



FAI Sporting Code

*Fédération
Aéronautique
Internationale*

Section 10 – Microlights and Paramotors

Class R

To Take Effect on 01 January 2016

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

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1 FAI Statutes, Chapter 1, para. 1.6
2 FAI Sporting Code, Gen. Section, Chapter 4, para 4.1.2
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 By-Laws, Chapter 1, para 1.2.1
6 FAI Statutes, Chapter 2, para 2.4.2.2.5
7 FAI By-Laws, Chapter 1, paras 1.2.2 to 1.2.5
8 FAI Statutes, Chapter 5, paras 5.1.1, 5.2, 5.2.3 and 5.2.3.3
9 FAI Sporting Code, Gen. Section, Chapter 4, para 4.1.5
10 FAI Sporting Code, Gen. Section, Chapter 2, para 2.2.
11 FAI Statutes, Chapter 5, para 5.2.3.3.7
12 FAI Statutes, Chapter 6, para 6.1.2.1.3

SPORTING CODE SECTION 10 - 2016 Edition

This document, the SPORTING CODE - SECTION 10, 2016 Edition, takes effect on the 1st January 2016
This edition differs from the previous edition in those paragraphs with a double vertical bar in the margin.

TABLE OF CONTENTS

CHAPTER 1		4
1.1	SECTION 10 SCOPE OF WORK	4
1.2	SECTION 10 AUTHORITY	4
1.3	DEFINITION OF A MICROLIGHT OR PARAMOTOR AIRCRAFT	4
1.4	TYPES OF MICROLIGHT AND PARAMOTOR AIRCRAFT	4
1.5	CLASSES OF MICROLIGHT AND PARAMOTOR AIRCRAFT	5
1.5.1	Organisation of class names.	5
1.5.2	Table of Microlight and Paramotor classes	5
CHAPTER 2, Diplomas and Badges		7
2.1	THE COLIBRI DIPLOMA (BL 7.11.1)	7
2.2	THE ANN WELCH DIPLOMA (BL 7.11.2)	7
2.3	COLIBRI PROFICIENCY BADGES	7
2.3.3	QUALIFICATIONS AND REQUIREMENTS	7
2.3.3.1	Bronze Colibri	7
2.3.3.2	Silver Colibri	7
2.3.3.3	Gold Colibri	7
2.3.3.4	Diamond Colibri	8
2.3.4	GENERAL CONDITIONS	8
2.3.5	CONTROL OF BADGE FLIGHTS	8
CHAPTER 3, Records		9
3.1	CLASSES	9
3.2	RECORD CATEGORIES IN EACH CLASS	9
3.3	AVAILABILITY OF RECORDS	9
3.4	GENERAL RULES FOR RECORDS	9
3.5	Special rules for distance in a straight line without landing.	9
3.6	Special rules for distance in a straight line without engine power.	9
3.7	Special rules for distance in a straight line with limited fuel.	10
3.8	Special rules for closed circuits.	10
3.9	Special rules for distance in a closed circuit without landing.	10
3.10	Special rules for distance in a closed circuit without engine power.	10
3.11	Special rules for distance in a closed circuit with limited fuel.	10
3.12	Special rules for altitude records.	10
3.13	Special rules for time to climb records.	10
3.14	Special rules for speed over a straight course.	11
3.15	Special rules for speed over a closed circuit.	11
3.16	RECORD CLAIM PROCEDURE	11
3.17	CHAMPIONSHIP RECORDS	11
CHAPTER 4, Championships		14
4.1	GENERAL RULES	14
4.2	PURPOSE	14
4.3	VALIDITY OF A CHAMPIONSHIP	14
4.4	CHAMPIONSHIP BIDS	14
4.5	PREPARATION MONITOR	14
4.6	COMPETITION DIRECTOR	14
4.7	GENERAL ORGANISATION	14
4.8	STATUS AND TIMING OF LOCAL REGULATIONS	15
4.9	ENTRY FEE	15
4.10	INTERNATIONAL JURY	15
4.11	RESPONSIBILITIES OF THE ORGANISER AND THE DIRECTOR	15
4.12	PROGRAMME AND FACILITIES	15
4.13	STEWARDS	16
4.14	NATIONAL TEAMS	16
4.15	TEAM LEADER RESPONSIBILITIES	16
4.16	PILOT AND NAVIGATOR QUALIFICATIONS	16
4.17	AIRCRAFT AND ASSOCIATED EQUIPMENT	17
4.18	INSURANCE	17
4.19	CONTEST NUMBERS	17
4.20	REGISTRATION	17
4.21	BRIEFING	17
4.22	TEAM LEADERS' MEETINGS	17

