DEFINITIONS

GENERAL DEFINITIONS

AERODYNE: A heavier-than-air aircraft which derives its lift in flight mainly from aerodynamic forces.

AEROPLANE: A fixed wing aerodyne with means of propulsion.

AIRCRAFT: A vehicle that can be sustained in the atmosphere by forces exerted on it by the air.

AMPHIBIAN: An aeroplane with the capacity of taking off and landing both on ground and water.

FIXED WING: A non-rotating wing with rigid structure which does not rely upon relative motion of the air to maintain its aerodynamic characteristics.

SEAPLANE: An aeroplane which can only take off and land on water.

TILT WING/TILT ENGINE AEROPLANE: An aeroplane capable of both horizontal and vertical flight which, in forward horizontal flight, derives most of its lift from fixed wings and which achieves vertical or hovering flight by tilting the wings or engine(s) upward to a position substantially vertical.

VERTICAL TAKE-OFF AND LANDING AEROPLANE: An aeroplane capable of taking off, maintaining hovering or forward flight, and landing while obtaining the whole of its lift directly from the thrust of one or more engines installed in and integral to the aeroplane and not requiring lift derived from external surfaces during take-off or landing. The same engine or engines shall also provide the forward thrust of the aeroplane.

FLIGHT DEFINITIONS

CONTROL POINT: A point used for measurement purposes which an aircraft is required to reach or to land at during a flight along a course. A control point is reached when the aircraft is shown to have complied with the rule for proof of presence in the observation zone; OR when the aircraft lands at the point.

COURSES: A Course for FAI purposes consists of the distance between a start point and a finish point via any control points. Distance is the shortest distance on the earth's surface between the two points concerned, measured in accordance with the WGS84 ellipsoid.

APPROVED COURSE: A course measured in advance and certified by an NAC. FAI shall be notified of the details of the course together with full certifying documentation.

DECLARED COURSE: A course declared in advance by the pilot; the course for a proposed Goal Flight. In the event of several declarations for the Flight Performance, only the most recent shall be valid. For a course with control point(s) the declaration must include the sequence in which these points are to be reached. Declarations may be written on paper or may be recorded, dated and timed electronically, such as through a GNSS Flight Recorder, approved for this purpose.

CLOSED CIRCUIT COURSE: A course in which the start and finish points are at the same place.

OUT-AND-RETURN COURSE: A closed circuit course flown to one or more control points, with return along the reciprocal course.

POLYGON COURSE: A closed-circuit flight performance around a course with three or more control points.

TRIANGULAR COURSE: A closed-circuit flight performance around two control points.

CROSSING A FINISH LINE: A finish line is crossed when the nose of the aircraft cuts the line unassisted by any force external to the aircraft. Time measurement is from the precise time of crossing, distance measurement is from the center point of the finish line.

CROSSING A START LINE: A start line is crossed when the nose of the aircraft cuts the line. Time measurement is from the precise time of crossing, distance measurement is from the center point of the start line.

DESIGNATED SEQUENCE: The order in which the control points shall be flown.

FINISH ALTITUDE: The altitude above sea level (unless otherwise specified) at the Finish point.

FINISH LINE: A gateway of a width of one kilometer (unless otherwise specified), the base being specified on the surface of the earth and being perpendicular to the last leg of the course.

FINISH POINT: The end of a course used for measurement purposes. Depending on the type of flight concerned, the finish point may be one of the following:
a. The Landing Point; OR,
b. The crossing of a finish line

FINISH TIME: The time an aircraft reaches the landing place or crosses the finish line.

FLIGHT: An event which starts at takeoff and ends with a landing, and contains a Flight Performance which is to be validated by an NAC and/or FAI.

FLIGHTS, TYPES OF: Flight Performances from one or more of the following types of flight may be claimed and validated for an individual flight.

ALTITUDE FLIGHT: A flight performance measured for altitude achieved or maintained.

DISTANCE FLIGHT: A flight performance measured for distance over a Course.

EFFICIENCY FLIGHT: A flight performance measured for distance and fuel used and calculated for efficiency.

GAIN OF HEIGHT FLIGHT: A flight performance measured for gain of height between any low height and the subsequent greatest height.

GOAL FLIGHT: A flight performance over a course declared before take-off. A goal flight may also be a Distance Flight or a Speed Flight, but a Distance Flight or a Speed Flight need not necessarily be a Goal Flight.

PAYLOAD FLIGHT: A flight performance measured for payload carried to a specified minimum height.

SPEED FLIGHT: A flight performance timed and calculated for speed over the distance of a Course.

