

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

95
96 FINISH TIME: The time an aircraft reaches the landing place or crosses the
97 finish line.
98
99 FLIGHT: An event which starts at takeoff and ends with a landing, and
100 contains a Flight Performance which is to be validated by an NAC and/or FAI.
101
102 FLIGHTS, TYPES OF: Flight Performances from one or more of the following
103 types of flight may be claimed and validated for an individual flight.
104
105 ALTITUDE FLIGHT: A flight performance measured for altitude
106 achieved or maintained.
107
108 DISTANCE FLIGHT: A flight performance measured for distance over a
109 Course.
110
111 EFFICIENCY FLIGHT: A flight performance measured for distance and
112 fuel used and calculated for efficiency.
113
114 GAIN OF HEIGHT FLIGHT: A flight performance measured for gain of
115 height between any low height and the subsequent greatest height.
116
117 GOAL FLIGHT: A flight performance over a course declared before
118 take-off. A goal flight may also be a Distance Flight or a Speed Flight,
119 but a Distance Flight or a Speed Flight need not necessarily be a Goal
120 Flight.
121
122 PAYLOAD FLIGHT: A flight performance measured for payload carried
123 to a specified minimum height.
124
125 SPEED FLIGHT: A flight performance timed and calculated for speed
126 over the distance of a Course.
127
128 TIME TO CLIMB FLIGHT: A flight performance timed from a standing
129 start to the time at which a designated height is achieved.
130
131 FLIGHT PERFORMANCE: The designated portion of a flight or series of flights
132 and associated ground operations which is performed for the declared
133 purpose of setting a record and which is conducted according to the rules of
134 Section 2; or, the achievement attained during free flight, the evidence for
135 which is put forward for validation of the achievement to an NAC or by FAI,
136 to Sporting Code criteria.
137
138 FLYING START: Where the aircraft is in free flight at the start point.
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140 FREE FLIGHT: That part of a flight in which an aircraft is not towed, carried
141 or assisted by another aircraft or separate external or jettisonable power
142 source.

Deleted: or free fall

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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,

191 b. The take-off point; OR,
192 c. The crossing of a start line.
193
194 START TIME: The time an aircraft reaches the takeoff place or crosses the
195 start line.
196
197 TAKEOFF: The point and/or time at which all parts of an aircraft or its crew
198 cease to be in contact with or connected to the ground or water.
199
200 TAKEOFF PLACE: The center of the airfield or precise place from which the
201 takeoff is made.
202
203 TAKEOFF POINT: The precise point at which all parts of an aircraft or its crew
204 cease to be in contact with or connected to the ground or water.
205
206 UNCOMPLETED FLIGHT: A flight is deemed to be uncompleted if; EITHER,
207 An accident occurs during the flight resulting in the death of any member of
208 the crew within 48 hours; or, any person leaves the aircraft during the flight;
209 or, any part of the aircraft, its equipment, or payload is jettisoned during the
210 flight performance.

Deleted: performance

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

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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

Deleted: Piston

259 Group IV Rocket (and Rocket assisted)

260 Group V Scramjet

261

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

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267 Determination of Weight and Weight Classification

268

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

271

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

275

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

278

279 Tolerances for weight measuring equipment shall be applied in the most
280 conservative direction to assure the aircraft is properly classified by weight.

281 (For example, if an aircraft's weight was found to be 50 kg below the next
282 higher weight classification, and the scale tolerance was +/- 75 kg, the
283 aircraft could not be unambiguously classified. In this case the aircraft
284 weight could be reduced by removing fuel or equipment or a weighing
285 system with a lower tolerance could be used to determine the aircraft
286 weight.)

287

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

298

299

300 Payload Schedule

301

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

304

305 1,000 kg

306 2,000 kg

307 5,000 kg
308 10,000 kg
309 15,000 kg
310 20,000 kg
311 25,000 kg
312 30,000 kg
313 35,000 kg
314 40,000 kg
315 45,000 kg
316 50,000 kg
317 60,000 kg
318 70,000 kg
319 80,000 kg
320 90,000 kg
321 100,000 kg
322 120,000 kg
323 140,000 kg
324 160,000 kg
325 180,000 kg
326 200,000 kg
327 then by increments of 25,000 kg

328

329
330 Improvement in Record Performances

331

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

334

335 Altitude 3% or 300 meters, whichever is less
336 Distance 1% or 100 kilometers, whichever is less
337 Efficiency..... 3%
338 Greatest Payload Carried 1% or 500 kilograms, whichever is less
339 Speed 1%
340 Time to Climb 3%

