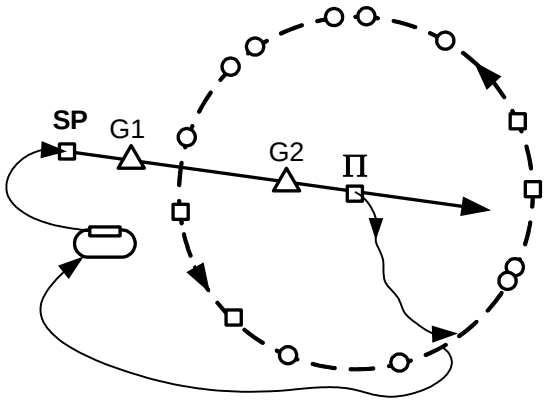
Circular navigation and diameter



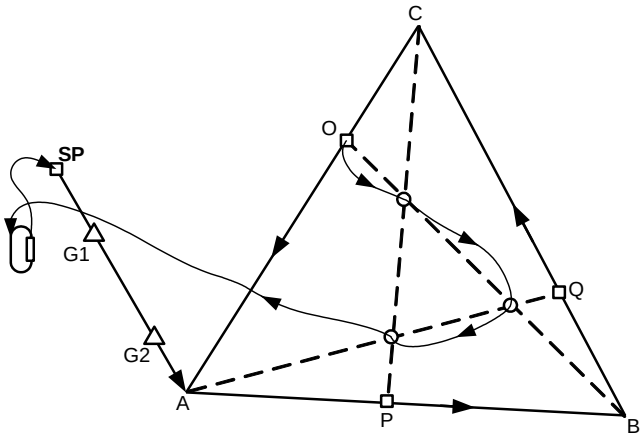
Circular navigation, diameter and reverse.



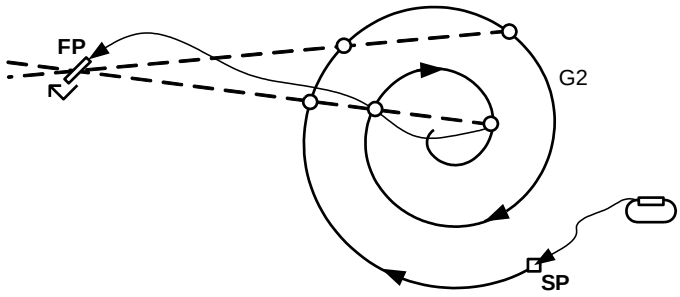
Circle and two lines



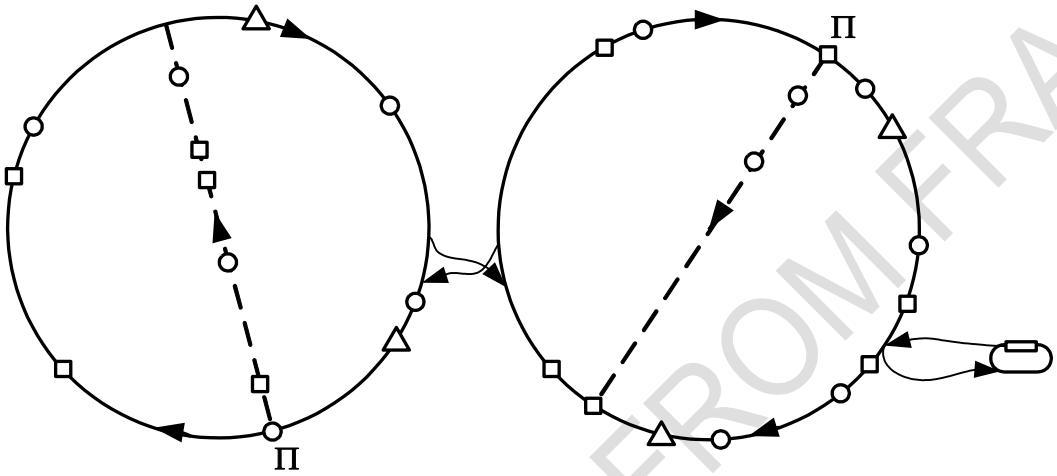
Drawn circular navigation



Triangle and three lines



Speed spiral and two lines

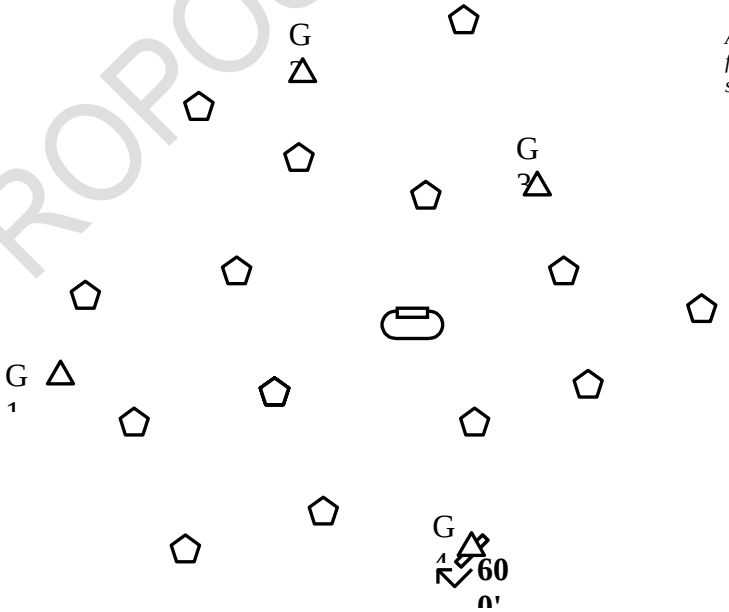


Double circular navigation

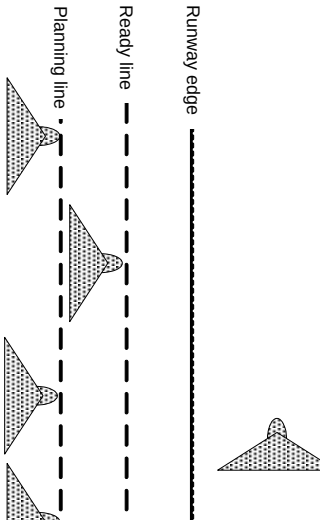
2. A6 TURNPOINT HUNT

Objectives

To fly to and identify from given photographs as many turnpoints as possible within a limited time and in the order predicted. 3 of the turnpoints will be compulsory timing gates which must be overflown within 10 seconds of a time predicted by the competitor. One of the gates may require a precision touchdown. A 'Le Mans' start may be required.



Arrangement for Le Mans start



Summary

Competitors will be given:

- The location and score of all turnpoints and gates
- Photos of any ground features to be identified

Before takeoff the competitor must declare:

- The predicted time at which the gates will be overflown
- The predicted turnpoints and gates that will be visited and their sequence in the flight

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 scoring.

Le Mans Start

If a 'Le Mans' start is required for this task the aircraft will initially be lined up alongside the runway on the Planning line, about two aircraft lengths away. Each competitor's time will start when the turnpoint information is given. Once a competitor's planning is completed he will indicate this by starting his engine and pulling forward one aircraft length to the Ready line where he will wait until the Start Marshal flags him to enter the runway and line up. Once an aircraft is on the runway it must be allowed to take off before any other aircraft may enter the runway.

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

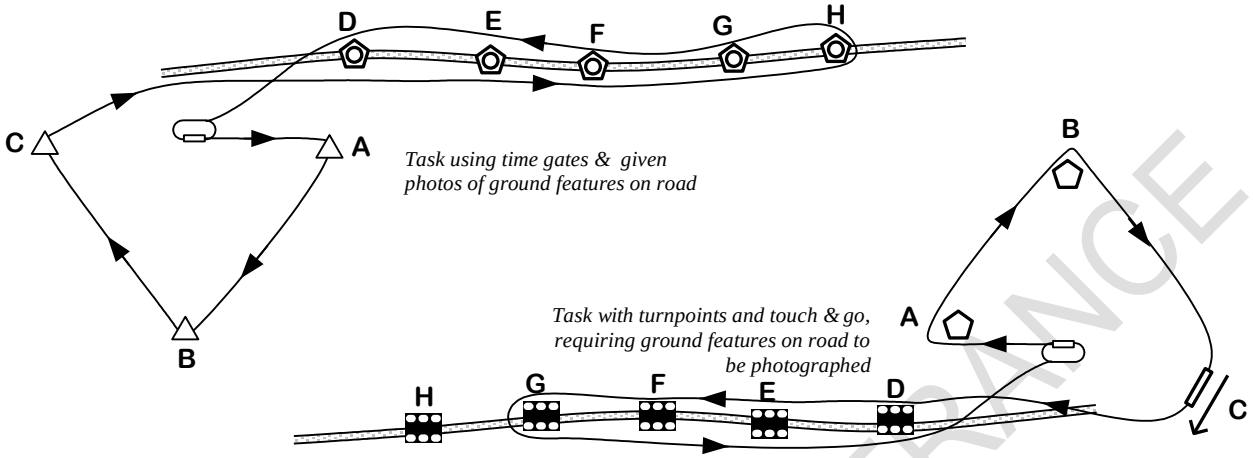
Typically each photo will score 100 points, each time gate 200 points and an additional score will be awarded if the full and correct turnpoint and gate sequence is achieved. The following penalties will apply:

- Takeoff deck penalty: 20%
- Landing deck penalty: 20%
- Breach of Quarantine: 100%
- Photo wrongly identified on the map: Penalty 50% of photo score
- Timing gate error >10 seconds from prediction: 10 points/second
- Time over maximum task duration: 10 points/second

2.B1 SPEED TRIANGLE OUT-AND-RETURN

Objectives

With limited fuel, to fly around a triangular circuit in the shortest possible time, then to return to the deck or pass through a gate, and finally, with the remaining fuel, to fly in a given direction as far as possible, photograph a known ground feature or identify it from a given photograph and return to the deck.



Summary

Competitors will be given:

- The location of the three turnpoints or time gates that form the triangle
- A line or linear ground feature such as a road, river, railway or power-lines to be followed
- The location of or photographs of known ground features
- A specified weight or volume of fuel

The task will normally start and finish with a Deck Takeoff and Deck Landing and, if a residual fuel requirement has been specified, after completing the landing the competitor will be required to enter a Quarantine area for fuel checking.and any scoring

Scores

The following penalties will apply:

- Takeoff deck penalty: 20%
- Landing deck penalty: 20%
- Backtracking against the task direction: 100%
- Failing to pass around the outside of the turnpoints or overfly gates:100%
- Returning with less than minimum specified fuel: 100%

The task score calculation will be:

$$\text{Pilot score} = \left(500 \times \frac{\text{tMin}}{\text{tp}}\right) + \left(500 \times \frac{\text{dp}}{\text{dMax}}\right) + \text{T}$$

Where:

tp = the pilot's time,

tMin = The best time (Part 1)

dp = the pilot's distance

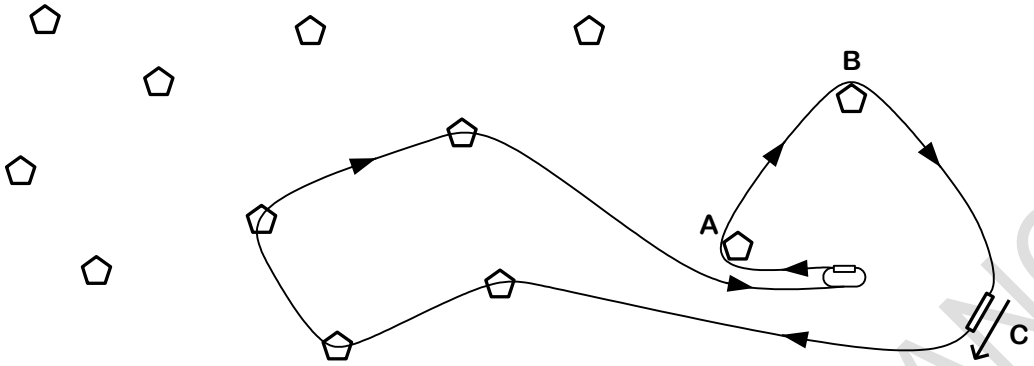
dMax = the greatest distance (Part 2)

T= touch & go score

2.B2 SPEED TRIANGLE & TURNPOINT HUNT

Objectives

With limited fuel, to fly around a triangular circuit in the shortest possible time, then to complete a precision touchdown, and finally, with the remaining fuel, to fly to as many turnpoints as possible and identify ground features from a given photograph before returning to the deck.