TIME TO CLIMB FLIGHT: A flight performance timed from a standing start to the time at which a designated height is achieved.

FLIGHT PERFORMANCE: The designated portion of a flight or series of flights and associated ground operations which is performed for the declared purpose of setting a record and which is conducted according to the rules of Section 2; or, the achievement attained during free flight, the evidence for which is put forward for validation of the achievement to an NAC or by FAI, to Sporting Code criteria.

Deleted: or free fall

FLYING START: Where the aircraft is in free flight at the start point.

FREE FLIGHT: That part of a flight in which an aircraft is not towed, carried or assisted by another aircraft or separate external or jettisonable power source.

JETTISON: To intentionally release or drop from an aeroplane.

LANDING PLACE: Either the center of the airfield or precise place at which the landing is made.

LANDING POINT: The precise point at which any part of an aircraft or its crew first touches the ground or water.

LANDING TIME: The time at the Landing Point.

LAP: A single completed transit of a closed-circuit course.

Deleted: flight performance around

OBSERVATION ZONES: Observation Zones (OZ) consist of the airspace above and enclosed by the following lines on the earth's surface:

CONTROL POINT: The OZ for a control point may be based on a 90° quadrant on the surface with its apex at the Point concerned and orientated symmetrically to and remote from the two legs of the course at the Point. A circular OZ may be used, centered on the Point, of a radius of one kilometer. In this case, the leg distances that can be claimed to and from that Point shall be the distance to or from the Point minus one kilometer.

START AND FINISH POINTS: The OZ for start and finish points is based on a one kilometer line (unless otherwise specified), the center of which passes through the start or finish point. The line is oriented at right angles (90°) to the first leg of the course at the start point and the last leg of the course at the finish point.

PROOF OF PRESENCE IN THE OBSERVATION ZONE: Proof of presence in an OZ may be established from the surface by visual observation, radar, or an approved tracking device. Proof of presence may also be established from a valid navigational fix in the OZ, produced by a secure recording device carried in the aircraft and approved for this purpose, or by direct observation by an official observer of the aircraft's navigational instruments.

START ALTITUDE: The altitude at the start point.

START LINE: A gateway of a width of one kilometer (unless otherwise specified), the base being specified on the surface of the earth and being at right angles (90°) to the first leg of the course at the start point.

START POINT: The beginning of a course used for measurement purposes. Depending on the type of flight concerned, the start point may be one of the following:
a. The point of start of the takeoff roll; OR,

b. The take-off point; OR,
c. The crossing of a start line.

START TIME: The time an aircraft reaches the takeoff place or crosses the start line.

TAKEOFF: The point and/or time at which all parts of an aircraft or its crew cease to be in contact with or connected to the ground or water.

TAKEOFF PLACE: The center of the airfield or precise place from which the takeoff is made.

TAKEOFF POINT: The precise point at which all parts of an aircraft or its crew cease to be in contact with or connected to the ground or water.

UNCOMPLETED FLIGHT: A flight is deemed to be uncompleted if; EITHER, An accident occurs during the flight resulting in the death of any member of the crew within 48 hours; or, any person leaves the aircraft during the flight; or, any part of the aircraft, its equipment, or payload is jettisoned during the flight performance.

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GENERAL RULES

Classification of Records

Aeroplane records (with the exception of Absolute World Records) shall be classified in one of the following classes:

Class C-1.... Landplanes
Class C-2.... Seaplanes
Class C-3.... Amphibians
Class H ..... Vertical Takeoff and Landing (VTOL)
Class M ..... Tilt-Wing/Tilt Engine

Aeroplane records (with the exception of Absolute World Records and Speed Over a Commercial Airline Route records) shall be further classified by weight as follows:

a/o ... weight less than 300 kg
a ..... weight 300 kg to less than 500 kg
b ..... weight 500 kg to less than 1,000 kg
c ..... weight 1,000 kg to less than 1,750 kg
d ..... weight 1,770 kg to less than 3,000 kg
e ..... weight 3,000 kg to less than 6,000 kg
f ..... weight 6,000 kg to less than 9,000 kg
g ..... weight 9,000 kg to less than 12,000 kg
h ..... weight 12,000 kg to less than 16,000 kg
i ..... weight 16,000 kg to less than 20,000 kg
j ..... weight 20,000 kg to less than 25,000 kg
k ..... weight 25,000 kg to less than 35,000 kg
l ..... weight 35,000 kg to less than 45,000 kg
m ..... weight 45,000 kg to less than 60,000 kg
n ..... weight 60,000 kg to less than 80,000 kg
o ..... weight 80,000 kg to less than 100,000 kg
p ..... weight 100,000 kg to less than 150,000 kg
q ..... weight 150,000 kg to less than 200,000 kg
r ..... weight 200,000 kg to less than 250,000 kg
s ..... weight 250,000 kg to less than 300,000 kg
t ..... weight 300,000 kg to less than 400,000 kg
u ..... weight 400,000 kg to less than 500,000 kg
v ..... weight 500,000 kg and greater