4.23	OPERATIONAL REGULATIONS	18
4.24	FLIGHT SAFETY	18
4.25	TEST OR OTHER FLYING	18
4.26	EXTERNAL AID TO COMPETITORS	18
4.27	ELECTRONIC EQUIPMENT	18
4.28	CHAMPIONSHIP CLASSES	19
4.29	CHAMPIONSHIP TASKS	19
4.30	START OF A TASK	19
4.31	FLYING THE TASK	20
4.32	OUTLANDINGS	20
4.33	FLIGHT BOUNDARIES	20
4.34	SCORING	20
4.35	COMPLAINTS	21
4.36	PROTESTS	22
CHAPTER 5, Control & Measurement		23
5.1	CONTROL OF FLIGHTS	23
5.2	MEASUREMENT	23
5.3	WEIGHT	24
5.4	FUEL	24
5.5	BAROGRAPHS AND FLIGHT RECORDERS	24
5.6	START AND FINISH GATES	24
5.7	GNSS FLIGHT RECORDERS IN CHAMPIONSHIPS	24

Annex 1 to SECTION 10: Conformation Requirements for Microlights: *See separate booklet*

Annex 2 to SECTION 10: Guide for Championship Organisers: *See separate booklet*

Annex 3 to SECTION 10: Model Local Regulations. *See separate booklet*

Annex 4 to SECTION 10: Task Catalogues for Microlight and Paramotor Championships. *See separate booklet*

Annex 5 to SECTION 10: Notes for Directors, International Officials, and Official Observers. *See separate booklet*

Annex 6 to SECTION 10: GNSS Flight Recorders and other electronic devices. *See separate booklet*

Annex 7 to SECTION 10: Model Local Regulations for Paramotor Slalom Competitions. *See separate booklet*

ABBREVIATIONS

CIMA: The Microlight and Paramotor Commission of the FAI.	A5: Sporting Code Section 10 Annex 5.
GS: FAI Sporting Code General Section.	A6: Sporting Code Section 10 Annex 6.
BL: FAI By-Laws.	A7: Sporting Code Section 10 Annex 7.
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

- 1.1.1 Section 10 of the Sporting Code deals with records, proficiency badges, world and continental championships and any other event approved by CIMA for Microlight and Paramotor aircraft.

1.2 SECTION 10 AUTHORITY

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

- 1.2.2 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

- 1.2.3 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
- 375 kg for a landplane specifically designed to be flown with two persons but flown solo in championships.
- 330 kg for an amphibian or a pure seaplane flown solo;
- 405 kg for an amphibian or a pure seaplane specifically designed to be flown with two persons but flown solo in championships.
- 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.

- 1.3.2 The MTOW described in 1.3.1 may be increased by 5% if the aircraft is equipped with a parachute system designed to bring the entire aircraft to the ground if it is deployed.

1.4 TYPES OF MICROLIGHT AND PARAMOTOR AIRCRAFT

- 1.4.1 A Microlight with movable aerodynamic control is a fixed wing powered aircraft with moveable aerodynamic surfaces for control.
- 1.4.2 A Microlight with weight-shift control is a flexwing powered aircraft with pilot weightshift as primary method of control
- 1.4.3 A Paramotor is a powered aircraft which has a wing without any rigid structure and is controlled via movable aerodynamic surfaces and pilot weightshift.
- 1.4.4 An Autogyro is a powered aircraft, which in flight, derives most of its lift from an autorotating rotor system not provided with any form of direct power drive.
- 1.4.5 A Landplane is an aircraft only capable of taking off and land on land, ice or snow.
- 1.4.6 A Seaplane is an aircraft only capable of taking off and landing on water.
- 1.4.7 An Amphibian is an aircraft capable of taking off and landing on water and land.
- 1.4.8 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.
- 1.4.9 A thermal powered Microlight or Paramotor is one with an engine that converts thermal energy to mechanical output, typically by burning a hydrocarbon fuel.