Summary

Competitors will be given:

- The location of the two turnpoints or time gates and the airstrip that form the triangle
- The location and photographs of known ground features
- A specified weight or volume of fuel

The task will normally start and finish with a Deck Takeoff and Deck Landing and, if a residual fuel requirement has been specified, after completing the landing the competitor will be required to enter a Quarantine area for fuel checking.and any scoring

Scores

The following penalties will apply:

- Takeoff deck penalty: 20%
- Landing deck penalty: 20%
- Backtracking against the task direction: 100%
- Failing to pass around the outside of the triangle turnpoints or overfly gates: 100%
- Photo wrongly identified on the map: Distance reduced as if turnpoint missed
- Returning with less than minimum specified fuel: 100%

The task score calculation will be:

Pilot score = $\left(500 \times \frac{\text{tMin}}{\text{tp}}\right) + \left(500 \times \frac{\text{dp}}{\text{dMax}}\right) + \text{T}$

Where:

tp = the pilot's time,

tMin = The best time (Part 1)

dp = the pilot's distance

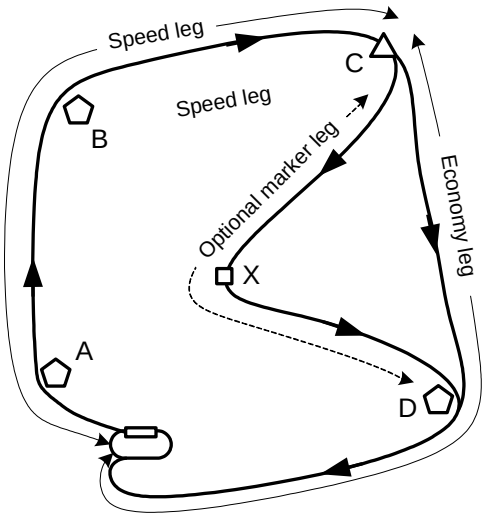
dMax = the greatest distance (Part 2)

T= touch & go score

2.B3 SPLIT SQUARE

Objectives

To fly around a square circuit, divided into a speed leg and an economy leg, using the minimum amount of fuel, the competitor deciding how much fuel to take. The competitor may choose to



identify an optional scoring marker or ground feature in the centre of the square.

Summary

Competitors will be given:

- The location of the four turnpoints or time gates that form the square
- The location of optional scoring ground feature or marker
- The weight or volume of fuel specified by the competitor

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

Scores

- Takeoff deck penalty: 20%
- Landing deck penalty: 20%
- Failing to pass around the outside of the turnpoints or through gates: 100%
- Backtracking against the task direction: 100%
- Returning with less than minimum specified fuel: 100%

The task score calculation will be:

Pilot score = $\left(450 \times \frac{\text{tMin}}{\text{tp}}\right) + \left(450 \times \frac{\text{fMin}}{\text{fp}}\right) + \text{X}$

Where:

tp = the pilot's time,

tMin = the best time (Part 1)

fp = the pilot's fuel

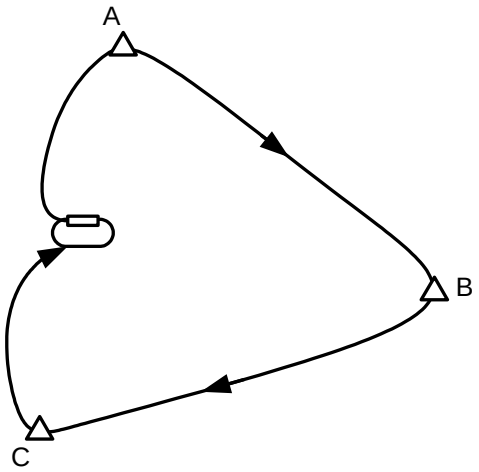
fMin = the least fuel (Part 2)

X = marker score of 100 points

2.B4 FUEL & SPEED TRIANGLE

Objectives

To fly around a triangular circuit at speed on limited fuel having accurately predicted the time to each corner of the triangle.



Summary

Competitors will be given:

- The location of the three time gates that form the triangle
- The weight or volume of fuel specified by the competitor

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. If a residual fuel requirement has been specified, after completing the landing the competitor will be required to enter a Quarantine area for fuel checking.

Scores

Typically, each timing gate overflown within 10 seconds of the predicted time will score 100 points. The following penalties will apply:

- Takeoff deck penalty: 20%
- Landing deck penalty: 20%
- Failing to pass through the triangle timing gates: 100%
- Backtracking against the task direction: 100%

- Returning with less than minimum specified fuel: 100%
- Timing gate error >10 seconds from prediction: 5 points/second

The typical task score calculation will be:

Pilot score = $\left(350 \times \frac{\text{tMin}}{\text{tp}}\right) + \left(350 \times \frac{\text{fMin}}{\text{fp}}\right) + X_A + X_B + X_C$

Where:

tp = the pilot's time,

tMin = the shortest time achieved by a scoring competitor

fp = the pilot's fuel

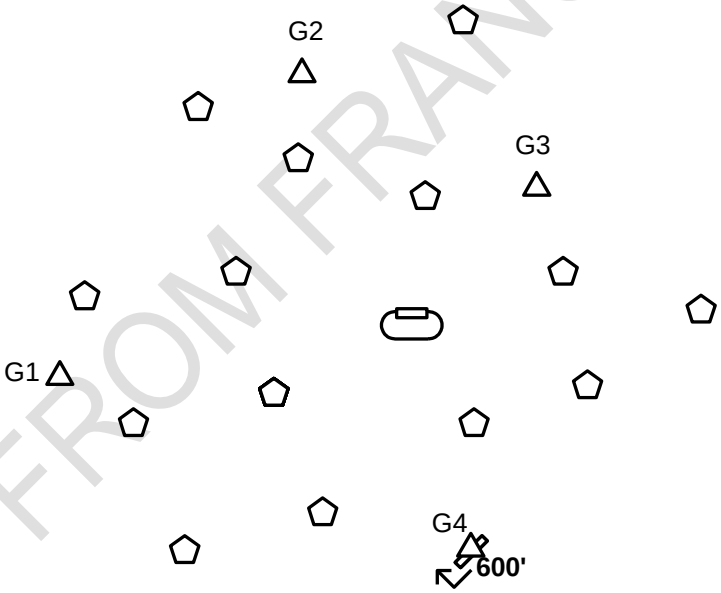
fMin = the least fuel used by a scoring competitor

X = gate score of 100 points

2.B5 LIMITED FUEL TURNPOINT HUNT

Objectives

To fly to and identify from given photographs 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 10 seconds of a time predicted by the competitor. One of the gates may require a precision touchdown.



Summary

Competitors will be given:

- The location and score of all turnpoints and gates
- A specified weight or volume of fuel
- Photos of any ground features to be identified

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 photo will score 100 points and each time gate 200 points. The following penalties will apply:

- Takeoff deck penalty: 20%
- Landing deck penalty: 20%
- Breach of Quarantine: 100%
- Photo wrongly identified on the map: Penalty 50% of photo score
- Timing gate error >10 seconds from prediction: 10 points/second
- Time over maximum task duration: 10 points/second

2.B6 DURATION

Objectives

To fly for as long as possible on a limited amount of fuel.

Summary

Competitors will be given:

- A specified weight or volume of fuel

The task will normally start with a Deck Takeoff. Landing will normally be in an extended area, to be specified at the briefing. If a residual fuel requirement has been specified, after completing the landing the competitor will be required to enter a Quarantine area for fuel checking.

Safety

Particularly if the task is to be flown to empty tanks, pilots must look out for other aircraft preparing to land engine off. A proper look-out must be kept at all times. An aircraft joining another in a thermal shall circle in the same direction as that established by the first regardless of height separation

Scores

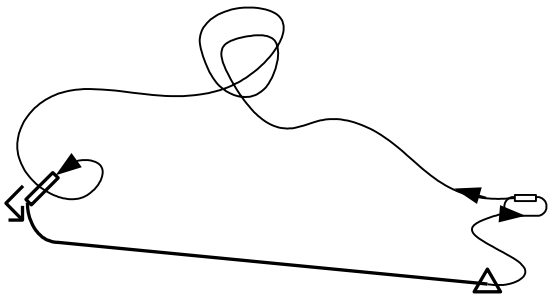
The following penalties will apply:

- Takeoff deck penalty: 20%
- Breach of Quarantine: 100%
- Flight in a prohibited area: 100%
- Landing outside the specified area but within the airfield boundary: To be briefed

2.B7 DURATION & SPEED

Objectives

Given a limited amount of fuel, competitors must stay airborne for as long as possible, leaving enough fuel for a precision touch-and-go followed by a fast leg flown at a speed to be predicted by the competitor



Summary

Competitors will be given:

- A specified weight or volume of fuel
- The location of the airstrip for the precision touch-and-go
- The location of the gate at the end of the speed leg

Before takeoff the competitor must:

- Declare the predicted time for the speed leg

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

Safety

Particularly if the task is to be flown to empty tanks, pilots must look out for other aircraft preparing to land engine off. A proper look-out must be kept at all times. An aircraft joining another in a thermal shall circle in the same direction as that established by the first regardless of height separation

Scores

The following penalties will apply:

- Takeoff deck penalty: 20%
- Landing deck penalty: 20%
- Breach of Quarantine: 100%
- Flight in a prohibited area: 100%
- Predicted ground speed error: To be briefed

The typical task score calculation will be:

$$\text{Pilot score} = \left(400 \times \frac{\text{tdp}}{\text{tdMax}}\right) + \left(400 \times \frac{\text{tsMin}}{\text{tsp}}\right) + (200 - \text{t}\Delta\text{p})$$

Where:

tdp = the pilot's time achieved on the duration leg

tdMax = the longest time achieved on the duration leg by a scoring competitor

tsp = the pilot's time achieved on the speed leg

tsMin = the shortest time achieved on the speed leg by a scoring competitor

$t\Delta p$= the speed leg time error in excess of allowed 10 secs at 1 point/second (max 200)

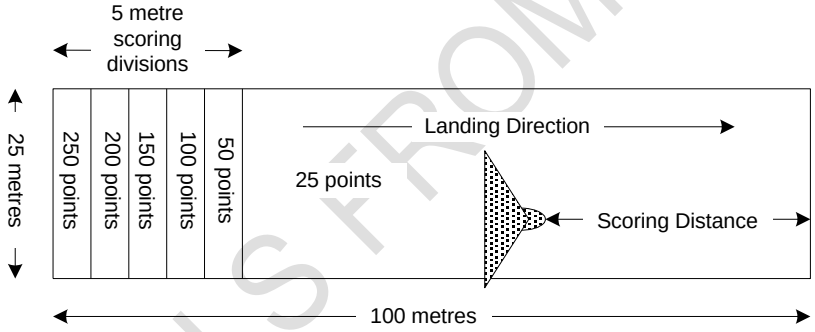
2.C1 SPOT LANDING

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

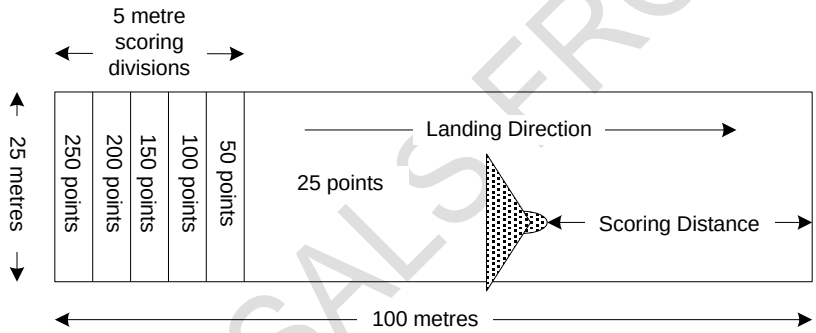
2.C2 SPOT LANDING - TIMED

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) x 250/450 with a maximum score of 250