Aeroplane records (with the exception of Absolute World Records and Speed Over a Commercial Airline Route records) shall be further classified according to the type of powerplant, as follows:

Group I ..... Internal Combustion
Group II ..... Turboprop
Group III ..... Jet

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Deleted: more than ...kgs ... [22]
Deleted:
Deleted: Piston

Group IV ..... Rocket (and Rocket assisted)
Group V ..... Scramjet

Aeroplanes with more than one type of powerplant shall be classified according to the powerplant giving the greatest advantage for the record task being performed.

Determination of Weight and Weight Classification

The greatest weight of the aircraft during the flight performance shall determine the weight classification for the record attempt.

The aircraft shall be weighed prior to take-off in the same configuration that will be used during the flight performance and must account for fuel, cargo, carry-on equipment, crew and crew personal equipment.

Current aircraft weight and balance records may be used in lieu of weighing to determine aircraft weight for Speed Over a Recognized Course records.

Tolerances for weight measuring equipment shall be applied in the most conservative direction to assure the aircraft is properly classified by weight. (For example, if an aircraft's weight was found to be 50 kg below the next higher weight classification, and the scale tolerance was +/- 75 kg, the aircraft could not be unambiguously classified. In this case the aircraft weight could be reduced by removing fuel or equipment or a weighing system with a lower tolerance could be used to determine the aircraft weight.)

If refueling in flight occurs before or during the flight performance and the aircraft's fuel quantity measuring system is to be used to determine aircraft weight, the aircraft shall be weighed with fuel tanks empty. The weight of fuel as indicated by the aircraft fuel quantity measurement system shall be added to the zero fuel weight to determine the aircraft weight. In addition a series of weight measurements shall be made with the aircraft fueled to representative weights to calibrate and verify the accuracy of the aircraft fuel quantity measuring system. The weight measuring system tolerances shall be applied to the fuel measuring system calibrations in the least favorable direction.

Payload Schedule

The following minimum payload weights shall be carried during the flight performance for record tasks with payloads:

1,000 kg
2,000 kg

5,000 kg
10,000 kg
15,000 kg
20,000 kg
25,000 kg
30,000 kg
35,000 kg
40,000 kg
45,000 kg
50,000 kg
60,000 kg
70,000 kg
80,000 kg
90,000 kg
100,000 kg
120,000 kg
140,000 kg
160,000 kg
180,000 kg
200,000 kg
then by increments of 25,000 kg

Improvement in Record Performances

To be approved as a World record, the new performance must exceed the current record by the following amounts:

Altitude	3% or 300 meters, whichever is less
Distance	1% or 100 kilometers, whichever is less
Efficiency	3%
Greatest Payload Carried	1% or 500 kilograms, whichever is less
Speed	1%
Time to Climb	3%

A World record established for Altitude with Payload, Speed Over a Closed Course with Payload, or Time to Climb with Payload will also be awarded the same record with an inferior payload (or no payload), subject to the improvement requirements above.

Accuracy of Measurement Requirements

The accuracy of measurements used to validate a flight performance must meet the following requirements:

Altitude and Height	±1%
Distance	±0.02%

Time ..... ±0.1%
Mass ..... ±1%

Registration of Flight Performances

Flight performances shall be registered in the following units:

Altitude .....meters (m)
Distance .....kilometers (km)
Efficiency.....kilometers per kilogram (km/kg)
Greatest Payload Carried ....kilograms (kg)
Speed .....kilometers per hour (km/h)
Time to Climb .....minutes, seconds (m, s)

Calculation of Distances

For the purpose of the calculation of distances, the WGS84 earth model shall be used.

Vertical Take-off and Landing Aeroplanes (VTOL)

The take-off before and the landing following a flight performance for a record task performed in Class H (Vertical Take-off and Landing Aeroplane) shall be made vertically. Transition to and from horizontal flight shall be made no lower than 10 meters above the surface.