- 1.4.10 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
R	A = Movable aerodynamic control system W = Weight-shift control system P = Paraglider control system G = Autogyro	L = Landplane S = Seaplane M = Amphibian F = Foot-launched	1 = Flown solo 2 = Flown with two persons	E = Electric engine T = Thermal engine	m = Male f = Female

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
Autogyro / Landplane / Flown solo	RGL1
Autogyro / Landplane / Flown with two persons	RGL2

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 7.11.1)

- 2.1.1 This diploma may be awarded each year by the FAI on a proposal from CIMA to an individual or group who are considered to have made an outstanding contribution to the development of Microlight flying by their action, work, achievements, initiative or devotion.
- 2.1.2 Each active member of FAI may submit one candidate for consideration by CIMA which must reach the FAI Secretariat at least 45 days before the CIMA plenary meeting for inclusion in the agenda.. Only one diploma is awarded annually.

2.2 THE ANN WELCH DIPLOMA (BL 7.11.2)

- 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 and Paramotor aviation, but also of Gliding and Hang-gliding. She was instrumental in creating the FAI Microlight and Paramotor Commission (CIMA) and formulating the Microlight and Paramotor sporting code. She worked tirelessly for many years in the cause of Microlight and Paramotor sport flying.
- 2.2.2 Two Diplomas may be awarded each year, one to the pilot or crew of a Microlight and one to the pilot or crew of a 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.
- 2.2.3 A list of eligible candidates from the official FAI World Records database will be distributed in time before the Commission Annual Meeting for awards to be considered by Commission Delegates at the meeting.

2.3 COLIBRI PROFICIENCY BADGES

- 2.3.1 The FAI Colibri badges are standards of achievement that 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 that 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 or 3 precision landings with engine on in the landing deck, scoring at least 50 points during an official competition (A4 2.C1).
- c) 1 precision landing within 20m of the centre of a given spot from a height of 300m (1000ft) AGL with the throttle fully closed or 1 precision landing in the landing deck with engine stopped, scoring at least 50 points during an official competition.
- 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, or achieving a positive score in 2 navigation tasks flown in an official competition.

2.3.3.2 Silver Colibri

- a) 100 hours on Microlight or Paramotor aircraft including at least 200 flights.
- b) 2 flights to approximately 300m (1000ft) AGL, stop engine(s) complete a 360° turn and land within 5m of the centre of a given spot, or 2 precision landings in the landing deck with engine stopped, scoring at least 200 points during an official competition.
- 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), or achieving a positive score in 4 navigation tasks flown in an official competition.

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

2.3.3.4 Diamond Colibri

A CIMA award, with inauguration 1st January 1990, for an outstanding Microlight or Paramotor flying achievement. The following special conditions apply:

- a) Applicants or nominees must be qualified to at least silver badge standard.
- b) 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 during navigation tasks in an official competition and 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, or in an official competition the first touchdown with no damage to aircraft or pilot. Distance is measured from the touchdown/staydown point of the main wheels or, in the case of landings in a landing deck in an official competition, the first touchdown.
- 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
- 2.3.4.11 Evidence during official competitions shall be collected by FR records.

2.3.5 CONTROL OF BADGE FLIGHTS

- 2.3.5.1 Evidence shall be confirmed by the official observer or the FR record.
- 2.3.5.2 The number of flights and hours shall be by pilot declaration

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 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.

3.4 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 FR 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 FR 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 the FR trace is observed to pass through a quadrant (90° degree sector) on 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.
- 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 FR 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 FR 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 FR 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

- 3.16.1 The procedure for making World record claims is detailed in FAI General section, chapter 6.
- 3.16.2 Details are available at <http://www.fai.org/record-microlights-paramotors>
- 3.16.3 All forms and certificates must be signed or countersigned by the official observer(s) controlling the record attempt.
- 3.16.4 To be eligible as a World Record, the performance must have been recognized as a National record by the NAC concerned

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/cima-documents>
- 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:

$$\text{Elapsed time normalized to ISA sea level conditions, in seconds} = \frac{T_1}{0.5331359 \sqrt{\frac{P_1}{t_1 + 273}}}$$

Where

T1 = Actual pilot performance in seconds.