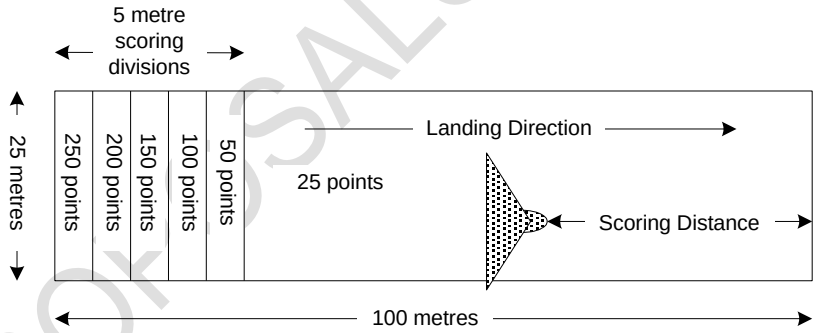
2.C3 POWERED PRECISION LANDING

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 (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:

- 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

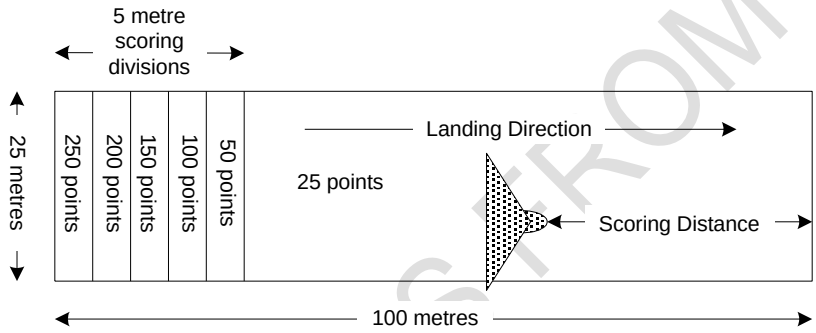
2.C4 POWERED PRECISION LANDING - TIMED

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

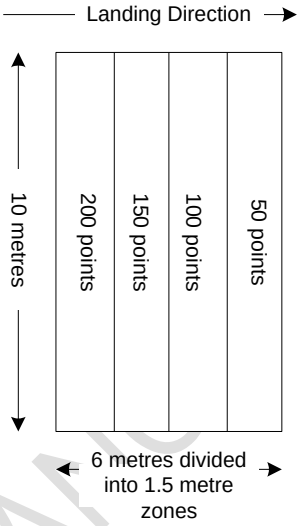
The score will be the value of the strip in which both main wheels touch down with the ground (PS) plus the distance between the finish of the deck and the closest wheel, scored 1 point per whole metre (PD). Touching down on a dividing line scores the higher of the two strips. If the aircraft touches 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) x 250/450 with a maximum score of 250

2.C5 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

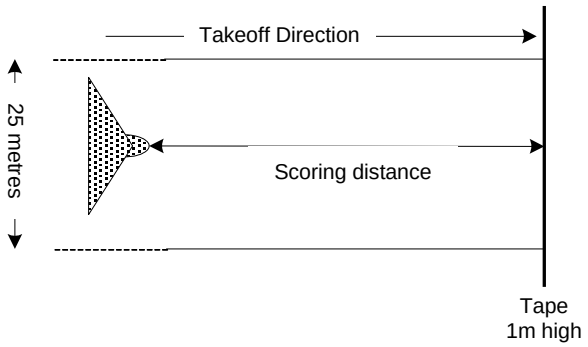
2.C6 SHORT TAKEOFF OVER AN OBSTACLE

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 the 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 (DMIN) 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 (DP) relative to DMIN. 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

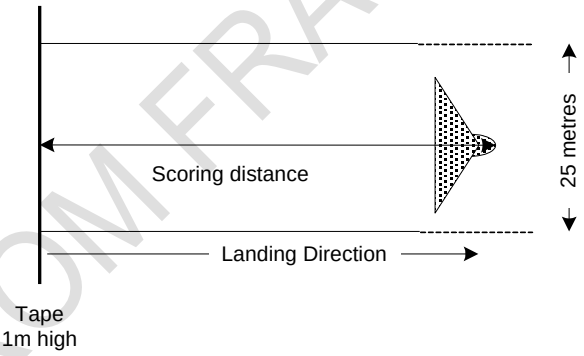
2.C7 SHORT LANDING OVER AN OBSTACLE

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 (DMIN) 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 (DP) relative to DMIN. 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 ($250 \times D_{MIN} / D_P$) with a maximum score of 250

2.C8 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.

2.C9 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

Annex 4, Part 3. Tasks for Paramotors

3.A1 PURE NAVIGATION

Objective

To fly a course between as many turn points or markers as possible within the time window and return to the deck.

Scoring

It is a navigation task so the number of turn points validated by the pilot will fix the results. In case of equalities the time will separate pilots, the fastest will be the first. (the 1st = 35pts, 2nd = 30pts, 3rd = 27pts, 4th = 25pts, 5th = 24pts, 6th = 23pts.....)

~~Pilot score = 1000 × NBp / NBmax~~

~~Where, according to briefing;~~

~~Either:~~

~~NBp = The number of ground markers and/or turn points a pilot collects in the task~~

~~NBmax = The maximum number of markers and/or turn points collected in the task~~

~~OR~~

~~NBp = the distance flown by the pilot in the task.~~

~~NBMax = the maximum distance flown in the task.~~

3.A2 NAVIGATION, PRECISION & SPEED

Objective

To make a clean take-off from the deck, to fly a course between as many turn points or markers as possible within a given time, and to collect bonus points for landing at designated markers before returning to the deck.

Special rules

- The clock starts the moment the marshal makes the signal to take off.
- At the start, the pilot scores ~~300 bonus~~ 10 points for a clean take off at the first attempt, ~~200~~ 7 pointsfor the second, ~~100~~ 5 points for the third, zero for any attempts thereafter.
- In the case of landing markers, If the pilot elects to switch off his engine at least 5m above the marker and:

Makes a first touch on the marker: Landing bonus: ~~200~~ 4 points

Misses the marker: landing bonus: ~~50~~ 2 points

- If the pilot elects to not switch off his engine and:

Makes a first touch on the marker: Landing bonus: ~~100~~ 1 points

- If the pilot falls over as a result of a landing: zero landing bonuses for that landing.
- If the pilot obstructs another competitor attempting to land at a landing marker penalties will apply.
- The clock stops the moment the pilot either crosses a line or lands back on the deck.
- Any outside assistance: Score zero.

Scoring

It is a navigation task so the number of turn points validated by the pilot will fix the results. In case of equalities the time will separate pilots, the fastest will be the first. (the 1st = 35pts, 2nd = 30pts, 3rd = 27pts, 4th = 25pts, 5th = 24pts, 6th = 23pts.....)

Points for precision are added

$$\text{Pilot score} = \left(500 \times \frac{NBp}{NBMax}\right) + Bto + \left(200 \times \frac{Bld}{BldMax}\right)$$

Where, according to briefing;

Either:

NBp = The number of ground markers and/or turn points a pilot collects in the task

NBmax = The maximum number of markers and/or turn points collected in the task

OR

NBp = the distance flown by the pilot in the task.

NBMax = the maximum distance flown in the task.

AND

Bto = Pilot's takeoff bonus points

Bld = Pilot's landing bonus points

BldMax = The maximum landing bonus points achieved.

3.A3 NAVIGATION / ESTIMATED SPEED

Objective

To fly a course between any combination of turn points, markers and gates as defined at the briefing having declared estimated flight times or estimated times of arrival as required at the briefing, and return to the deck.

Special rules

- The value of T, in seconds, will be given at the briefing.

Scoring

It is a navigation task so the number of turn points validated or distance or:and difference between flying time and estimation by the pilot will fix the results. In case of equalities the time will separate pilots, the fastest will be the first. (the 1st = 35pts, 2nd = 30pts, 3rd = 27pts, 4th = 25pts, 5th = 24pts, 6th = 23pts.....)
Points for precision are added

$$\text{Pilot score} = \left(700 \times \frac{NBp}{NBMax}\right) + (300 - T)$$

Where, according to briefing;

Either:

NBp = The number of ground markers and/or turn points a pilot collects in the task

NBmax = The maximum number of markers and/or turn points collected in the task

OR

NBp = the distance flown by the pilot in the task.

NBMax = the maximum distance flown in the task.

AND

T = The total difference in between pilot's estimated and actual times for all timed sectors. (>=300 = 300)

3.A4 NAVIGATION / ESTIMATED SPEED / PRECISION

Objective

To fly a course between any combination of turn points, markers, landing markers and gates as defined at the briefing having declared estimated flight times as required at the briefing, and return to the deck.

Special rules

- The value of T, in seconds, will be given at the briefing.
- At the start, the pilot scores 150 bonus points for a clean take off at the first attempt, 100 for the second, 50 for the third, zero for any attempts thereafter.
- All landing markers may be attempted with engine on unless the marker is in the landing deck and is the final element in the task.
- If the pilot falls over as a result of a landing: zero landing score for that landing.
- If the pilot obstructs another competitor attempting to land at a landing marker penalties will apply.

Scoring

Same as 3.A3 plus precision points as 3A2

~~$$\text{Pilot score} = \left(400 \times \frac{NBp}{NBMax}\right) + (250 - T) + Bto + \left(200 \times \frac{Bld}{BldMax}\right)$$~~

~~Where, according to briefing;~~

~~Either:~~

~~NBp = The number of ground markers and/or turn points a pilot collects in the task~~

~~NBmax = The maximum number of markers and/or turn points collected in the task~~

~~OR~~

~~NBp = the distance flown by the pilot in the task.~~

~~NBMax = the maximum distance flown in the task.~~

~~AND~~

~~T = The total difference in between pilot's estimated and actual times for all timed sectors. (>=250 = 250)~~

~~Bto = Pilot's takeoff score~~

~~Bld = Pilot's landing points~~

~~BldMax = The maximum number of landing points achieved in the task.~~

3.A5 NAVIGATION OVER A KNOWN CIRCUIT

Follow a known circuit, finding markers or identifying ground features from photographs and locating their positions on a map or crossing hidden gates.

It may be required to distinguish between on-track and off-track markers and ground features.

There may be timing gates to take times if part of the task must be evaluated for time precision or for speed.

The task may finish with an outlanding.

Summary

Competitors will be given:

A series of headings to follow or lines drawn on a map or a description of the procedure to draw them.

The location of a start point (SP) before which no markers, ground features or gates will be found.

The time at which they must overfly the start point.

The location of a finish point (FP) after which no markers or ground features will be found.

Photos of any ground features or description of canvas markers to be identified.

If the task is to contain a speed prediction element before takeoff the competitor must either:

Declare the ground speed at which he plans to fly, or

Select a ground speed from those specified at the briefing, or

Declare crossing times at certain turn points.

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 scoring.

Safety

During the task competitors must not back track along the track line against the direction of the task. If there is a need to backtrack competitors must leave the track line and fly back well clear of it before rejoining the track line at an earlier point.

Scoring

It is a navigation task so the number of turn points validated and precision by the pilot will fix the results. In case of equalities the time will separate pilots, the fastest will be the first. (the 1st = 35pts, 2nd = 30pts, 3rd = 27pts, 4th = 25pts, 5th = 24pts, 6th = 23pts.....)