Tilt Wing/Tilt Engine Aeroplanes

The take-off before and the landing following a flight performance for a record task performed in Class M (Tilt Wing/Tilt Engine Aeroplane) shall be made vertically. Transition to and from horizontal flight shall be made no lower than 10 meters above the surface.

Measuring Equipment

The FAI General Aviation Commission will, from time to time, authorize new measuring equipment or procedures, the details of which shall be set out in an Annex to this Section.

Unless determined otherwise by the FAI General Aviation Commission, a flight recorder approved by the FAI Gliding Commission for use in gliding world record attempts may also be used in aeroplane record attempts, subject to conformity with the corresponding provision of FAI Sporting Code Section 3 and its Annexes and the accuracy of measurement requirements of this Section.

Control of Fuel Systems

Where the record task does not permit refueling, the aircraft fuel tanks shall be sealed before takeoff by the Official Observer controlling the event. If an aircraft is equipped for in-flight refueling, but in-flight refueling is not to be accomplished during the record attempt, the air refueling equipment shall be similarly sealed.

Powerplant Requirements

The aeroplane powerplant shall be capable of being started, shut down, and monitored throughout the flight.

Uncompleted Flights

A record shall not be awarded to any uncompleted flight.

AEROPLANE RECORDS

Absolute World Records

Absolute World Records represent the best performances from all classes of Aeroplanes, regardless of weight classification or method of propulsion.

Four Absolute World Records shall be awarded as follows:

Absolute Altitude: the greatest altitude achieved for a flight performance for Altitude, Altitude with Payload, or Altitude in Horizontal Flight

Absolute Distance: the greatest distance achieved for a flight performance for Distance or Distance Over a Closed Course

Absolute Greatest Payload: the greatest payload achieved for a flight performance for Greatest Payload

Absolute Speed: the greatest speed achieved for a flight performance for Speed Over a 3 Kilometer Course or Speed Over a 15 Kilometer Course

Altitude Record Tasks:

Altitude

The objective of this record task is to demonstrate the greatest altitude achieved during the flight performance.

The flight performance begins at takeoff and ends after achieving the highest altitude.

Altitude with Payload (see payload schedule)

The objective of this record task is to demonstrate the greatest altitude achieved while carrying a payload during the flight performance.

The flight performance begins at takeoff and ends after achieving the highest altitude.

Altitude in Horizontal Flight

The objective of this record task is to demonstrate the greatest altitude achieved and maintained during the flight performance.

The flight performance begins at takeoff and ends when the aeroplane initiates the final descent for landing.

The altitude shall be maintained within 50 meters for a minimum of 90 seconds.

The speed of the aeroplane at the end of the 90 seconds must not be less than the speed at the beginning of the 90 seconds.

The achieved altitude shall be the lowest altitude that is maintained within 50 meters for 90 seconds.

Altitude Gain, Aeroplane Launched from a Carrier Aircraft

The objective of this record task is to demonstrate the greatest altitude gained during the flight performance.

The flight performance begins at release from the carrier aircraft and ends after achieving the highest altitude.

The achieved altitude shall be the difference between the release altitude and the highest altitude.

Distance Record Tasks:

Distance

The objective of this record task is to demonstrate the greatest range of an aeroplane when flying to a predetermined landing place.

The course shall be approved or declared in writing prior to takeoff.

The course shall consist of a takeoff place, any control points (if allowed), and a landing place.

The course shall not be a closed-circuit.

Control points may be declared if:

- The average distance between control points is a minimum of 5,000 km; and
- The change in direction at each control point does not exceed 90 degrees.

One alternate course may be used. If so, it shall be approved or declared in writing prior to takeoff.

Flight performance begins at takeoff and ends upon landing.

The aeroplane shall not land or refuel during the flight performance.

The achieved distance shall be measured from the takeoff place to the landing place, along any control points.

Distance Over a Closed Course

The objective of this record task is to demonstrate the greatest range of an aeroplane when flying a closed circuit course.

The course shall be approved or declared in writing prior to takeoff.

The course shall be a closed circuit course consisting of a takeoff and landing place and one or more control points.

The flight performance begins at takeoff and ends upon landing.

The flight performance shall be accomplished over a single lap of the course.

The aeroplane shall not land or refuel during the flight performance.

The achieved distance shall be measured from the takeoff place to the control point (or points) to the landing place.

Efficiency Record Task:

Aeroplane Efficiency

The objective of this record task is to demonstrate the greatest aeroplane operating efficiency.

The course shall be approved or declared in writing prior to takeoff.

The course shall be a triangular closed course defined by three control points including the takeoff place.

No leg of the triangular course shall be less than 25 percent of the course length.