P1 = Ambient pressure in mb.

t1 = Ambient temperature in degrees Celsius.

- 3.17.6 Elapsed times (after normalization, if required), if less than five minutes shall be rounded down to the nearest 0.01 second, 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 PF2 & PL2: 4 Kg
 - Classes WL1 & AL1: 9 Kg
 - Classes WL2 & AL2: 13 Kg
- Distance measured is the distance flown without any intermediate landing in a straight line or around a course, and used in calculating the scoring.
- 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 PF2 & PL2: 4 Kg
 - Classes WL1 & AL1: 5 Kg
 - Classes WL2 & AL2: 8 Kg
- Time measured is the time flown by the pilot without any intermediate landing, and used in calculating the scoring.
- 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.

3.18 ABSOLUTE RECORDS

Absolute World Records represent the best World record performances from all classes of Microlights or Paramotors regardless of class.

Six Absolute World Records shall be awarded as follows:

3.18.1 FASTEST MICROLIGHT

The greatest speed achieved by a microlight in any speed related record category.

3.18.2 FASTEST PARAMOTOR

The greatest speed achieved by a paramotor in any speed related record category.

3.18.3 GREATEST MICROLIGHT DISTANCE (FURTHEST MICROLIGHT)

The greatest distance achieved by a microlight in any distance related record category.

3.18.4 GREATEST PARAMOTORÛ DISTANCE (FURTHEST PARAMOTOR)

The greatest distance achieved by a paramotor in any distance related record category.

3.18.5 HIGHEST MICROLIGHT

The greatest altitude achieved by a microlight in any altitude or height related record category.

3.18.6 HIGHEST PARAMOTOR

The greatest altitude achieved by a paramotor in any altitude or height related record category.

Note: New Absolute records are eligible for the De La Vaulx medal.

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

- 4.2.1 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 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, and must start a minimum of one 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 and at least one task of each type (navigation, economy, precision) has been valid.
- 4.3.3.1 For Slalom classes, the title of Slalom Champion shall be awarded only if there have been at least 3 valid tasks.

4.3.4 YOUNG PILOT'S TROPHY

In each Championship class may be established a special sub class for young pilots (crew) no older, than XX years (In two-seater classes both members must be younger than XX years). This subclass may be valid, if more than 3 crews from at least two countries will be registered and will start in the first task. The age will be judged by age at the opening ceremony date.

Note: XX shall be defined at CIMA meeting from 23 to 30

4.4 CHAMPIONSHIP BIDS

- 4.4.1 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.

4.5 PREPARATION MONITOR

- 4.5.1 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.

4.6 COMPETITION DIRECTOR

- 4.6.1 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.

- 4.6.2 Evidence of this experience shall be provided to CIMA in the form of a comprehensive CV supported by the NAC presenting the bid and verified by the CIMA Bureau or a nominated CIMA representative.

4.7 GENERAL ORGANISATION

- 4.7.1 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 Model Local Regulations, S10 A3)
- 4.7.2 The total period of the championships shall not exceed 14 days including the opening and closing ceremonies.

- 4.7.3 An official practice period of not less than 2 (1 for slalom) and not more than 5 (2 for slalom) days immediately preceding the opening of the championship shall be made available to all competitors. All the infrastructure for the competition (camping, maps, offices, scoring, slalom stadium...) 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 and the understanding of the rules by pilots. The scores thus generated shall not be counted.
- 4.7.4 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.
- 4.7.5 There will normally be a rest day only after 6 consecutive days flying, unless this day is the last one of the championship. The policy for rest days shall be declared by the director at the first briefing.
- 4.7.6 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. After the event, Team Leaders from winning teams may order extra FAI team medals for every member of their team.
- 4.7.7 The text engraved on each FAI medal shall be in either French or English according to the preference of the organizers

4.8 STATUS AND TIMING OF LOCAL REGULATIONS

- 4.8.1 Local regulations are the rules for a specific event prepared by the organisers. They must use the model document format in S10 A3 and any differences shall be listed separately and submitted to CIMA for approval at least one year before the event. The CIMA Approved 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.

