Note: Proposal 4 of amendments to S10 refers.

Changes:

- Version 3: Addition of the course change limit of 145 deg for closed circuits of more than 2 legs. Reordering of some items so they are in a more logical order.
- Version 2: Clarification of Start lines & Finish lines so the text is in conformance with definitions in S10 5.7.1 (as amended in proposal 5 of amendments to S10) and the General section.
- Version 1 Original edition.

Key:

Text in black is the original unchanged text

Text in green is proposed INSERTED text generally unchanged from the current document but moved to a more logical place in the document and are editorial changes not considered controversial.

Text in blue is NEW text. Although the emphasis of all these amendments is to make records easier to claim rather than easier to do, these items are new in as much as they are not in the existing text.

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 Annex 6) 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 microlight 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 Chapter 1, 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 aircraft 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 Only the pilot-in-command need hold a sporting licence but pilots not holding sporting licences will not be shown on FAI Diplomas.

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 that 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 but a deviation of up to ± 5% per leg is permitted in circuits of three or more legs.

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.

3.9 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.

3.15 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... [exact URL to be confirmed]

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 and Continental championship records in class may be established for that performance.

3.17.2 Championship records for microlights can only be established during valid competition tasks by bona-fide competitors at a FAI category 1 microlight 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 The International Jury must certify that all the conditions attached to a Championship record claim are satisfied and they must include all valid claims in their championship report to FAI. Information to be provided should include Pilot/co-pilot name, nation, competition class, aircraft type, the performance, type of record claimed, and whether it was a World or Continental claim.

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 WL1, AL1 & 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 & 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 ('Classical slalom')

- Task 3.C2 as defined in the current task catalogue.
- The sum of the straight line distance through all sticks 1 - 10 must be 792m (+-10m)
- Whilst the pilot is in the course the local wind speed must not have exceeded an average of 10Kt (18 Km/h) nor may the wind direction have varied more than 90° either side of the direction shown in the task description.
- A pilot only qualifies for a record if his scoring in the task includes NQ = 10.
- Pilot performance is expressed as an elapsed time normalized to ISA sea level conditions.

3.17.8.4 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 75m
- 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.

3.17.8.5 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
- 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.

Included in this proposal is the intention to delete S10 Chapter 5.3 which is no longer relevant.

~~**5.3 ALTITUDE DISTANCE RELATIONSHIP**~~

~~(Height loss during distance flights for records and badges)~~

~~**5.3.1** The difference in altitude between that of the Departure point and the altitude of the Finish point shall not exceed 2% of the distance flown. (Not mandatory for championships).~~