The required distance shall be accomplished on a single lap of the triangular course.

The minimum required course length is determined by weight classification according to the table below:

Weight Classification	Minimum Course Length (km)	Weight Classification	Minimum Course Length (km)
a/0	540	l	4,440
A	865	m	4,765
B	1,190	n	5,090
C	1,515	o	5,415
D	1,840	p	5,740
E	2,165	q	6,065
F	2,490	r	6,390
G	2,815	s	6,715
H	3,140	t	7,040
I	3,465	u	7,365
J	3,790	v	7,690
K	4,115		

The flight performance begins at engine start prior to takeoff and ends with engine shutdown after landing.

The aeroplane shall not land or refuel during the flight performance.

Determination of fuel used during the flight performance:

Prior to flight, the aircraft shall be weighed three times with the fuel which will be in the aircraft at engine start and all equipment required for flight aboard except for crew and personal crew equipment.

The average of the three weights shall determine the pre-flight aircraft weight.

Nothing shall be added to the aircraft after the pre-flight weight is established except for the crew and personal crew equipment. The total of the pre-flight aircraft weight plus the weight of the crew and personal crew equipment shall determine the weight classification for the record attempt.

Following the flight performance, the aircraft shall be weighed three times with the fuel that was on the aircraft at engine shutdown and all equipment required for flight except for personal crew equipment. All personal crew equipment shall be accounted for and removed from the aircraft prior to the post-flight weighing so that the aircraft is in the same configuration as the pre-flight weighing.

The average of the three weights shall determine the post-flight aircraft weight.

The fuel used during the flight performance shall be the difference between the pre-flight aircraft weight and the post-flight aircraft weight.

The achieved efficiency shall be determined by dividing the course distance (in kilometers) by the weight of the fuel used (in kilograms) during the flight performance.

Greatest Payload Record Task:

Greatest Payload

The objective of this record task is to carry the greatest payload to a height of at least 2,000 meters.

The payload shall be declared in writing and weighed prior to takeoff.

The flight performance begins at takeoff and ends when the target altitude is reached.

The target altitude shall be reached within 20 minutes of takeoff.

The target altitude shall be at least 2,000 meters above the elevation of the takeoff place or, if the takeoff place is below sea level the target altitude shall be at least 2,000 meters above sea level.

No external or auxiliary source of power shall be used for takeoff or at any time during the flight performance.

Speed Record Tasks:

Speed Over a 3 Kilometer Course

The objective of this record task is to achieve the greatest average speed over a 3,000 meter course.

The course shall be approved or declared in writing prior to takeoff.

The course shall meet the following dimensions:

The course shall be a minimum of 3,000 meters in length; and

The course shall have defined approaches of at least 1,000 meters, and

The course and its approaches shall have a maximum width of 200 meters.

The average of the elevation at the start and the finish will be the basis for determining the maximum height allowed.

The aeroplane shall not descend more than 100 meters between the beginning of the approach and the finish point.

The aircraft's height shall not exceed 500 meters during the flight performance.

The flight performance begins upon entering the approach to the first start point and ends at the last finish point.

The flight performance shall be completed within 30 minutes.

The achieved speed shall be the average speed of the four individual runs.

The timing of the event may be accomplished by timing each run individually using synchronized timing devices to determine start and finish times. For this timing method, the course length shall be divided by the elapsed time to determine the speed for each run.

An alternate method of timing is to time the round trip from the start point to the finish point through the turn and through the course in the opposite direction to the finish point. The time off course as determined by the observer at the end of the run will be subtracted from the elapsed time kept by the observer at the start of the run. For this timing method, two times the course length shall be divided by the elapsed time to determine the speed of the two combined runs. Under certain conditions this method of timing will produce a lower speed.

The aeroplane shall not land or refuel during the flight performance.

Speed over a 15 kilometer course

The objective of this record task is to achieve the greatest average speed over a 15,000 meter course.

The course shall be approved or declared in writing prior to takeoff.

The course shall meet the following dimensions:

The course shall be a minimum of 15,000 meters in length; and

The course shall have defined approaches of at least 5,000 meters; and

Deleted: flight performance shall be flown as four runs over the course, with each successive run in the opposite direction.¶
¶
The altitude at the finish point

Deleted: be greater

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The course and its approaches shall have a maximum width of two kilometers.

The flight performance shall be flown as two runs over the course, in opposite directions.

Flight performance begins upon entering the first approach and ends at the last finish point.

The maximum altitude outside the approach shall not exceed 2,000 meters above the start altitude.