4.9 ENTRY FEE

- 4.9.1 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.
- 4.9.2 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 CIMA Bureau. Only minor matters may be approved by this method. Local regulations and supplementary information must not conflict with the general rules.
- 4.9.3 Teams wishing to take advantage of the official practice period shall be able to register and get all items mentioned in S10 4.9.1 at least the day before the first official practice starts.
- 4.9.4 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.

4.10 INTERNATIONAL JURY

- 4.10.1 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 CIMA. The two other jury members shall be confirmed by CIMA.

4.11 RESPONSIBILITIES OF THE ORGANISER AND THE DIRECTOR

- 4.11.1 The NAC organising the championships shall appoint a championships director acceptable to CIMA not later than 6 months prior to the event. Any change of director must be approved by CIMA.
- 4.11.2 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 CIMA president (S10 A5, Notes for directors).
- 4.11.3 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.

4.12 PROGRAMME AND FACILITIES

- 4.12.1 The organisers shall provide all facilities necessary for the satisfactory operation of the championship, and circulate to each team leader the following information as a minimum, as far in advance as possible (S10 A2 & A3).

- Programme of the championship 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.

4.13 STEWARDS

- 4.13.1 The organisers shall appoint a minimum of 1 steward. If Microlights and Paramotors are competing in the same venue at the same time, there will be a minimum of 3 stewards.
- 4.13.2 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.
- 4.13.3 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.
- 4.13.4 At least 1 steward shall be present at each championship site or contest area throughout all operational activities (GS 4.3.4.2).

4.14 NATIONAL TEAMS

- 4.14.1 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.
- 4.14.2 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.
- 4.14.3 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.
- 4.14.4 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.
- 4.14.5 NAC's may enter one extra all female team crew per class above the maximum number stated by the organizer in the local regulations.
- 4.14.6 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.

4.15 TEAM LEADER RESPONSIBILITIES

- 4.15.1 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.

4.16 PILOT AND NAVIGATOR QUALIFICATIONS

- 4.16.1 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.
- 4.16.2 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.

4.17 AIRCRAFT AND ASSOCIATED EQUIPMENT

- 4.17.1 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.
- 4.17.2 Each competing aircraft must possess documentary evidence confirming it is legal to fly in its country of origin or in the country entering it or in the country of the organisers.
- 4.17.3 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.
- 4.17.4 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 aircraft is not exceeded, and that the certificate of airworthiness is not prejudiced.
- 4.17.5 An emergency parachute in Paramotors is not to be considered as a part of the structural entity.
- 4.17.6 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.
- 4.17.7 Competing aircraft in classes AL, WL and GL shall have a still-air range of not less than 250 km. Classes WF, PF and PL shall have a still-air range of not less than 100 km.
- 4.17.8 A WF or PF must be foot launched for all tasks.
- 4.17.9 If there is no separate class for aircraft with electric engines there shall be no fuel limit for them in any task.

4.18 INSURANCE

- 4.18.1 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).

4.19 CONTEST NUMBERS

- 4.19.1 The organisers shall allocate numbers or letters to each competing aircraft. Microlight classes shall normally display them on the underside of the right wingtip with the top of the numbers or letters towards the leading edge. Paramotor classes shall normally display them on the pilot's helmet and/or cage netting and also centrally on the underside of the canopy, top towards the leading edge.
- 4.19.2 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.
- 4.19.3 For Slalom competitions, the organiser shall allocate numbers to each competing aircraft which shall be displayed on the front and back sides of the cage.

4.20 REGISTRATION

- 4.20.1 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. The local regulations shall state the times of the opening and closing of the registration office.
- 4.20.2 After registration no changes of crew member or aircraft may be made.
- 4.20.3 Registration information may be available to team leaders on request until the start of flying on the first contest day.

4.21 BRIEFING

- 4.21.1 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. Any verbal amendments that are made to the printed task information during the briefing shall be published as an official update before the task window opens.
- 4.21.2 Briefings shall be recorded by notes, tape recorder or similar. Recordings shall be kept intact for not less than 6 months.
- 4.21.3 Flight safety requirements given at briefing shall carry the status of regulations.
- 4.21.4 Briefing may be postponed from the set time in the event of bad weather and further briefings given. This information must be prominently displayed.