341

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

346

347

348 Accuracy of Measurement Requirements

349

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

352

353 Altitude and Height $\pm 1\%$
354 Distance $\pm 0.02\%$

355 Time $\pm 0.1\%$

356 Mass $\pm 1\%$

357

358

359 Registration of Flight Performances

360

361 Flight performances shall be registered in the following units:

362

363 Altitude meters (m)

364 Distance kilometers (km)

365 Efficiency kilometers per kilogram (km/kg)

366 Greatest Payload Carried kilograms (kg)

367 Speed kilometers per hour (km/h)

368 Time to Climb minutes, seconds (m, s)

369

370

371 Calculation of Distances

372

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

375

376

377 Vertical Take-off and Landing Aeroplanes (VTOL)

378

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

383

384

385 Tilt Wing/Tilt Engine Aeroplanes

386

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

391

392

393 Measuring Equipment

394
395 The FAI General Aviation Commission will, from time to time, authorize new
396 measuring equipment or procedures, the details of which shall be set out in
397 an Annex to this Section.
398

399 Unless determined otherwise by the FAI General Aviation Commission, a
400 flight recorder approved by the FAI Gliding Commission for use in gliding
401 world record attempts may also be used in aeroplane record attempts,
402 subject to conformity with the corresponding provision of FAI Sporting Code
403 Section 3 and its Annexes and the accuracy of measurement requirements of
404 this Section.
405

406
407 Control of Fuel Systems

408
409 Where the record task does not permit refueling, the aircraft fuel tanks shall
410 be sealed before takeoff by the Official Observer controlling the event. If an
411 aircraft is equipped for in-flight refueling, but in-flight refueling is not to be
412 accomplished during the record attempt, the air refueling equipment shall be
413 similarly sealed.
414

415
416 Powerplant Requirements

417
418 The aeroplane powerplant shall be capable of being started, shut down, and
419 monitored throughout the flight.
420

421
422 Uncompleted Flights

423
424 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

473 The objective of this record task is to demonstrate the greatest altitude
474 achieved and maintained during the flight performance.
475
476 The flight performance begins at takeoff and ends when the aeroplane
477 initiates the final descent for landing.
478
479 The altitude shall be maintained within 50 meters for a minimum of 90
480 seconds.
481
482 The speed of the aeroplane at the end of the 90 seconds must not be less
483 than the speed at the beginning of the 90 seconds.
484
485 The achieved altitude shall be the lowest altitude that is maintained within 50
486 meters for 90 seconds.
487
488
489 Altitude Gain, Aeroplane Launched from a Carrier Aircraft
490
491 The objective of this record task is to demonstrate the greatest altitude
492 gained during the flight performance.
493
494 The flight performance begins at release from the carrier aircraft and ends
495 after achieving the highest altitude.
496
497 The achieved altitude shall be the difference between the release altitude and
498 the highest altitude.
499
500
501 Distance Record Tasks:
502
503
504 Distance
505
506 The objective of this record task is to demonstrate the greatest range of an
507 aeroplane when flying to a predetermined landing place.
508
509 The course shall be approved or declared in writing prior to takeoff.
510
511 The course shall consist of a takeoff place, any control points (if allowed),
512 and a landing place.
513
514 The course shall not be a closed-circuit.
515
516 Control points may be declared if:
517 The average distance between control points is a minimum of 5,000
518 km; and
519 The change in direction at each control point does not exceed 90
520 degrees.

521
522 One alternate course may be used. If so, it shall be approved or declared in
523 writing prior to takeoff.
524
525 Flight performance begins at takeoff and ends upon landing.
526
527 The aeroplane shall not land or refuel during the flight performance.
528
529 The achieved distance shall be measured from the takeoff place to the
530 landing place, along any control points.
531
532
533 Distance Over a Closed Course
534
535 The objective of this record task is to demonstrate the greatest range of an
536 aeroplane when flying a closed circuit course.
537
538 The course shall be approved or declared in writing prior to takeoff.
539
540 The course shall be a closed circuit course consisting of a takeoff and landing
541 place and one or more control points.
542
543 The flight performance begins at takeoff and ends upon landing.
544
545 The flight performance shall be accomplished over a single lap of the course.
546
547 The aeroplane shall not land or refuel during the flight performance.
548
549 The achieved distance shall be measured from the takeoff place to the
550 control point (or points) to the landing place.
551
552
553 Efficiency Record Task:
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555
556 Aeroplane Efficiency
557
558 The objective of this record task is to demonstrate the greatest aeroplane
559 operating efficiency.
560
561 The course shall be approved or declared in writing prior to takeoff.
562
563 The course shall be a triangular closed course defined by three control points
564 including the takeoff place.
565
566 No leg of the triangular course shall be less than 25 percent of the course
567 length.
568

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.