The aeroplane shall not descend more than 100 meters between the beginning of the approach and the finish point.

The course length shall be divided by the elapsed time to determine the speed for each run.

The achieved speed shall be the average speed of the two individual runs.

The flight performance shall be completed within 45 minutes.

The aeroplane shall not land or refuel during the flight performance.

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Speed Over a Closed Course of 100 Kilometers
Speed Over a Closed Course of 500 Kilometers
Speed Over a Closed Course of 1,000 Kilometers
Speed Over a Closed Course of 2,000 Kilometers
Speed Over a Closed Course of 5,000 Kilometers
(and then by increases of 5,000 Kilometers)

Speed Over a Closed Course of 100 Kilometers with Payload (see payload schedule)
Speed Over a Closed Course of 500 Kilometers with Payload (see payload schedule)
Speed Over a Closed Course of 1,000 Kilometers with Payload (see payload schedule)
Speed Over a Closed Course of 2,000 Kilometers with Payload (see payload schedule)
Speed Over a Closed Course of 5,000 Kilometers with Payload (see payload schedule)
(and then by increases of 5,000 Kilometers)

The objective of this record task is to achieve the greatest speed over a closed course of various distances.

The course shall be an out and return course, with up to two control points.

The course shall be approved or declared in writing prior to takeoff.

The course shall have a defined approach of at least 1,000 meters, a start/finish line of one kilometer in width, and up to two control points.

The minimum course distances for this record task are as follows:

- 100 Kilometers
- 500 Kilometers
- 1,000 Kilometers
- 2,000 Kilometers
- 5,000 Kilometers
- Then by increases of 5,000 Kilometers

The course for the attempt shall be any length between the specified minimum and the next higher course length.

The flight performance begins upon entering the approach and ends at the finish point.

The flight performance may be accomplished over more than one lap of the course.

The aircraft shall fly level within 100 meters during the approach to the start line.

The aircraft shall fly out along the course, and return along the reciprocal course.

The altitude at the finish point shall not be less than the altitude at the start point.

The aeroplane shall not land or refuel during the flight performance.

The achieved speed shall be determined by dividing the distance of the course by the elapsed time.

Speed Around the World, Nonstop and Non-refueled

The objective of this record task is to achieve the greatest speed around the world.

The course shall be a closed circuit course that crosses all meridians.

The course distance from the start point through each control point to the finish point shall not be less than 36,770 km.

The course shall be approved or declared in writing prior to takeoff.

All control points shall lie at latitudes less than 66 degrees 33 minutes.

One alternate course may be declared. If so, it shall be declared in writing prior to takeoff.

The flight performance begins at takeoff and ends with either a landing or crossing a finish line.

The aeroplane shall start and finish at the same aerodrome. The finish can be either a landing or a flying finish.

If a flying finish is used, the aeroplane shall cross a finish line that is one kilometer wide and is centered on the starting aerodrome.

The aeroplane shall not land or refuel during the flight performance.

The achieved speed shall be determined by dividing the distance of the course by the elapsed time.

Speed Around the World, Eastbound

The objective of this record task is to achieve the greatest speed around the world in an eastbound direction.

The course shall be a closed circuit course that crosses all meridians.

The course shall be approved or declared in writing prior to takeoff.

The course distance from the start point through each control point to the finish point shall not be less than 36,770 km.

All control points shall lie at latitudes less than 66 degrees 33 minutes.

All control points shall be flown in an easterly succession.

One alternate course may be declared. If so, it shall be declared in writing prior to takeoff.

The flight performance begins at takeoff and ends with a landing at the finish point.

Intermediate landings are permitted during the flight performance.

Time on the ground at intermediate landing places shall count as flying time.

Refueling on the ground is permitted.

Refueling in-flight is not permitted.

Repairs or replacements of aircraft components and engine(s) are permitted except that wings and fuselage shall not be changed.

The flight crew shall not be changed during the flight performance. A crewmember other than the PIC may leave during the flight performance, but shall not be replaced.

Passengers may be changed during the flight performance.

If the landing cannot be made at the departure aerodrome, the aeroplane shall fly the last leg of the course to an alternate aerodrome. The alternate aerodrome shall be located further east than the departure aerodrome.

The achieved speed shall be determined by dividing the distance of the course by the elapsed time.

Speed Around the World, Eastbound, with In-flight Refueling

The objective of this record task is to achieve the greatest speed around the world in an eastbound direction with in-flight refueling.

The course shall be a closed circuit course that crosses all meridians.

The course shall be approved or declared in writing prior to takeoff.