4.22 TEAM LEADERS' MEETINGS

- 4.22.1 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.

4.23 OPERATIONAL REGULATIONS

- 4.23.1 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.
- 4.23.2 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 Paramotors.
- 4.23.3 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.
- 4.23.4 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 Paramotor may be replaced by a similar model or one of lesser performance.

Note. Change of major parts may incur a penalty.

- 4.23.5 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.

4.24 FLIGHT SAFETY

- 4.24.1 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, and in Paramotors is mandatory.
- 4.24.2 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.
- 4.24.3 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.
- 4.24.4 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.
- 4.24.5 During a navigation along a leg, competitors must not backtrack along the track line against the direction of the task. Backtracking is defined as flying with an angle of greater than 90 degrees in respect to the intended flight direction. This limitation is extended to the corridor defined by the width used to score gates in the task.
- 4.24.6 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.
- 4.24.7 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.
- 4.24.8 Aerobatics. Unauthorised aerobatics are prohibited.
- 4.24.9 Any infringement of any safety rule shall result in penalty.

4.25 TEST OR OTHER FLYING

- 4.25.1 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.

4.26 EXTERNAL AID TO COMPETITORS

- 4.26.1 The following limitations are so that, as far as possible, the contest shall be between individual competitors, neither helped nor controlled by external aids except when authorised in the Local Regulations.
- 4.26.2 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.
- 4.26.3 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.

4.27 ELECTRONIC EQUIPMENT

- 4.27.1 CIMA approved GNSS flight recorders and ELT's without voice transmission capability are permitted and may be carried. Sealed mobile phones, switched off, may be carried for use after landing or in an emergency. Only materials issued by the organizer, mathematical calculators without any capability for any data transfer, and clocks may be used for preflight preparation and flight control.

Unless otherwise briefed, then in the period between entering quarantine before flying a task and leaving quarantine after flying a task no other electronic devices with real or potential communication and/or navigation capabilities shall be available to, or accessed by the pilot or crew. Breaking of this rule may result in disqualification.

- 4.27.2 The director will establish a document-based method for sealing and unsealing that will enforce seal checking after each task.

4.28 CHAMPIONSHIP CLASSES

- 4.28.1 The championships shall be held in one or more of the championship classes (S10 1.5) as approved by CIMA.
- 4.28.2 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.
- 4.28.3 Each competing aircraft will be subject to inspection for compliance with class rules at any time during the championship.

4.29 CHAMPIONSHIP TASKS

- 4.29.1 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.
- 4.29.2 The tasks to be used shall be chosen from the Task Catalogue defined by the Director, based on the Master Task Catalogue, S10 A4. The Task Catalogue shall be approved by CIMA and precisely set out in the local regulations together with the method of scoring.
- 4.29.3 Tasks shall, as far as practicable, conform to the following guidelines in standard championships:
- For Microlight aircraft classes AL, WL WF and GL**
- A Tasks for flight planning, navigation, etc with no fuel limit: 55% of the total value of the tasks flown.
- B Tasks for fuel economy, speed, duration, etc with limited fuel: 30% of the total value of the tasks flown.
- C Precision tasks: 15% 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.
- 4.29.4 In "Precision championships" for Paramotors 100% of the tasks will be precision tasks.
- 4.29.5 The task for each class may be different and a task may be set for one class only.
- 4.29.6 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.
- 4.29.7 Where possible and practicable, the task director should try set an additional or alternative task at briefing for use, should the weather conditions change from those forecast at the time of the briefing.

4.30 START OF A TASK

- 4.30.1 The order in which competitors shall take-off shall normally be left free within an open window period, unless the specific requirements of the task dictate that it should be ordered, in which case it will be given at the briefing. Take offs shall normally be made from the marked deck.
- 4.30.2 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.
- 4.30.3 A competitor may return to the airfield within 5 minutes of take-off for safety reasons or in the event of a FR 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.
- 4.30.4 Pilots in Paramotors may have 3 attempts at take-off in tasks where the take-off order is given.
- 4.30.5 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.