Spatial precision:

~~Vh = Value assigned to crossing a hidden gate or properly placing a mark on the map (e.g. 100)~~
Nh = Number of hidden gates correctly crossed or
properly placed marks on the map (less than 2 mm error).
Markers placed between 2 and 5 mm error score ½ point.
More than 5 mm score zero.
Out of track marks score zero.
~~Qh = Vh * Nh~~

Time precision (when included in the task):

~~Vt = Gate value (e.g. 180)~~
Ei = Absolute error in seconds in gate i.
Maximum error is Vt.
Time gates not crossed do not add error.
~~Qt = ∑ (Vt - Ei) (sum of gate value minus time error each gate crossed)~~

Speed (when included in the task):

~~Vs = Relative value for the speed term~~
S = Pilot's speed in the speed section
~~Qv = Vs * S / Smax~~

~~Total: Q = Qh + Qt + Qv P = 1000 * Q / Qmax~~

Penalties

Each photo or marker correctly identified and located on the map to within 2mm and any ground speed element will score as briefed. The following penalties will apply:

Takeoff deck penalty: 20%

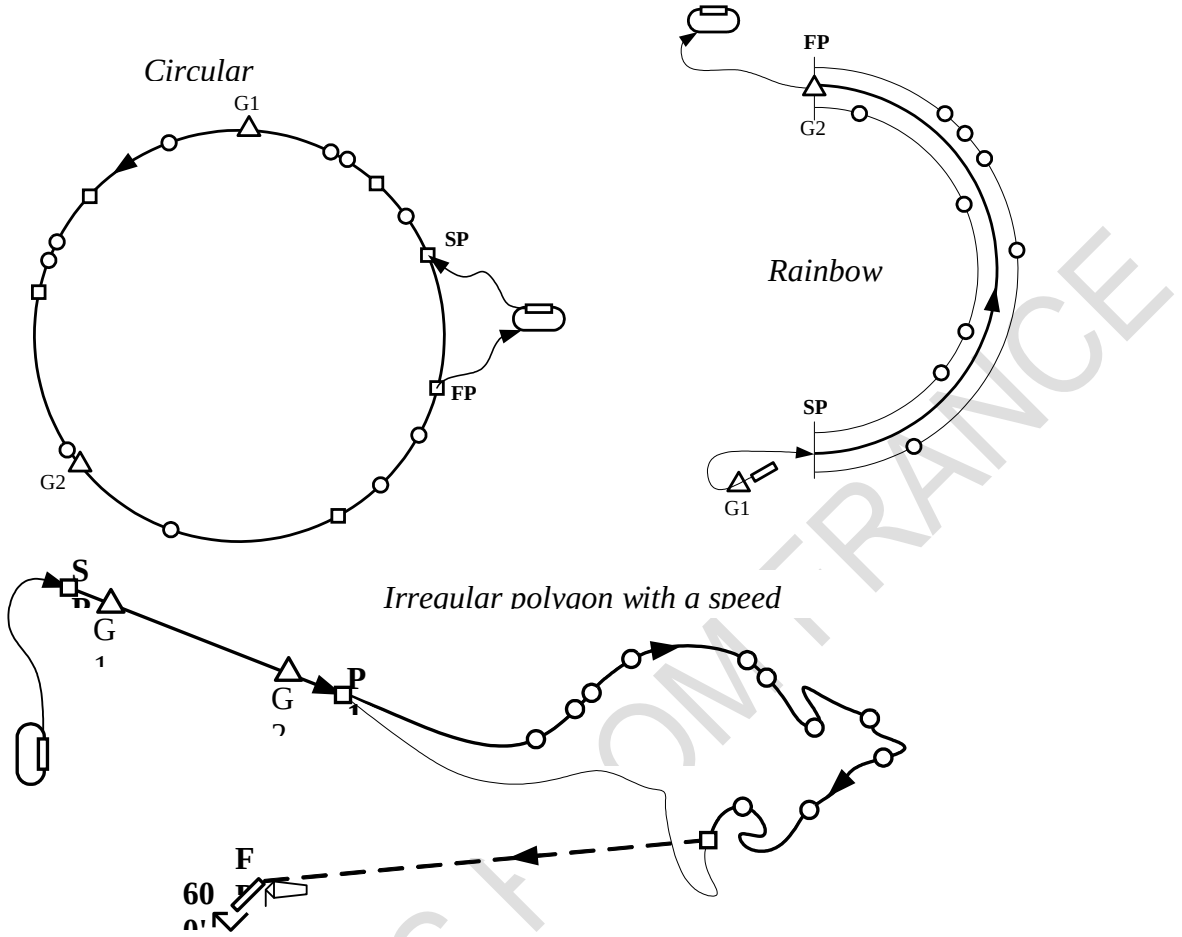
Landing deck penalty: 20%

Backtracking against the task direction or crossing a hidden gate backwards: 100%

Breach of Quarantine: 100%

Crossing a hidden gate twice invalidates the gate.

Examples



3.A6 NAVIGATION WITH UNKNOWN LEGS

Follow a series of headings or known lines, finding markers and identifying ground features from photographs, and locating their positions on a map or crossing hidden gates.

It may be required to distinguish between on-track and off-track markers and ground features.

Certain of the ground features or markers will indicate a change of heading or the start of a leg to another point.

There may be timing gates to take times if part of the task must be evaluated for time precision or for speed.

The task may finish with an outlanding.

Summary

Competitors will be given:

A series of headings to follow or lines drawn on a map or a description of the procedure to draw them.

The location of a start point (SP) before which no markers, ground features or gates will be found.

Details of which markers or ground features indicate a point from which a new line must be drawn.

The location of a finish point (FP) after which no markers or ground features will be found

Depending on the specific task design, competitors may be given:

Sealed instructions giving the location of next turn points or outlanding sites.

The time at which they must overfly the start point.

Photos of any ground features or description of canvas markers to be identified.

If the task is to contain a speed prediction element before takeoff the competitor must either:

Declare the ground speed at which he plans to fly, or;

Select a ground speed from those specified at the briefing.

Declare crossing times at certain turn points.

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 scoring.

Safety

During the task competitors must not back track along the track line against the direction of the task. If there is a need to backtrack competitors must leave the track line and fly back well clear of it before rejoining the track line at an earlier point.

Scoring

It is a navigation task so the number of turn points validated and precision by the pilot will fix the results. In case of equalities the time will separate pilots, the fastest will be the first. (the 1st = 35pts, 2nd = 30pts, 3rd = 27pts, 4th = 25pts, 5th = 24pts, 6th = 23pts.....)

Spatial precision:

~~Vh = Value assigned to crossing a hidden gate or properly placing a mark on the map (e.g. 100)~~
Nh = Number of hidden gates correctly crossed or
properly placed marks on the map (less than 2 mm error).
Markers placed between 2 and 5 mm error score ½ point.
More than 5 mm score zero.
Out of track marks score zero.
~~Qh = Vh * Nh~~

Time precision (when included in the task):

~~Vt = Gate value (e.g. 180)~~
Ei = Absolute error in seconds in gate i.
Maximum error is Vt.
Time gates not crossed do not add error.
~~Qt = ∑ (Vt - Ei) (sum of gate value minus time error each gate crossed)~~

Speed (when included in the task):

~~Vs = Relative value for the speed term~~
S = Pilot's speed in the speed section
~~Qv = Vs * S / Smax~~

~~Total: Q = Qh + Qt + Qv P = 1000 * Q / Qmax~~

Penalties

Each photo or marker correctly identified and located on the map to within 2mm and any ground speed element will score as briefed. The following penalties will apply:

Takeoff deck penalty: 20%

Landing deck penalty: 20%

Backtracking against the task direction or crossing a hidden gate backwards: 100%

Breach of Quarantine: 100%

Crossing a hidden gate twice invalidates the gate.

~~Spatial precision:~~

~~Vh = Value assigned to crossing a hidden gate or properly placing a mark on the map (e.g. 100)~~
~~Nh = Number of hidden gates correctly crossed or~~
~~properly placed marks on the map (less than 2 mm error).~~
~~Markers placed between 2 and 5 mm error score ½ point.~~
~~More than 5 mm score zero.~~
~~Out of track marks score zero.~~
~~Qh = Vh * Nh~~

~~Time precision (when included in the task):~~

~~Vt = Gate value (e.g. 180)~~
~~Ei = Absolute error in seconds in gate i.~~
~~Maximum error is Vt.~~
~~Time gates not crossed do not add error.~~
~~Qt = ∑ (Vt - Ei) (sum of gate value minus time error each gate crossed)~~

~~Speed (when included in the task):~~

~~Vs = Relative value for the speed term~~
~~S = Pilot's speed in the speed section~~
~~Qv = Vs * S / Smax~~

~~Total: Q = Qh + Qt + Qv P = 1000 * Q / Qmax~~

~~Penalties~~

~~Each photo or marker correctly identified and located on the map to within 2mm and any ground speed element will score as briefed. The following penalties will apply:~~

~~Take-off deck penalty: 20%.~~

~~Landing deck penalty: 20%.~~

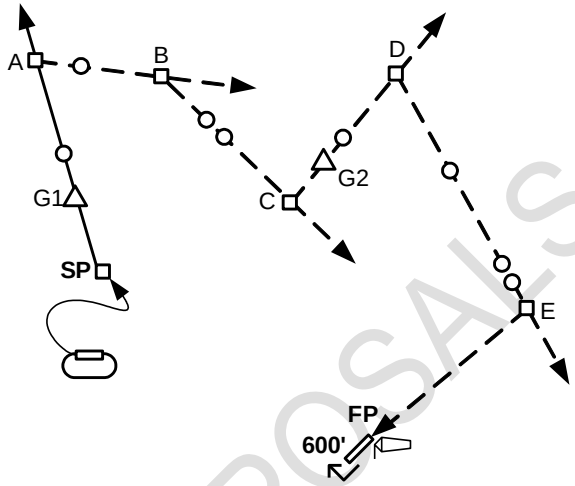
~~Backtracking against the task direction or crossing a hidden gate backwards: 100%~~

~~Breach of quarantine: 100%~~

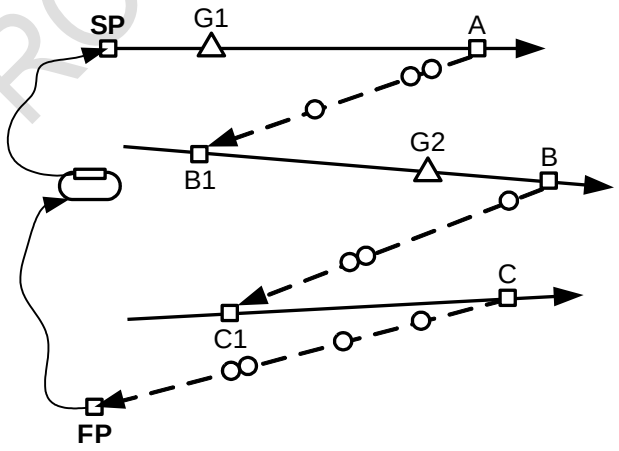
~~Crossing a hidden gate twice invalidates the gate.~~