602 The average of the three weights shall determine the post-flight aircraft
603 weight.
604
605 The fuel used during the flight performance shall be the difference between
606 the pre-flight aircraft weight and the post-flight aircraft weight.
607
608 The achieved efficiency shall be determined by dividing the course distance
609 (in kilometers) by the weight of the fuel used (in kilograms) during the flight
610 performance.
611

612
613 Greatest Payload Record Task:
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615
616 Greatest Payload
617

618 The objective of this record task is to carry the greatest payload to a height
619 of at least 2,000 meters.
620

621 The payload shall be declared in writing and weighed prior to takeoff.
622

623 The flight performance begins at takeoff and ends when the target altitude is
624 reached.
625

626 The target altitude shall be reached within 20 minutes of takeoff.
627

628 The target altitude shall be at least 2,000 meters above the elevation of the
629 takeoff place or, if the takeoff place is below sea level the target altitude
630 shall be at least 2,000 meters above sea level.
631

632 No external or auxiliary source of power shall be used for takeoff or at any
633 time during the flight performance.
634

635
636 Speed Record Tasks:
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638
639 Speed Over a 3 Kilometer Course
640

641 The objective of this record task is to achieve the greatest average speed
642 over a 3,000 meter course.
643

644 The course shall be approved or declared in writing prior to takeoff.
645

646 The course shall meet the following dimensions:
647 The course shall be a minimum of 3,000 meters in length; and
648 The course shall have defined approaches of at least 1,000 meters,
649 and

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

652
653 The average of the elevation at the start and the finish will be the basis for
654 determining the maximum height allowed.

655
656 The aeroplane shall not descend more than 100 meters between the
657 beginning of the approach and the finish point.

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

Deleted: below the altitude at

658
659 The aircraft's height shall not exceed 500 meters during the flight
660 performance.

661
662 The flight performance begins upon entering the approach to the first start
663 point and ends at the last finish point.

664
665 The flight performance shall be completed within 30 minutes.

666
667 The achieved speed shall be the average speed of the four individual runs.

668
669 The timing of the event may be accomplished by timing each run individually
670 using synchronized timing devices to determine start and finish times. For
671 this timing method, the course length shall be divided by the elapsed time to
672 determine the speed for each run.▼

Deleted: The elapsed time of

Deleted: 3,000 meters

Deleted:

673
674 An alternate method of timing is to time the round trip from the start point to
675 the finish point through the turn and through the course in the opposite
676 direction to the finish point. The time off course as determined by the
677 observer at the end of the run will be subtracted from the elapsed time kept
678 by the observer at the start of the run. For this timing method, two times
679 the course length shall be divided by the elapsed time to determine the
680 speed of the two combined runs. Under certain conditions this method of
681 timing will produce a lower speed.▼

Deleted: The elapsed time of this method shall be divided by 6,000 meters to determine the speed of the two combined runs.

682
683 The aeroplane shall not land or refuel during the flight performance.

684
685
686 Speed over a 15 kilometer course

687
688 The objective of this record task is to achieve the greatest average speed
689 over a 15,000 meter course.

690
691 The course shall be approved or declared in writing prior to takeoff.

692
693 The course shall meet the following dimensions:

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

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

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

699
700 The flight performance shall be flown as two runs over the course, in
701 opposite directions.

702
703 Flight performance begins upon entering the first approach and ends at the
704 last finish point.

705
706 The maximum altitude outside the approach shall not exceed 2,000 meters
707 above the start altitude.

708
709 The aeroplane shall not descend more than 100 meters between the
710 beginning of the approach and the finish point.

711
712 The course length shall be divided by the elapsed time to determine the
713 speed for each run.

714
715 The achieved speed shall be the average speed of the two individual runs.

716
717 The flight performance shall be completed within 45 minutes.

718
719 The aeroplane shall not land or refuel during the flight performance.