4.31 FLYING THE TASK

- 4.31.1 Fuelling arrangements shall be given to competitors at first briefing.
- 4.31.2 A set course shall be flown in the direction specified at briefing.
- 4.31.3 Control at turn points shall be by FR.
- 4.31.4 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 FR evidence as given at briefing.
- 4.31.5 Take-offs and landings by Microlights in all tasks shall be completed within a 100 x 25 m landing deck, or for the task "Short take off and landing over obstacle", within a deck 150 m x 25 m. Aircraft not capable of taxiing unaided from the deck after landing score zero. Landing provisions in the case of an emergency shall be specified at briefing. Failure to comply with instructions regarding emergency shall incur a penalty.
- Deck length shall be corrected for altitude at the rate of a 7% increase for every 300m of elevation, rounding the result to the nearest integer metre. The width of the deck may be decreased to be adjusted to the width of the existing runway (S10 4.31.5).
- 4.31.6 Precision landing tasks and their control shall be detailed in the local regulations.
- 4.31.7 The official map, or partial copies of it, is the only one allowed to be used or carried to fly the tasks or to be consulted in quarantine prior to or after a flight.

4.32 OUTLANDINGS

- 4.32.1 Evidence of the landing place must be obtained from FR 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 the pilot not being scored for the task, or charged for any rescue services which have been called out, or disqualification.
- 4.32.2 After landing, a Paraglider canopy must be folded to indicate that the pilot does not need help.

4.33 FLIGHT BOUNDARIES

- 4.33.1 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.
- 4.33.2 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.

4.34 SCORING

- 4.34.1 The scoring system to be used shall be approved by CIMA and attached to the local regulations. The scoring must be performed by strictly applying the procedures and formulas found in the approved task catalogue.
- 4.34.2 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. Regardless of any electronic board for publishing scores or results, score sheets with the official or final results and any decision regarding a protest must be physically posted on the official notice board.
- 4.34.3 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.
- 4.34.4 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. In the case of an electronic score publishing system, the director's signature won't be necessary as long as the publishing system is directly managed by the director and his scoring team.
- 4.34.5 The provisional score sheet must be posted with the minimum delay 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 hours after the posting of the provisional score sheet.
- 4.34.6 Overall scores will be posted as soon as the provisional scores for the second task are available.
- 4.34.7 Team scores will be posted as soon as the provisional scores for the first task are available.
- 4.34.8 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.
- 4.34.9 Overall scores will reflect the status of each individual task (provisional, official, final).

- 4.34.10 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.
- 4.34.11 The team score shall be computed from
- a) 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, WL2, GL1 and GL2
 - Each valid Paramotor class which has a minimum of 8 pilots.
 - b) a combined Nation Score for paramotor classes shall be computed from the sum of the scores of:
 - top 3 pilots in PF1 class
 - top 3 pilots in PL1 class
 - 1 top crew in PF2 class
 - 1 top crew in PL2 class
 - 1 top female pilot in PF1f class
 of each country in each task grouped together.
- 4.34.12 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.
- 4.34.13 A score given to a competitor shall be expressed to the nearest whole number, 0.5 being rounded up.
- 4.34.14 All distances not obtained from FR's shall be calculated from the official map and rounded up to the next 0.5 km.
- 4.34.15 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.
- 4.34.16 Deduction of penalty points for a task shall be made after scoring is completed.
- 4.34.17 In Paramotors, except for Slalom events, 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:
- $$\text{Pilot final task score} = Ps * (\text{MIN}(1, (\text{Ts}/\text{Tc}) * 2))$$
- 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.
- 4.34.18 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.
- 4.34.19 If a failure in FR flight analysis or scoring is discovered before the end of the championship and the failure is due to a technical error which emanates from the equipment being used for the FR flight analysis or scoring, this failure must be corrected regardless of time limits for complaints and protests in S10 and the local regulations.
- 4.34.20 The track logs used to score a task should be made available to all competitors as soon as possible and remain intact and available for 90 days after the end of the competition.