The course distance from the start point through each control point to the finish point shall not be less than 36,770 km.

All control points shall lie at latitudes less than 66 degrees 33 minutes.

All control points shall be in an easterly succession.

One alternate course may be declared. If so, it shall be declared in writing prior to takeoff.

The flight performance begins at takeoff and ends with a landing at the finish point.

Intermediate landings are permitted during the flight performance.

Time on the ground at intermediate landing places shall count as flying time.

The aeroplane shall be refueled in-flight at least once during the flight performance.

Refueling on the ground is permitted.

Repairs or replacements of aeroplane components and engine(s) are permitted except that wings and fuselage shall not be changed.

The flight crew shall not be changed during the flight performance. A crewmember other than the PIC may leave during the flight performance, but shall not be replaced.

Passengers may be changed during the flight performance.

If the landing cannot be made at the departure aerodrome, the aeroplane can fly the last leg of the course to an alternate aerodrome. The alternate aerodrome shall be located further east than the departure aerodrome.

The achieved speed shall be determined by dividing the distance of the course by the elapsed time.

Speed Around the World, Westbound

The objective of this record task is to achieve the greatest speed around the world in a westbound direction.

The course shall be a closed circuit course that crosses all meridians.

The course shall be approved or declared in writing prior to takeoff.

The course distance from the start point through each control point to the finish point shall not be less than 36,770 km.

All control points shall lie at latitudes less than 66 degrees 33 minutes.

All control points shall be flown in a westerly succession.

One alternate course may be declared. If so, it shall be declared in writing prior to takeoff.

The flight performance begins at takeoff and ends with a landing at the finish point.

Intermediate landings are permitted during the flight performance.

Time on the ground at intermediate landing places shall count as flying time.

Refueling on the ground is permitted.

Refueling in-flight is not permitted.

Repairs or replacements of aircraft components and engine(s) are permitted except that wings and fuselage shall not be changed.

The flight crew shall not be changed during the flight performance. A crewmember other than the PIC may leave during the flight performance, but shall not be replaced.

Passengers may be changed during the flight performance.

If the landing cannot be made at the departure aerodrome, the aeroplane can fly the last leg of the course to an alternate aerodrome. The alternate aerodrome shall be located further west than the departure aerodrome.

The achieved speed shall be determined by dividing the distance of the course by the elapsed time.

Speed Around the World, Westbound, with In-flight Refueling

The objective of this record task is to achieve the greatest speed around the world in a westbound direction with in-flight refueling.

The course shall be a closed circuit course that crosses all meridians.

The course shall be approved or declared in writing prior to takeoff.

The course distance from the start point through each control point to the finish point shall not be less than 36,770 km.

All control points shall lie at latitudes less than 66 degrees 33 minutes.

All control points shall be in a westerly succession.

One alternate course may be declared. If so, it shall be declared in writing prior to takeoff.

The flight performance begins at takeoff and ends with a landing at the finish point.

Intermediate landings are permitted during the flight performance.

Time on the ground at intermediate landing places shall count as flying time.

The aeroplane shall be refueled in-flight at least once during the flight performance.

Refueling on the ground is permitted.

Repairs or replacements of aeroplane components and engine(s) are permitted except that wings and fuselage shall not be changed.

The flight crew shall not be changed during the flight performance. A crewmember other than the PIC may leave during the flight performance, but shall not be replaced.

Passengers may be changed during the flight performance.

If the landing cannot be made at the departure aerodrome, the aeroplane can fly the last leg of the course to an alternate aerodrome. The alternate aerodrome shall be located further west than the departure aerodrome.

The achieved speed shall be determined by dividing the distance of the course by the elapsed time.

Speed Around the World Over Both the Earth's Poles

The objective of this record task is to achieve the greatest speed around the world over both of the Earth's poles.

The course shall be a closed circuit course.

The course shall be approved or declared in writing prior to takeoff.

The course shall pass through both geographic poles.

Crossing of the equator from North to South shall be separated from the crossing of the equator from South to North by 120-180 degrees of longitude.

One alternate course may be declared. If so, it shall be declared in writing prior to takeoff.

The flight performance begins at takeoff and ends with a landing at the finish point.

Intermediate landings are permitted during the flight performance.

Time on the ground at intermediate landing places shall count as flying time.

Refueling on the ground is permitted.

Refueling in-flight is not permitted.

Repairs or replacements of aeroplane components and engine(s) are permitted except that wings and the fuselage shall not be changed.

The flight crew shall not be changed during the flight performance. A crewmember other than the PIC may leave during the flight performance, but shall not be replaced.