720

721

722 Speed Over a Closed Course of 100 Kilometers

723 Speed Over a Closed Course of 500 Kilometers

724 Speed Over a Closed Course of 1,000 Kilometers

725 Speed Over a Closed Course of 2,000 Kilometers

726 Speed Over a Closed Course of 5,000 Kilometers

727 (and then by increases of 5,000 Kilometers)

728

729 Speed Over a Closed Course of 100 Kilometers with Payload (see payload
730 schedule)

731 Speed Over a Closed Course of 500 Kilometers with Payload (see payload
732 schedule)

733 Speed Over a Closed Course of 1,000 Kilometers with Payload (see payload
734 schedule)

735 Speed Over a Closed Course of 2,000 Kilometers with Payload (see payload
736 schedule)

737 Speed Over a Closed Course of 5,000 Kilometers with Payload (see payload
738 schedule)

739 (and then by increases of 5,000 Kilometers)

740

741

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

744

Deleted: altitude at the finish point

Deleted: be greater

Deleted: below the altitude at

Deleted: .

Deleted: elapsed time of each run

Deleted: 15,000

Deleted: that individual

745 The course shall be an out and return course, with up to two control points.
746
747 The course shall be approved or declared in writing prior to takeoff.
748
749 The course shall have a defined approach of at least 1,000 meters, a
750 start/finish line of one kilometer in width, and up to two control points.
751
752 The minimum course distances for this record task are as follows:
753 100 Kilometers
754 500 Kilometers
755 1,000 Kilometers
756 2,000 Kilometers
757 5,000 Kilometers
758 Then by increases of 5,000 Kilometers
759
760 The course for the attempt shall be any length between the specified
761 minimum and the next higher course length.
762
763 The flight performance begins upon entering the approach and ends at the
764 finish point.
765
766 The flight performance may be accomplished over more than one lap of the
767 course.
768
769 The aircraft shall fly level within 100 meters during the approach to the start
770 line.
771
772 The aircraft shall fly out along the course, and return along the reciprocal
773 course.
774
775 The altitude at the finish point shall not be less than the altitude at the start
776 point.
777
778 The aeroplane shall not land or refuel during the flight performance.
779
780 The achieved speed shall be determined by dividing the distance of the
781 course by the elapsed time.
782
783
784 Speed Around the World, Nonstop and Non-refueled
785
786 The objective of this record task is to achieve the greatest speed around the
787 world.
788
789 The course shall be a closed circuit course that crosses all meridians.
790
791 The course distance from the start point through each control point to the
792 finish point shall not be less than 36,770 km.

793
794 The course shall be approved or declared in writing prior to takeoff.
795
796 All control points shall lie at latitudes less than 66 degrees 33 minutes.
797
798 One alternate course may be declared. If so, it shall be declared in writing
799 prior to takeoff.
800
801 The flight performance begins at takeoff and ends with either a landing or
802 crossing a finish line.
803
804 The aeroplane shall start and finish at the same aerodrome. The finish can
805 be either a landing or a flying finish.
806
807 If a flying finish is used, the aeroplane shall cross a finish line that is one
808 kilometer wide and is centered on the starting aerodrome.
809
810 The aeroplane shall not land or refuel during the flight performance.
811
812 The achieved speed shall be determined by dividing the distance of the
813 course by the elapsed time.
814
815
816 Speed Around the World, Eastbound
817
818 The objective of this record task is to achieve the greatest speed around the
819 world in an eastbound direction.
820
821 The course shall be a closed circuit course that crosses all meridians.
822
823 The course shall be approved or declared in writing prior to takeoff.
824
825 The course distance from the start point through each control point to the
826 finish point shall not be less than 36,770 km.
827
828 All control points shall lie at latitudes less than 66 degrees 33 minutes.
829
830 All control points shall be flown in an easterly succession.
831
832 One alternate course may be declared. If so, it shall be declared in writing
833 prior to takeoff.
834
835 The flight performance begins at takeoff and ends with a landing at the finish
836 point.
837
838 Intermediate landings are permitted during the flight performance.
839
840 Time on the ground at intermediate landing places shall count as flying time.