~~A penalty will be specified for braking an envelope seal.~~

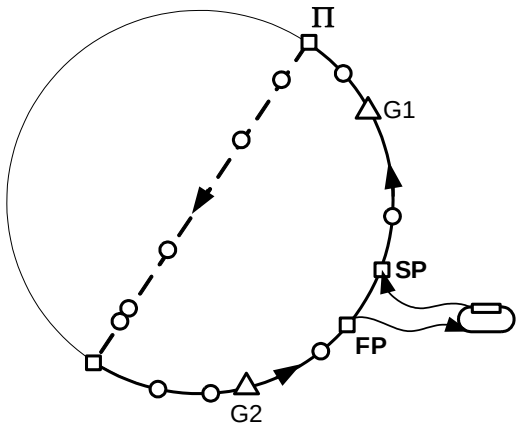
Examples



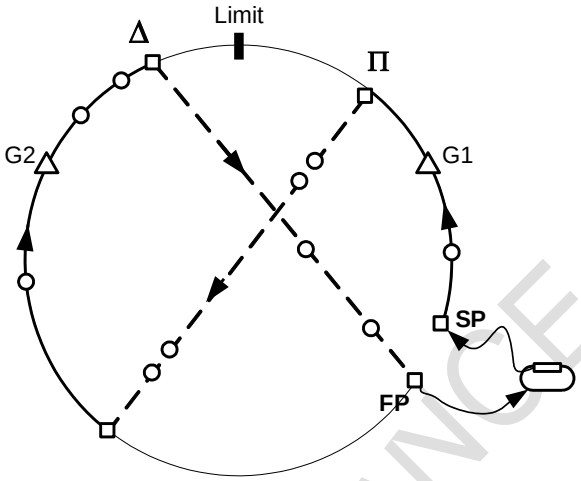
Sequential navigation



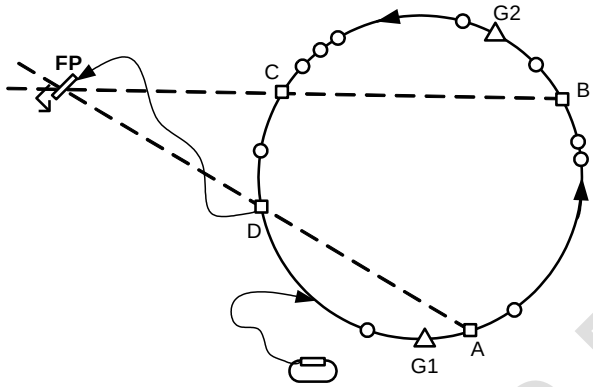
Linear navigation



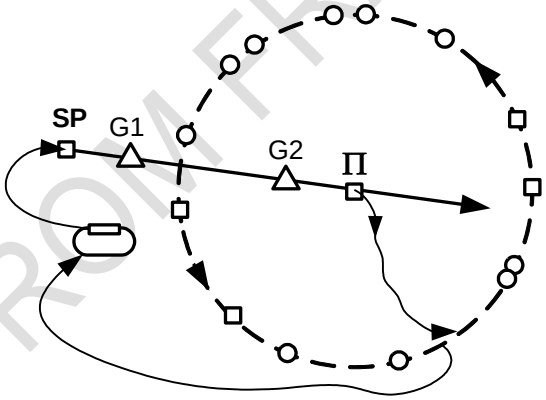
Circular navigation and diameter



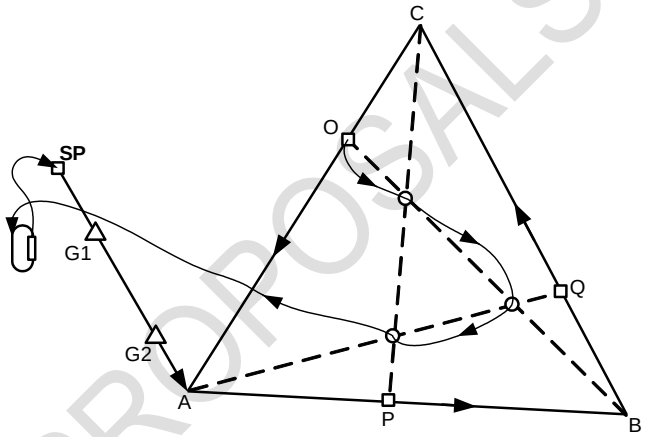
Circular navigation, diameter and reverse.



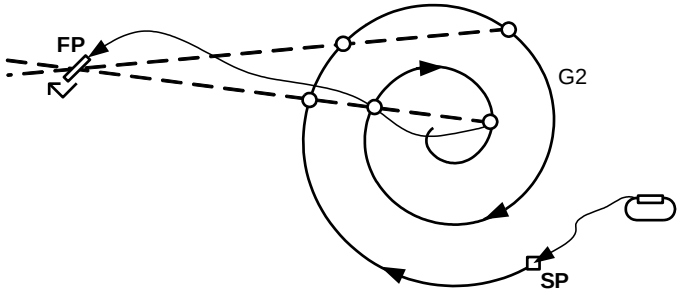
Circle and two lines



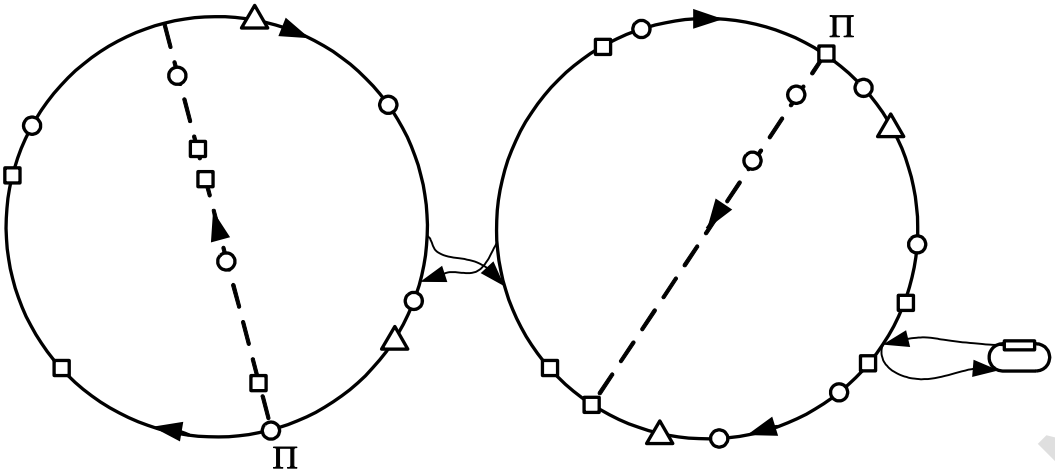
Drawn circular navigation



Triangle and three lines



Speed spiral and two lines



Double circular navigation

3.B1. PURE ECONOMY

Objective

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

Special rules

- Free take-off within the time window.
- Departure from view of the marshals or egress from the permitted flight area will incur penalties.
- Land outside the airfield boundary: Score zero. Land inside the airfield boundary but outside the deck: 20% penalty.

Scoring

it is an economy task the longest time will fix the results

$$\text{Pilot score} = 1000 \times \frac{Tp}{Tmax}$$

Where:

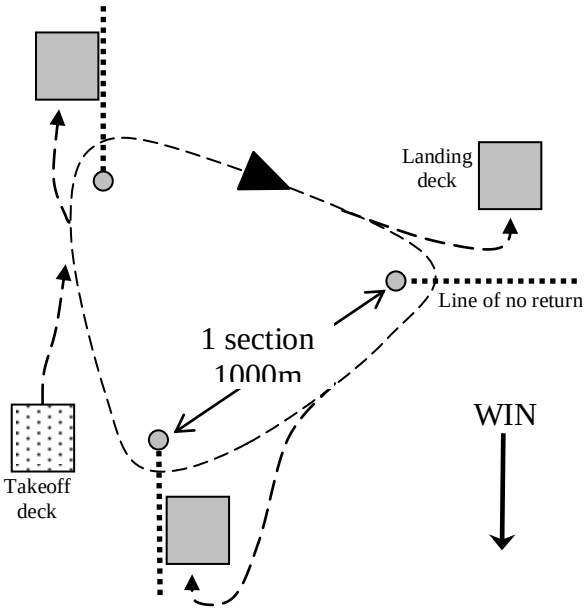
Tp = The pilot's time,

Tmax = The longest time taken to complete the task

3.B2 ECONOMY & DISTANCE

Objective

To take off from the deck with a given quantity of fuel, fly as many sections as possible around a course of one or more sections and land in a landing deck.



Description

Each section must be approximately 1Km in length and must contain a landing deck. Lines of no return are arranged to prevent aircraft flying in the reverse direction to the general flow of traffic.

Special rules

- Pilots must not exceed 200ft height at any time.
- Exceeding the height limitations or failure of the complete aircraft to round a pylon does not score that section.
- Pilots should overtake on the outside of the course, they may overtake on the inside but will not score that section if the manoeuvre is considered to be overly aggressive.
- If the pilot or any part of his paramotor touches the ground during the task and takes off again, score zero.
- Flying back across a 'line of no return' score zero.
- Failure to land in a landing deck: 20% penalty.

Scoring

Ithe number of whole sections completed by the pilot will fix the results. In case of equalities the times will separate the pilots and As it is an economy task the longest time will fix the results

~~Pilot score = $1000 \times \frac{Lp}{Lmax}$~~

~~Where:~~

~~Lp = The number of whole sections completed by the pilot~~

~~Lmax = The maximum number of whole sections achieved in the task.~~

3.B3 ECONOMY & NAVIGATION

Objective

To take off with a given quantity of fuel and locate an unknown number of markers within defined sectors and return to the deck.

Description

Each sector will contain a given IP (initial point) and a FP (finishing point) which may be a turn point, marker or gate. The pilot flies a given track between the IP and FP. An unknown number of markers may be distributed along the track.

Special rules

- Outlanding: Score zero.

Scoring

$$\text{Pilot score} = 1000 \times \frac{NBp}{NBmax}$$

Where:

NBp = The number of ground markers and/or turn points a pilot collects in the task

NBmax = The maximum number of markers and/or turn points collected in the task

~~**3.B4. ECONOMY & PRECISION**~~

~~**Objective**~~

~~To make a clean take-off in the time window with a given quantity of fuel, stay airborne as long as possible within a defined area and land on landing markers situated within the deck before the end of the time window.~~

~~**Special rules**~~

~~- The pilot scores 300 bonus points for a clean take off at the first attempt, 200 for the second, 100 for the third, zero for any attempts thereafter.~~

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

~~- When landing, If the pilot elects to switch off his engine at least 5m above a marker and:~~

~~Makes a first touch on the marker: Landing bonus: 200 points~~

~~- If the pilot elects to not switch off his engine and:~~

~~Makes a first touch on the marker: Landing bonus: 50 points~~

~~- If the pilot falls over as a result of the landing: zero landing bonus.~~

~~- If the pilot obstructs another competitor attempting to land at a landing marker penalties will apply.~~

~~**Scoring**~~

~~$$\text{Pilot score} = \left(500 \times \frac{Tp}{Tmax}\right) + Bto + Bld$$~~

~~Where:~~

~~TP = The pilot's time~~

~~Tmax = The longest time taken to complete the task~~

~~Bto = Takeoff bonus points~~

~~Bld = Landing bonus points~~

3.B5 SPEED TRIANGLE AND OUT AND RETURN

Objective

With limited fuel, to fly around a circuit in the shortest possible time, return to the deck, and then, with the pilots remaining fuel fly in a given direction as far as possible and return to the deck.

Description

Fuel quantity allowed: (Suggested: 6 litres)

Part 1: Speed; The pilot take off time is noted. The pilot flies to one or more turnpoints and returns to the deck where he is timed.

Part 2: Distance; The pilot then flies in a given direction to a point of pilot choice and returns to the deck.

Special rules

- Land out before completing part 1: Score zero.
- Land out before completing part 2: Score zero for part 2.
- Failure to takeoff or land entirely in the deck: 20% penalty.

Scoring

For the speed triangle : It is a speed race thus only the time will fix the results. The pilots will be classified according time(the 1st = 35pts, 2nd = 30pts, 3rd = 27pts, 4th = 25pts, 5th = 24pts, 6th = 23pts.....)

For the distance : the maximum distance will fix the results. The pilots will be classified according to the distance (the 1st = 35pts, 2nd = 30pts, 3rd = 27pts, 4th = 25pts, 5th = 24pts, 6th = 23pts.....)

Pilot score = $\left(500 \times \frac{tMin}{tp}\right) + \left(500 \times \frac{dp}{dMax}\right)$

Where:

tp = the pilot's time,

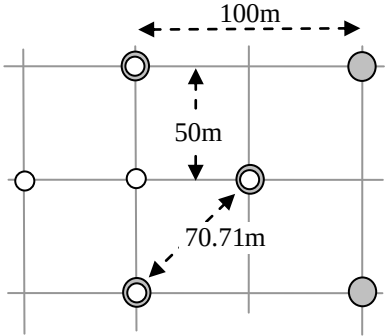
Tmin = The best time (Part 1)

dp = the pilot's distance

dMax = the greatest distance (Part 2)

A note about Paramotor precision tasks

Most precision tasks with slalom poles and/or pylons are designed to be run in either a 50m grid, a 70.71m grid or a 100m grid. It is then convenient for the organizer to set up the task area according



to the grid in the drawing which gives the maximum flexibility in any wind direction with the minimum of hole-digging.