4.35 COMPLAINTS

(Ref. GS, Chapter 5)

- 4.35.1 A competitor who is dissatisfied on any matter may, through his team leader, make a complaint in writing to the director.
- 4.35.2 Complaints must be presented not later than 6 hours after the respective provisional score sheet has been published, not counting the time between 22:00 and 07:00, except for the tasks for which the results are published on the last competition day, or for provisional score sheets published on or after the last competition day, when the time limit is 2 hours.
- 4.35.3 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. The complaint and its response must be published on the official notice board.

4.36 PROTESTS

(Ref. GS, Chapter 5)

- 4.36.1 If a competitor is dissatisfied with the decision on a 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.
- 4.36.2 A protest must be presented not later than 6 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.
- 4.36.3 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 shall be made by 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 472.5 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, or rounded down to an accuracy of 1/100th of a second if an approved electronic timing system is used.

5.3 WEIGHT

- 5.3.1 The empty weight of the aircraft is its weight ready to fly except for the pilot, fuel and supplementary items.
- 5.3.2 The take-off weight is the weight of the aircraft ready to fly including pilot, fuel and any supplementary equipment.
- 5.3.3 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.
- 5.3.4 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 FUEL

- 5.4.1 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.
- 5.4.2 The permitted amount of fuel shall be put into the aircraft tank when it is empty.
- 5.4.3 An official observer must control fuelling. In championships this may also be done by a competitor or team leader from a rival team.
- 5.4.4 An official observer must seal the tank. In championships, sealing of tanks is optional if aircraft are moved under supervision of officials directly to the take off place.

5.5 BAROGRAPHS AND FLIGHT RECORDERS

- 5.5.1 A serviceable barograph or FR (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.
- 5.5.2 The barogram or print-out must show that no intermediate landing was made and must generally substantiate the flight.
- 5.5.3 It must not be possible to adjust the recording function of the barograph or FR without this being apparent to the observer.
- 5.5.4 The barograph or FR must be sealed and unsealed only by an official observer. The print-out must be observed.
- 5.5.5 Where no height or altitude performance is involved no barograph calibration is required.
- 5.5.6 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.

5.6 START AND FINISH GATES

- 5.6.1 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.
- 5.6.2 Slalom start and finish gates shall be between 6m and 12m in width and a maximum of 2m in height. Details shall be included in the Local Regulations.

5.7 GNSS FLIGHT RECORDERS IN CHAMPIONSHIPS

- 5.7.1 Only CIMA approved FR's may be used and they must be operated in strict accordance with their approval documents. (S10 A6)
- 5.7.2 The status of FR evidence relative to other forms of evidence (eg. observers) must be detailed in the local regulations.
- 5.7.3 The scoring sector size shall be stated in the local regulations. 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.

5.8 INFLATABLE PYLONS

- 5.8.1 The purpose of an inflatable pylon is to clearly define a point. The point originates at the centre of the base of the pylon and extends vertically to an infinite height.
- 5.8.2 A pylon may be used to define a point to be turned, or if arranged in a pair, to define the extents of a gate.
- 5.8.3 If it is intended for a pylon to be turned at low level (any part of the aircraft below pylon height) then the pylon shall be minimum 8m tall.
- 5.8.4 Pylons shall be constructed and erected in a manner such that:
- They will not deform or fall over in any wind in which it is reasonable to expect the task could be safely flown.
 - They will deform in the event of contact with an aircraft.
 - There are no supporting lines, or if there are, they do not constitute a hazard.
 - Stakes, inflation devices and other hard obstacles associated with a pylon are either buried, protected with padding or positioned to minimize accidental contact by a pilot or aircraft.
- 5.8.5 The local regulations or task description shall clearly explain what constitutes a valid rounding of a pylon (eg. pilot body or whole aircraft) and any limitations (eg not below pylon height).
- 5.8.6 Unless described otherwise in the task description, a pylon shall be deemed rounded when the pilot crosses in the correct direction the line on the ground with its apex at the pylon and orientated symmetrically to and remote from the two legs of the course at the pylon. (ref. GS A13.1 but without the 90 deg quadrant)
- 5.8.7 Where a minimum distance between pylons is described in task catalogues and/or record definitions, the distance shall be measured between the outmost points of pylon bases along the line joining the centres of the pylon bases.

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