841
842 Refueling on the ground is permitted.
843
844 Refueling in-flight is not permitted.
845
846 Repairs or replacements of aircraft components and engine(s) are permitted
847 except that wings and fuselage shall not be changed.
848
849 The flight crew shall not be changed during the flight performance. A
850 crewmember other than the PIC may leave during the flight performance, but
851 shall not be replaced.
852
853 Passengers may be changed during the flight performance.
854
855 If the landing cannot be made at the departure aerodrome, the aeroplane
856 shall fly the last leg of the course to an alternate aerodrome. The alternate
857 aerodrome shall be located further east than the departure aerodrome.
858
859 The achieved speed shall be determined by dividing the distance of the
860 course by the elapsed time.
861
862
863 Speed Around the World, Eastbound, with In-flight Refueling
864
865 The objective of this record task is to achieve the greatest speed around the
866 world in an eastbound direction with in-flight refueling.
867
868 The course shall be a closed circuit course that crosses all meridians.
869
870 The course shall be approved or declared in writing prior to takeoff.
871
872 The course distance from the start point through each control point to the
873 finish point shall not be less than 36,770 km.
874
875 All control points shall lie at latitudes less than 66 degrees 33 minutes.
876
877 All control points shall be in an easterly succession.
878
879 One alternate course may be declared. If so, it shall be declared in writing
880 prior to takeoff.
881
882 The flight performance begins at takeoff and ends with a landing at the finish
883 point.
884
885 Intermediate landings are permitted during the flight performance.
886
887 Time on the ground at intermediate landing places shall count as flying time.
888

889 The aeroplane shall be refueled in-flight at least once during the flight
890 performance.
891
892 Refueling on the ground is permitted.
893
894 Repairs or replacements of aeroplane components and engine(s) are
895 permitted except that wings and fuselage shall not be changed.
896
897 The flight crew shall not be changed during the flight performance. A
898 crewmember other than the PIC may leave during the flight performance, but
899 shall not be replaced.
900
901 Passengers may be changed during the flight performance.
902
903 If the landing cannot be made at the departure aerodrome, the aeroplane
904 can fly the last leg of the course to an alternate aerodrome. The alternate
905 aerodrome shall be located further east than the departure aerodrome.
906
907 The achieved speed shall be determined by dividing the distance of the
908 course by the elapsed time.
909
910
911 Speed Around the World, Westbound
912
913 The objective of this record task is to achieve the greatest speed around the
914 world in a westbound direction.
915
916 The course shall be a closed circuit course that crosses all meridians.
917
918 The course shall be approved or declared in writing prior to takeoff.
919
920 The course distance from the start point through each control point to the
921 finish point shall not be less than 36,770 km.
922
923 All control points shall lie at latitudes less than 66 degrees 33 minutes.
924
925 All control points shall be flown in a westerly succession.
926
927 One alternate course may be declared. If so, it shall be declared in writing
928 prior to takeoff.
929
930 The flight performance begins at takeoff and ends with a landing at the finish
931 point.
932
933 Intermediate landings are permitted during the flight performance.
934
935 Time on the ground at intermediate landing places shall count as flying time.
936

937 Refueling on the ground is permitted.
938
939 Refueling in-flight is not permitted.
940
941 Repairs or replacements of aircraft components and engine(s) are permitted
942 except that wings and fuselage shall not be changed.
943
944 The flight crew shall not be changed during the flight performance. A
945 crewmember other than the PIC may leave during the flight performance, but
946 shall not be replaced.
947
948 Passengers may be changed during the flight performance.
949
950 If the landing cannot be made at the departure aerodrome, the aeroplane
951 can fly the last leg of the course to an alternate aerodrome. The alternate
952 aerodrome shall be located further west than the departure aerodrome.
953
954 The achieved speed shall be determined by dividing the distance of the
955 course by the elapsed time.
956
957
958 Speed Around the World, Westbound, with In-flight Refueling
959
960 The objective of this record task is to achieve the greatest speed around the
961 world in a westbound direction with in-flight refueling.
962
963 The course shall be a closed circuit course that crosses all meridians.
964
965 The course shall be approved or declared in writing prior to takeoff.
966
967 The course distance from the start point through each control point to the
968 finish point shall not be less than 36,770 km.
969
970 All control points shall lie at latitudes less than 66 degrees 33 minutes.
971
972 All control points shall be in a westerly succession.
973
974 One alternate course may be declared. If so, it shall be declared in writing
975 prior to takeoff.
976
977 The flight performance begins at takeoff and ends with a landing at the finish
978 point.
979
980 Intermediate landings are permitted during the flight performance.
981
982 Time on the ground at intermediate landing places shall count as flying time.
983