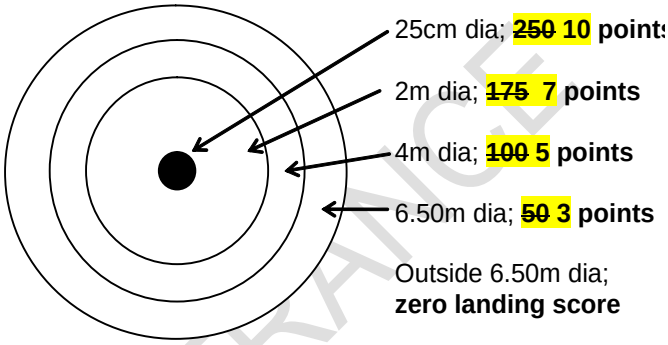
3.C1. PRECISION TAKE-OFF AND LANDING

Objective

To make a clean take off at the first attempt in the deck, and subsequently land as near as possible to a target.

Description

The pilot is permitted four takeoff attempts, climbs to 500ft overhead the target, cuts the engine before passing through a gate and tries to make a first touch as near as possible to the centre of a target consisting of:



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

Special rules

- The pilot scores ~~250~~ 10 points for a clean take off at the first attempt, ~~170~~ 7 for the second, ~~90~~ 5 for the third, zero for the fourth.
- The circuit to be flown will be detailed at briefing.
- The first touch of the ground by the pilot's foot (PF) or the aircraft wheels (PL) is the point from which the pilot's score will be derived. A first touch on the line scores the higher score. When more than one PL wheel touches simultaneously, the point chosen is the one in favour of the pilot.
- Contestants will be awarded a zero score if the pilot or any part of the aircraft touching the ground outside the deck while undertaking the task.
- Contestants will be awarded a zero landing score for:

Engine not stopped before the gate.

Gate not passed correctly.

Falling over as a result of the landing.

Scoring

Pilot score = (Bto + Bld)

Where:

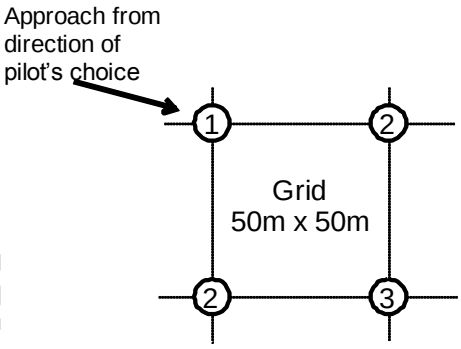
Bto = Takeoff points

Bld = Landing points

3.C2 THE FOUR STICKS

Objective

This task is intended as a small break task between elements of an overall task.



Description

There are 4 standard kicking sticks set at the corners of a 50m x 50m square. The pilot must kick 3 of the 4 sticks. The first stick the pilot kicks may be any of the 4 sticks. The third stick the pilot kicks must be diagonally opposite the first, the second stick may be either of the two other sticks.

Special rules

- If this task is used to take a time for the purposes of an element of the overall task then the time shall be taken the moment the pilot strikes the first stick.
- The pilot may have as many attempts as necessary at striking the first stick.
- Only ONE attempt is allowed at kicking both the second and third sticks.
- There shall be one group of 4 sticks for every 15 competitors in the task.
- On approach to the task, pilots should choose a "free" group of sticks. However if, in the opinion of the marshals on duty a conflict with another aircraft existed (depending on the overall task, for example if there is a timing involved) both should kick only one stick and then depart on the rest of the overall task. Both pilots will then be given the opportunity to have ONE further attempt at this task as soon as possible after the end of the overall task.

Scoring

The scoring should be integrated into the overall task as NQ. If the pilot fails to kick either the second or third stick then for each stick then the penalty shall be no more than 5% of the overall task score.

3.C3 PRECISION TAKE-OFF AND LANDING

Objective

To make a clean take off at the first attempt in the deck, and subsequently land as near as possible to a target which is:

- A point for PF1 and PF2 classes
- A 5 m long line marked on the ground perpendicular to the wind direction for PL1 and PL2 classes.

Description

The pilot is permitted four takeoff attempts, climbs to 500ft overhead the target, cuts the engine before passing through a gate and tries to make a first touch as near as possible to the centre of a target.

Special rules

- The pilot scores ~~250~~ 10 points for a clean take off at the first attempt, ~~170~~ 7 for the second, ~~90~~ 5 for the third, zero for the fourth.
- The circuit to be flown will be detailed at briefing.

- The first touch of the ground by the pilot's foot (PF) or the aircraft wheels (PL) is the point from which the pilot's score will be derived. When more than one PL wheel touches simultaneously the point chosen is the one in favour of the pilot.

The pilots will be classified according to the distance (in cm) to the target(the 1st = 35pts, 2nd = 30pts, 3rd = 27pts, 4th = 25pts, 5th = 24pts, 6th = 23pts.....)

- Zero score if the pilot or any part of the aircraft touches the ground outside the deck while undertaking the task.

Contestants will be awarded a zero landing score for:

- Engine not stopped before the gate.
- Gate not passed correctly.
- Falling over as a result of the landing.

Scoring

Pilot score = $\text{Bto} + \left(250 \times \frac{\text{Dp}}{\text{Dmin}}\right)$

Where

Bto = Pilot's takeoff score.

Dmin = x - the closest distance to the target achieved by any pilot.

Dp = x - the pilot's distance to the target (> x m = zero landing score).

The value of x, in metres will be given at briefing but may be between 10 and 25 metres depending on the meteorological conditions. This outer zone should be marked by cones or some other visual indication in the form of:

- A circle for PF1 and PF2 classes,
- Two 5m long lines parallel to the target for PL1 and PL2 classes.

~~3.C4 SHORT TAKE-OFF OVER A FENCE~~

~~Objective~~

~~To take off and clear a fence from as short a distance as possible. This task is intended to be included as a small element of another task.~~

~~Description~~

~~A fence 2m high and 10m long is manoeuvred into a position of pilot choice.~~

~~When takeoff permission is granted, pilots takes off and tries to fly over the fence. Maximum distance of pilot's feet on the ground to the fence is scored.~~

~~Special rules~~

- ~~If the pilot's feet have not left the ground and the line of the fence is not reached at the first attempt then one second attempt is permitted.~~
- ~~Zero fence score for breaking the fence or weaving.~~

~~Scoring~~

~~The scoring should be integrated into the overall task scoring as F. If the pilot fails to clear the fence then the penalty shall be no more than 10% of the overall task score.~~

~~Pilot score = $100 \times \left(\frac{\text{Fmin}}{\text{Fp}}\right)$~~

~~Where~~

~~Fmin = The shortest distance in metres for a takeoff over the fence~~

~~Fp = The pilot's takeoff distance to clear the fence.~~

~~Notes~~

~~A fence may simply be 2 kicking sticks with a plastic tape between.~~

~~To prevent unnecessary delay the fence should only be brought to the pilot when he is ready to take off.~~

~~The pilot should not be told the distance he is from the fence, the distance should be at the sole visual judgement of the pilot.~~

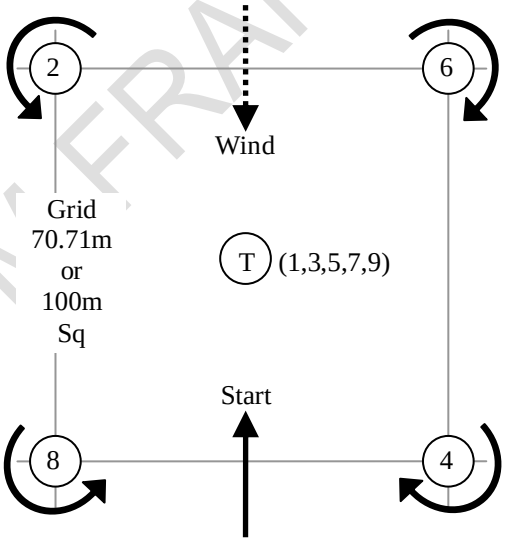
~~The distance measured is the maximum distance the pilot is away from the fence whilst touching the ground, thus if the pilot steps away from the fence during launch then this distance shall be included.~~

~~The job of holding the two poles supporting the fence can be quite hazardous; it should be entrusted to marshals experienced in PF operations.~~

3.C5 PRECISION CIRCUIT IN THE SHORTEST TIME ('Clover leaf slalom')

Objective

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



Description

4 pylons 2m in height are laid out

- At the corners of a 70.71m square for PF1 and PL1 classes.
- At the corners of a 100m square for PF2 and PL2 classes.

A fifth target is set at the centre of the square.

The pilot enters the course into wind and strikes the target T (strike 1). At this point the clock starts. The pilot flies around pylon 2 and returns to kick the stick T (strike 3), he then flies around pylon 4 and returns to kick the stick T (strike 5). This continues until all four pylons have been rounded. The clock stops when target T is kicked for the last time (strike 9).

Special rules

- A valid strike on the target T 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.
- To count as a strike, the pilot's body must be clearly seen to round each pylon and pylons 2 & 8 must be rounded in an ANTI CLOCKWISE direction and pylons 4 & 6 must be rounded in a CLOCKWISE direction.
- A strike on target 1 starts the clock, a strike on target 9 stops the clock.
- Pilots may have only one attempt at striking each target except for the first and last targets where three attempts at each are permitted.
- Failure to strike the first or last target or round at least one pylon or ~~touch the ground at any point between~~ them: score zero.
- The grid may be opened up to max. 100M at the briefing if the meterological conditions dictate.

Scoring

It is a speed race thus only the time will fix the results

All pilots having kicking all sticks will be classidied in first

Then all pilots having missing one stick will be classified

Then all pilots having missing 2 sticks will be classified, ect…

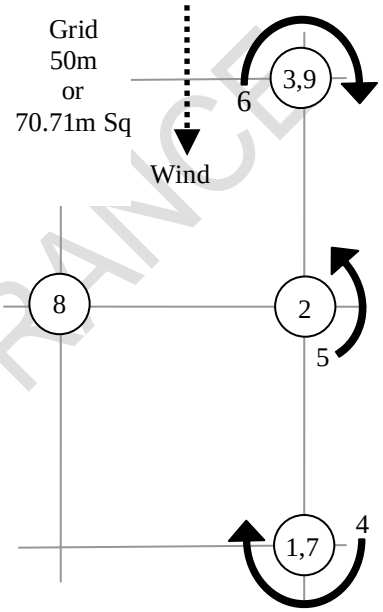
~~N = number of targets~~
~~T = time from first to last target~~

~~Q = N^3 / T~~
~~Pq = 500 * Q / Qmax~~
~~Ps = 500 – 30 * (T – Tpmin). Minimum Ps = 0; if N < 9, Ps = 0.~~
~~P = Pq + Ps~~

3.C6 PRECISION CIRCUIT IN THE SHORTEST TIME ('Japanese slalom')

Objective

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



Description

4 pylons 2m in height are laid out on

- On a 50 m x 50 m grid for PF1 and PL1 classes,
- On a 70,71 m x 70,71 m grid for PF2 and PL2 classes.

The pilot enters the course into wind and strikes target 1. At this point the clock starts. The pilot then strikes targets 2 and 3. He then returns to fly clockwise around target 1 (strike 4), anticlockwise around target 2 (strike 5) and clockwise around target 3 (strike 6). He then returns to strike target 1 (strike 7), target 4 (strike 8) and target 3 (strike 9). The clock stops when target 3 (strike 9) is kicked.

Special rules

- A valid strike on a target 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.

- When targets are acting as pylons, to count as a strike, the pilot's body must be clearly seen to round it, pylons 1 & 3 must be rounded in a CLOCKWISE direction and pylon 2 must be rounded in an ANTI CLOCKWISE direction.
- A strike on target 1 starts the clock, a strike on target 9 stops the clock.
- Pilots may have only one attempt at striking each target except for the first and last targets where three attempts at each are permitted.
- Failure to strike the first or last target ~~or touch the ground at any point between~~ them: score zero.

Scoring

It is a speed race thus only the time will fix the results

All pilots having kicking all sticks will be classidied in first

Then all pilots having missing one stick will be classified

Then all pilots having missing 2 sticks will be classified, ect…

~~N = number of targets~~
~~T = time from first to last target~~
~~Q = N^3 / T~~
~~Pq = 500 * Q / Qmax~~
~~Ps = 500 – 30 * (T – Tpmin). Minimum Ps = 0; if N < 9, Ps = 0.~~
~~P = Pq + Ps~~

3.C7 PRECISION CIRCUIT IN THE SHORTEST TIME ('Chinese slalom')

Objective

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

Description

Between 6 and 12 targets are laid out on a course not exceeding 3Km in length. Targets are sticks.