Passengers may be changed during the flight performance.

If the landing cannot be made at the departure aerodrome, the aeroplane can fly the last leg of the course to an alternate aerodrome. The alternate aerodrome shall be located further than the departure aerodrome.

The achieved speed shall be determined by dividing the distance of the course by the elapsed time.

Speed Over a Commercial Airline Route

The objective of this record task is to achieve the greatest speed between two cities with scheduled commercial airline service.

The minimum course length shall be 400 kilometers, unless the start and finish points are located in different countries.

The course shall be measured from the takeoff place to the landing place.

The flight performance begins at takeoff and ends with landing.

The flight performance shall be accomplished during a normally scheduled and timetabled flight as recognized by the International Air Transport Association (IATA).

The achieved speed shall be determined by dividing the distance of the course by the elapsed time.

Speed Over a Recognized Course

The objective of this record task is to achieve the greatest speed between any two cities or geographical features.

The minimum course length shall be 400 kilometers, unless the start and finish points are located in different countries.

The course shall be measured from the start point to the finish point. The start point and finish point shall be situated within 60 km of the center of the city. However, the distance between the start point and finish point shall not be less than 98% of the distance between the city centers.

When geographical features are used, the start and finish points shall be situated at the specific feature.

The flight performance begins at takeoff or crossing a start point and ends with landing or crossing a finish point.

The flight crew shall not be changed during the flight performance.

Repairs or replacements of aeroplane components are permitted except that engine(s), wings, and the fuselage shall not be changed.

The achieved speed shall be determined by dividing the distance of the course by the elapsed time.

The achieved speed shall not be less than the minimum steady flight speed of the aeroplane (stall speed with flaps up/Vs). If the minimum steady flight speed is not known, the achieved speed shall be greater than 100 kmh.

Speed Over a Recognized Course, Roundtrip

The objective of this record task is to achieve the greatest speed, roundtrip, between any two cities or geographical features.

The minimum course length shall be 400 kilometers, unless the start/finish point and intermediate control point are located in different countries.

The course shall be an out and return course.

The course shall be measured from the start point to the intermediate control point to finish point.

The start/finish point and intermediate point shall be situated within 60 km of the city center. However, the distance between the start/finish point and intermediate control point shall not be less than 98% of the distance between the city centers.

When geographical features are used the start/finish point and the intermediate control point shall be situated at the specific feature.

The flight performance begins at takeoff or crossing a start point and ends with landing or crossing a finish point.

The flight crew shall not be changed during the flight performance.

Repairs or replacements of aeroplane components are permitted except that engine(s), wings, and the fuselage shall not be changed.

The achieved speed shall be determined by dividing the distance of the course by the elapsed time.

Any time spent on the ground shall count as flying time.

The achieved speed shall not be less than the minimum steady flight speed of the aeroplane (stall speed with flaps up/Vs). If the minimum steady flight speed is not known, the achieved speed shall be greater than 100 kmh.

Time to Climb Record Tasks:

Time to Climb to 3,000 Meters
Time to Climb to 6,000 Meters
Time to Climb to 9,000 Meters
Time to Climb to 12,000 Meters
Time to Climb to 15,000 Meters
(and then by increases of 5,000 Meters)

Time to Climb to 3,000 Meters with Payload (see payload schedule)
Time to Climb to 6,000 Meters with Payload (see payload schedule)
Time to Climb to 9,000 Meters with Payload (see payload schedule)
Time to Climb to 12,000 Meters with Payload (see payload schedule)
Time to Climb to 15,000 Meters with Payload (see payload schedule)
(and then by increases of 5,000 Meters)

The objective of this record task is to achieve the minimum time to climb to various heights.

The heights to be achieved are 3,000, 6,000, 9,000, 12,000, 15,000 meters, and then by increases of 5,000 meters. Heights shall be measured from the starting point on the aerodrome.

The flight performance begins with the first forward movement of the aircraft after brakes or other restraining devices are released. For a vertical takeoff for records under Class H and Class M, the flight performance begins when any part of the aircraft ceases to be in contact with the surface. The flight performance ends when reaching the required height.

Since the indicated barometric altitude corresponding to the required height is dependent upon atmospheric conditions, the atmosphere should be

sampled to determine the target altitude for the required height when using barometric instruments to control the task.

For Time to Climb with Payload, the payload shall be declared and weighed prior to takeoff.

No fuel, ballast, or equipment shall be jettisoned during the flight performance.

The achieved time to climb shall be the time from the beginning of the flight performance until reaching the required height.