The pilot enters the course into wind and strikes target 1. At this point the clock starts.

The pilot then flies the course to strike all the other targets in the given order, a strike on the last one stops the clock.

Special rules

- A valid strike on a target 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.

- A strike on target 1 starts the clock, a strike on the last target stops the clock.
- Pilots may have only one attempt at striking each target except for the first and last targets where three attempts at each are permitted.
- Failure to strike the first or last target or at least two of the intermediate targets ~~or touch the ground at any point between~~ them: score zero.

Scoring

It is a speed race thus only the time will fix the results

All pilots having kicking all sticks will be classidied in first

Then all pilots having missing one stick will be classified

Then all pilots having missing 2 sticks will be classified, ect…

~~N = number of targets~~
~~T = time from first to last target~~
~~Q = N^3 / T~~
~~Pq = 500 * Q / Qmax~~
~~Ps = 500 – 30 * (T – Tpmin). Minimum Ps = 0; if N < 9, Ps = 0.~~
~~P = Pq + Ps~~

~~Note to Director: This task is ideally suited for sites where there are physical features which obscure a direct view from one target to the next.~~

3.C8 FAST / SLOW SPEED

Objective

To fly a course as fast as possible and then as slow as possible (or vice versa).

Description

A straight course consisting of four equally spaced 'kicking sticks' between 250m and 500m long is laid out facing approximately into wind.

The course shall be flown twice. The order will be briefed (fast then slow or slow then fast).

The pilot makes a timed pass along the first course, returns to the start, and makes a second timed pass in the same direction.

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

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.

- For each course, the clock starts the moment the pilot kicks the first stick and stops the moment he kicks the fourth stick.
- The pilot may have 3 attempts at kicking the first stick on each run.
- If the pilot misses the second or third stick then he is considered 'too high', penalty 50% course score for each stick missed.
- The maximum time allowed for a pilot to complete each course is 5 minutes.

In the slow course;

- If the pilot or any part of his paramotor touches the ground or the fourth stick is missed: Vp2 = null and Ep = zero
- If the pilot zigzags: Score zero.

In the fast course;

- If the pilot or any part of his paramotor touches the ground: Vp1 = zero and Ep = zero
- The pilot may have three attempts at kicking the fourth stick.

Score

The best pilot is the pilot with the greatest difference in time between the slow and the fast course. Time is taken with the most accurate unit (1/10 in case of manual timing, 1/100 in case of electronic timing)

$$\text{Pilot score} = \left(125 \times \frac{Vp_1}{Vmax}\right) + \left(125 \times \frac{Vmin}{Vp_2}\right) + \left(250 \times \frac{Ep}{EMax}\right)$$

Where:

Vmax = The highest speed achieved in the fast course, in Km/H

Vp1 = The speed of the pilot in Km/H in the fast course.

Vmin = The lowest speed achieved in the slow course, in Km/H

Vp2 = The speed of the pilot in Km/H in the slow course.

Ep = The difference between the pilot's slowest and fastest speeds, in Km/H

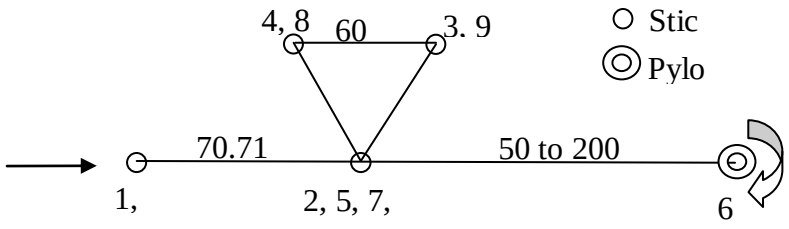
Emax = The maximum difference between slowest and fastest speeds, in Km/H

3.C9 ROUND THE TRIANGLE

Course description

The course consists of 4 sticks to be kicked and another stick or pylon as a turn point.

The distance from stick 1 to 2 is 80 m, the side of the equilaterlal triangle is 60 m, and the distance between stick 2 to turnpoint 6 is 50 to 200 m.



Flying the course

The pilot enters the course as indicated by the arrow and strikes the first target (strike 1). At this point the clock starts. The pilot flies kicking the sticks in the triangle (strikes 2, 3, 4 and 5), then ckockwise around pylon 6, returns to kick the sticks in the triangle (strikes 7, 8, 9 and 10) and then back to the initial stick (strike 11) The clock stops on strike 11.

Detail rules

- A valid strike on a target 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 pilot's body must be clearly seen to round pylon 6 clockwise.
- Pilots may have only one attempt at striking each target except for the first and last targets where three attempts at each are permitted.

Scoring

It is a speed race thus only the time will fix the results

All pilots having kicking all sticks will be classidied in first

Then all pilots having missing one stick will be classified

Then all pilots having missing 2 sticks will be classified, ect…

~~N = number of targets (sticks or pylons). Nmax = 11.~~
~~T = time from first to last target~~
~~Q = N^3 / T~~
~~Pq = 500 * Q / Qmax~~
~~Ps = 500 – 30 * (T – Tpmin). Minimum Ps = 0; if N < 11, Ps = 0.~~
~~P = Pq + Ps~~

~~**Penalties.**~~

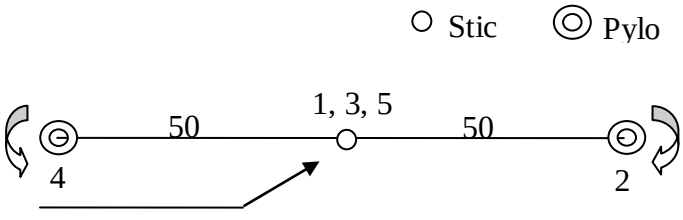
~~Touch the ground at any point between first and last strikes: Zero score.~~

~~Any part of the aircraft crosses the crowd line or dangerous flying: DSQ~~

3.C10 THE EIGHT

Course description

The courses consists of one central stick and another two sticks or pylons 50 m away on both sides.



Flying the course

The pilot enters the course as indicated by the arrow and kicks the stick (strike 1). At this point the clock starts. The pilot flies around the pylon aheado of him counterclockwise (strike 2), then kicks the stick (strike 3), then the other pylon clockwise (strike 4) and finally the kicks the stick for the last time (strike 5). The clock stops on strike 5.

If briefed, the course can be repeated twice, accumulationg a total of 9 possible targets.

Detail rules

- A valid strike on a target 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 pilot's body must be clearly seen to round the pylons clockwise or anticlockwise as indicated.
- Pilots may have only one attempt at striking each target except for the first and last targets where three attempts at each are permitted.

Scoring

It is a speed race thus only the time will fix the results

All pilots having kicking all sticks will be classidied in first

Then all pilots having missing one stick will be classified

Then all pilots having missing 2 sticks will be classified, ect…

~~Single course:~~

~~N = number of targets (sticks or pylons). Nmax = 5~~
~~T = time from first to last target~~
~~Q = N^3 / T~~
~~Pq = 250 * Q / Qmax~~
~~Ps = 250 – 30 * (T – Tpmin). Minimum Ps = 0; if N < 5, Ps = 0.~~
~~P = Pq + Ps~~

~~Courses repeated twice:~~

~~N = number of targets (sticks or pylons). Nmax = 9~~
~~T = time from first to last target~~
~~Q = N^3 / T~~
~~Pq = 500 * Q / Qmax~~
~~Ps = 500 – 30 * (T – Tpmin). Minimum Ps = 0; if N < 9, Ps = 0.~~
~~P = Pq + Ps~~

~~**Penalties.**~~

~~Touch the ground at any point between first and last strikes: Zero score.~~

~~Any part of the aircraft crosses the crowd line or dangerous flying: DSQ~~

~~3.C11 BOWLING LANDING~~

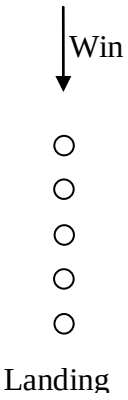
~~**Objective**~~

~~Land without engine, hitting as many pins as possible.~~

~~**Description**~~

~~5 pins are placed along a line into wind in the landing area at regular intervals between 1 and 2 m.~~

~~The pins are 50 cm high for PF classes and 100 cm high for PL classes and they are covered by dense foam. They can simply stand on the ground or can be attached to a spring system like that of the kicking sticks. A pin is said to be hit when it is clearly seen by a marshal or electronic sensor, or when the pin falls down.~~



~~Pilots will fly to 500ft and cut the engine before crossing a briefed gate.~~

~~They will fly a minimum of 60 seconds and will try to hit as many pins as possible before touching the ground. Each pin hit before touching the ground will score 50 points (maximum 250 points).~~

~~This task may be combined with a precision take-off.~~

~~**Scoring**~~

~~Pld = 50 points for each pin hit (maximum of 250 points)~~

~~**Penalties**~~

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

~~Flying less than 60 seconds with no engine: zero landing score.~~

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

3.N1 NOISE IN CLIMB

Objective

From a stationary position on the ground in front of a line and using a fixed throttle (and propeller pitch) setting of pilot choice, the pilot takes off and climbs in a straight line over a microphone set 300m distant from the line. The max noise in dBA of the aircraft is measured.

Special rules

- Weaving, failure to fly directly over the microphone, changing throttle or propeller pitch setting: Zero score.

Scoring

$$\text{Pilot score} = 500 \times \left(\frac{nMin}{nP} \right)$$

Where:

nMin = The minimum noise in dBA achieved in the class

nP = The noise achieved by the pilot in dBA

3.N2 MINIMUM NOISE IN LEVEL FLIGHT

Objective

To fly two legs of a course in opposite directions as quietly as possible.

Description

The course is between two points 300m apart and must be flown in a straight line at a height of 25ft (± 10ft), at a pilot selected constant throttle and propeller pitch setting. The microphone is positioned 100m offset from the centreline and equidistant from the two points.

Special rules

- Weaving, changing height, throttle or propeller pitch setting whilst in the course: Zero score for that run.

Scoring

$$\text{Pilot score} = \left(250 \times \left(\frac{nMin_1}{nP_1} \right) \right) + \left(250 \times \left(\frac{nMin_2}{nP_2} \right) \right)$$

Where:

nMin1 and nMin2 = The minimum noise in dBA achieved on each run in the class.

nP1 and nP2 = The noise achieved by the pilot in dBA on each run.

Annex 5 to SECTION 10

NOTES FOR DIRECTORS, INTERNATIONAL OFFICIALS AND OFFICIAL OBSERVERS

1. THE CHAMPIONSHIP DIRECTOR

The success or failure of an International Championship depends on the quality of its competition Director. A good Director will keep a championship together even with insufficient helpers and poor weather, but an inadequate Director can ruin the whole event even when supported by good staff and fine weather.

1.1 SELECTION OF A DIRECTOR

The Director of a championship is selected by the NAC (or delegated National Association) organising the event with the nomination approved by the Commission concerned.
If the Director cannot be named at the time of making a preliminary bid, it is essential that he should be in position at least one year ahead of the event. He must have enough time to look after all organisational aspects of the preparation, but may well have to make adjustments to his own life or work. This is often forgotten. Any financial and material support arrangements between the NAC and the Director should be finalised before the Director is expected to start work.
Sometimes confusion is caused by having more than one person in the organisation called director. The administration chief, for example, could be called Manager.
It should not need saying that the Director must have a wide experience of the sport, including having considerable knowledge of its technicalities, operation and needs. It is not enough for the Director ,just to be an excellent pilot.
The Director must want to do the job, be prepared for an immense amount of hard work, and have the health and stamina to complete it. Wanting to do the job means having affection for the sport and respect for the people who do it. This may seem obvious but in a recent championships the Director considered himself superior to the competitors and to the FAI rules and in another the Director made it known that he had no liking for the type of flying or the people involved. Both events ended with frustration and unhappiness.

1.2 WORK OF A DIRECTOR

The responsibility and work of a Director starts with his appointment and continues through the whole preparatory period, followed by 2-3 weeks of 24 hour a day responsibility - though hopefully not work. There will also be a clearing up period at the end.
If the championship is to succeed all its departments must complement each other and be efficiently run. This will involve many people in a big event so the initial planning has to be well thought through. This is the first job of the Director and includes:
a) Layout of the flying area, location of administration and reception offices, accommodation, car parks, social areas, workshops, stores etc so that they conveniently relate to each other. The championship site should be considered as a working village.
b) Deciding how work will be divided, into what departments, and deciding who will be in charge of each. For example, airfield marshals, observers and timekeepers, scorers, administration including production of score sheets and briefing notes as well as normal office work, technical officials, accountants, medical and SAR services, PR with local authorities and residents and the press, restaurant, bar, and social arrangements etc as required (S10 A2).
It is important for the Director to have a small and secluded personal office. It must be possible to have private talks with members of staff and VIPs etc, as well as having somewhere to keep spare clothes, cameras, etc.

1.3 DELEGATION

It is absolutely essential that the Director is willing and able to delegate. This means deciding on the best officials for the jobs and giving them responsibility. Officials and their helpers will also have to work hard and their reward is a successful and happy championship. A Director who tries to do all the work himself or who interferes unnecessarily prevents this. During the championship the Director should have time not only to keep a supervisory eye on the whole operation but to talk to competitors and interested visitors. For the whole championship period, plus any official practice days, the Director is on duty and will probably find each day longer than expected. For example, early morning task setting and weather assessment, attending evening jury meetings or helping sort out scoring computer breakdown at midnight. If he does not organise himself properly, he will, and many Directors have, become burnt out before the finish. it may seem simplistic but self organisation is about getting regular meals and enough sleep. A Director who walks about eating a sandwich in the afternoon because he missed breakfast and lunch, or who falls asleep on the scoring office floor at 2 am does no service to himself or the competition. The Director becomes a zombie and the organisation risks falling apart. It has happened.

1.4 THE DEPUTY DIRECTOR

Any wise Director will insist on having, and using, a Deputy Director. This person must be capable and available though need not be on duty to the same extent as the Director. The Deputy Director is not only an insurance, should the Director fall ill or have a personal emergency, but it is an extension of his eyes and ears, as well as looking after non-routine matters as the unexpected arrival of VIPs, arranging jury meeting paperwork, and ensuring that the prise giving takes place without problems.

2. THE INTERNATIONAL JURY

2.1 JURY OBJECTIVES

To apply the rules of the FAI Sporting Code General Section, Section 10 and the Local Regulations and come to a decision based on these rules as they are written. The "spirit" of the rules and of "sportsmanship" should not be considered if they conflict with the written rules and their intention.

2.2 PROCEDURE

The Jury should accept a protest, which must be in writing, only via the Director or Deputy Director. The protest must be given to the jury president although another jury member may accept it on his behalf.

2.3 Check with the Director that the protest was made within the permitted time limit, and that the Director has received and is holding the fee.

2.4 Read the protest carefully to ensure that it:

A) states the reason for the protest, and
B) states what the protester wants from the result.
If it is not clear what the protest is about, return it via the Director to the protester asking for clarification. If necessary give extra protest time (e.g.: 1 hour) for the protest to be rewritten. It is not possible to deal effectively with a protest which is just a general grumble against the organisers.
Remember that protests are made against a decision of the Director, so if he has not yet made one there are no grounds yet for a protest.

2.5 On accepting a protest the 3 jury members should:

A) Read it carefully,
B) Decide what rules are involved and read all of them carefully,
C) Agree the best way to deal with the protest.
This may involve interviewing witnesses, obtaining evidence from the Director, and/or studying papers, photographs and FR evidence. Since the competition has to continue while this is going on it may be sensible to see people separately rather than hold a formal "court" involving several key officials at the same time. However, it may be essential to see the Director and protester together and hear their evidence directly.
When the 3 jury members are agreed on how they want to handle the protest, they should arrange with the Director for a meeting with the officials and witnesses they wish to see.

If the Jury decides to hold a formal court, seats should be arranged for the Director to sit to one side and the protester to the other. Both should be allowed to bring an interpreter, or an expert witness of their own choosing to answer questions. The jury may itself require the presence of other officials, witnesses or papers.
There is no reason why the stewards should not be present as observers, used as information gatherers, or appear as witnesses.
When all the necessary evidence has been obtained the jury may either announce their decision, or end the meeting and on their own further consider the evidence and come to a decision. The jury decision shall be put in writing and signed by all 3 members. Copies shall be made for the 3 jury members, the Director, the protester, the notice board, and for the files.
If the protest is from the same country as one of the jury members it is usual for this member to abstain from any vote, and for this to be noted on the protest result.
The decision of the jury is final and applies for the remainder of the competition. If the NAC of the protester is unsatisfied, it may appeal to FAI, but this can be a long process. If the jury understands and interprets the rules properly and makes the correct decision it is extremely unlikely that the NAC will enter an appeal or that FAI would accept it.

2.6 PENALTIES

Unless a specific penalty for an offence is stated in the Local Regulations, the jury should study the penalty guidelines in the General Section and apply these appropriately without fear or favour. However, occasionally a penalty may be too severe for the circumstances. To take an example: it is normal that if a

pilot does not cross a finish line he will not receive speed points. But if he crossed with sufficient height and speed but just on or beyond the end of the line, because several other aircraft were crossing at the same time and he believed there was risk of collision, taking away all speed points is very harsh although the infringement took place.
In such a case the jury could look into any ameliorating circumstances very carefully. Should they find, for example, that the only reason for crossing just beyond the end of the line was because the collision risk was real, it would not be unreasonable to allow the speed points and consider the infringement as a technical offence. The penalty could be in accordance with the guidelines in the General section. The pilot would still lose points but fewer than the loss of all speed points. The protest would still be lost because the infringement had taken place and the protest fee would be forfeited, but the penalty would be more reasonable.

2.7 DISQUALIFICATION

The General Section guidelines are clear enough, but the Jury may have to decide whether disqualification should be for the rest of the competition or for only the day of the offence and/or the following day. (If, e.g., the pilot for any reason scored few or no points on the day of the infringement.)

2.8 OTHER WORK OF THE JURY

The jury has a commitment to ensure that the Director obeys the rules of the FAI and of the competition. If the jury finds that this is not the case, they are empowered, after warnings, to actually suspend or stop the event.
Detailed instructions of the Jury work and the Jury Presidents checklist is to be found in the FAI document “International Jury Members Hand Book.”
FINALLY, IT IS SENSIBLE FOR AT LEAST ONE JURY MEMBER TO CARRY ALL THE RULES, THE CONTEST AREA MAP, LIST OF COMPETITORS AND THE LATEST SCORE SHEETS AT ALL TIMES.

3 STEWARDS

Appointment & Qualifications: S10 4.9.

3.1 THE STEWARDS OBJECTIVES

Stewards are advisers to the Event Director. They watch over the conduct of the event and report any unfairness or infringement of the Rules and Regulations or behaviour prejudicial to the safety of other competitors or the public or in any way harmful to the sport. They assemble information and facts concerning matters to be considered by the International Jury. (GS 4.3.4.2)
As stewards should be able to easily communicate with the organizers and should be experienced in competing themselves, preferably in the types of aircraft being flown in the championships, then they are expected to provide independent advice to the organizers on 'normal practice' in the way tasks are designed and run and the interpretation of the rules, regulations and penalties.

3.2 THE STEWARDS' ROLE

To be effective a steward must:
1) Be aware that he has no formal power or authority to make decisions. His role is one of providing advice and/or SUPPORT to the Director, the International Jury, the Team Leaders AND the competitors.
2) Possess a thorough understanding of the FAI Sporting Code General Section, Section 10 and the Local Regulations and have these documents available at all times during the event. As he must advise the Director on rule interpretation, it is preferable that he has been present at the Commission meeting where the local regulations were approved. It is helpful if he has had experience in the interpretation of complex documents.
3) Be able to anticipate, and recognise in advance issues that may cause competitors to consider that they have not been treated fairly by the organiser. The steward should ensure that the information given to team leaders and competitors is unambiguous. He must be aware of difficulties created by language. He should ask himself "Was that briefing clear? How could the information be misinterpreted? Was the briefing consistent with the regulations? Were any changes, from what was required yesterday, clearly defined as different? Were all the items that were supposed to be covered, mentioned?" He should back up his judgement in these matters by enquiring of team leaders and/or competitors of their understanding. In addressing such issues he must not reduce the credibility of the Director.
4) Be prudent in answering questions from team leaders and competitors - His answers must be consistent with the rules and regulations and what the Director has stated, or will state at briefings. If the steward is unclear in any detail, he MUST confer with the Director.
5) Be able to establish a good working relationship with the Organisers, the team leaders and competitors. By recognising potential problems in advance he should take steps to avoid them

becoming issues. Many problems arise from a breakdown in communications. He should be aware of the strengths and weaknesses of the Director and his organisation.
6) Be experienced in sporting events at the highest level and the stress under which all involved operate. He must be sensitive to the human aspects.
7) Not take it for granted that all things are happening in accordance with the rules and/or the way they appear on the surface. He should be looking at the systems the organiser has in place to make sure that they are robust. "Are the scores being calculated correctly and is all the required information being presented in daily score sheets? How is FR data being checked? What security is in place to ensure that FR data cannot be tampered with? How are any official timepieces synchronised? What systems are in place to make sure a pilot's timings are always recorded?" These and a multitude of other questions should be asked continuously.
8) Be visible, watchful and observant. Take notes of incidents that may be unsafe or cause for complaint or protest. Record time of briefings, launch opening, complaints or protests being submitted. Be able to provide objective, accurate and factual evidence.

3.3 AFTER A CHAMPIONSHIP

For First Category Events, the FAI Secretariat shall be advised by the President of the Jury, within a maximum of eight days of the end of the event, of the number of protests made, together with the numbers of protests withdrawn, upheld or failed, and the respective Jury decisions. (GS 3.16.2.3)
The Stewards should review the event in writing, looking in particular at:
- Problems that arose;
- Situations that could have developed; and
- The successes of organiser and/or the organisation.

The Jury and Stewards should propose to their Commission modifications to the Sporting Code (or other documentation) so that for future championships problems are avoided (minimised), and successes repeated.

4. OFFICIAL OBSERVERS

4.1. AUTHORITY

Official Observers are appointed by a NAC (or its delegated National Association). They are empowered to control and certificate flights for FAI Records, Badges, Championships and Competitions in their own country and in another country if its NAC gives permission.

4.2. REGISTER

The NAC or its delegated National Association is responsible for keeping a register of its Official Observers, for providing briefing or instruction and ensuring that access to changes to the Sporting Code is available to them. The national register should be reviewed and updated at intervals of not more than 5 years.

4.3. QUALIFICATIONS

Official Observers must know the Sporting Code General Section and Section 10 and have the integrity to control and certificate flights without favour.
Official Observers may not act as such for any flight in which they are pilot or passenger or have a personal, financial or business interest. (Owning or part owning the aircraft is not of itself considered financial interest.). If in doubt the countersignature of an independent Official Observer should be obtained.

4.4. CONTROL

Control means observing of Take off, Departure, Finish and Landing; checking cameras and films, sealing, unsealing and download and/or print-out of barograph and FR data, and the signing of all certificates covering the evidence concerned for the flight.

4.5. CERTIFICATION

Official Observers may only certificate an event at which they were present, except that they may certificate an outlanding if they arrive soon afterwards and there is no doubt about the position of the landing.
Air Traffic Controllers on duty are considered Official Observers for observation of take off, start and finish lines, turn and control points and landing.
Championship officials are considered as Official Observers for a record or badge flight made during the event and for which the documentation is data used for scoring a valid task.
Independent witnesses may certificate an outlanding in the absence of an Official Observer. They must give their names, addresses, telephone numbers (if any) and state precisely the place and time of landing.
All certificates by people other than registered Official Observers must be countersigned as correct by the Official Observers controlling the flight.

4.6. SUSPENSION OR CANCELLATION OF AUTHORITY

The NAC may suspend or cancel the authority of an Official Observer for negligent certification or wilful misrepresentation.