984 The aeroplane shall be refueled in-flight at least once during the flight
985 performance.
986
987 Refueling on the ground is permitted.
988
989 Repairs or replacements of aeroplane components and engine(s) are
990 permitted except that wings and fuselage shall not be changed.
991
992 The flight crew shall not be changed during the flight performance. A
993 crewmember other than the PIC may leave during the flight performance, but
994 shall not be replaced.
995
996 Passengers may be changed during the flight performance.
997
998 If the landing cannot be made at the departure aerodrome, the aeroplane
999 can fly the last leg of the course to an alternate aerodrome. The alternate
1000 aerodrome shall be located further west than the departure aerodrome.
1001
1002 The achieved speed shall be determined by dividing the distance of the
1003 course by the elapsed time.
1004
1005
1006 Speed Around the World Over Both the Earth's Poles
1007
1008 The objective of this record task is to achieve the greatest speed around the
1009 world over both of the Earth's poles.
1010
1011 The course shall be a closed circuit course.
1012
1013 The course shall be approved or declared in writing prior to takeoff.
1014
1015 The course shall pass through both geographic poles.
1016
1017 Crossing of the equator from North to South shall be separated from the
1018 crossing of the equator from South to North by 120-180 degrees of
1019 longitude.
1020
1021 One alternate course may be declared. If so, it shall be declared in writing
1022 prior to takeoff.
1023
1024 The flight performance begins at takeoff and ends with a landing at the finish
1025 point.
1026
1027 Intermediate landings are permitted during the flight performance.
1028
1029 Time on the ground at intermediate landing places shall count as flying time.
1030
1031 Refueling on the ground is permitted.

1032
1033 Refueling in-flight is not permitted.
1034
1035 Repairs or replacements of aeroplane components and engine(s) are
1036 permitted except that wings and the fuselage shall not be changed.
1037
1038 The flight crew shall not be changed during the flight performance. A
1039 crewmember other than the PIC may leave during the flight performance, but
1040 shall not be replaced.
1041
1042 Passengers may be changed during the flight performance.
1043
1044 If the landing cannot be made at the departure aerodrome, the aeroplane
1045 can fly the last leg of the course to an alternate aerodrome. The alternate
1046 aerodrome shall be located further than the departure aerodrome.
1047
1048 The achieved speed shall be determined by dividing the distance of the
1049 course by the elapsed time.
1050
1051
1052 Speed Over a Commercial Airline Route
1053
1054 The objective of this record task is to achieve the greatest speed between
1055 two cities with scheduled commercial airline service.
1056
1057 The minimum course length shall be 400 kilometers, unless the start and
1058 finish points are located in different countries.
1059
1060 The course shall be measured from the takeoff place to the landing place.
1061
1062 The flight performance begins at takeoff and ends with landing.
1063
1064 The flight performance shall be accomplished during a normally scheduled
1065 and timetabled flight as recognized by the International Air Transport
1066 Association (IATA).
1067
1068 The achieved speed shall be determined by dividing the distance of the
1069 course by the elapsed time.
1070
1071
1072 Speed Over a Recognized Course
1073
1074 The objective of this record task is to achieve the greatest speed between
1075 any two cities or geographical features.
1076
1077 The minimum course length shall be 400 kilometers, unless the start and
1078 finish points are located in different countries.
1079

1080 The course shall be measured from the start point to the finish point.
1081 The start point and finish point shall be situated within 60 km of the center of
1082 the city. However, the distance between the start point and finish point shall
1083 not be less than 98% of the distance between the city centers.
1084
1085 When geographical features are used, the start and finish points shall be
1086 situated at the specific feature.
1087
1088 The flight performance begins at takeoff or crossing a start point and ends
1089 with landing or crossing a finish point.
1090
1091 The flight crew shall not be changed during the flight performance.
1092
1093 Repairs or replacements of aeroplane components are permitted except that
1094 engine(s), wings, and the fuselage shall not be changed.
1095
1096 The achieved speed shall be determined by dividing the distance of the
1097 course by the elapsed time.
1098
1099 The achieved speed shall not be less than the minimum steady flight speed
1100 of the aeroplane (stall speed with flaps up/Vs). If the minimum steady flight
1101 speed is not known, the achieved speed shall be greater than 100 kmh.
1102
1103
1104 Speed Over a Recognized Course, Roundtrip
1105
1106 The objective of this record task is to achieve the greatest speed, roundtrip,
1107 between any two cities or geographical features.
1108
1109 The minimum course length shall be 400 kilometers, unless the start/finish
1110 point and intermediate control point are located in different countries.
1111
1112 The course shall be an out and return course.
1113
1114 The course shall be measured from the start point to the intermediate control
1115 point to finish point.
1116
1117 The start/finish point and intermediate point shall be situated within 60 km of
1118 the city center. However, the distance between the start/finish point and
1119 intermediate control point shall not be less than 98% of the distance between
1120 the city centers.
1121
1122 When geographical features are used the start/finish point and the
1123 intermediate control point shall be situated at the specific feature.
1124
1125 The flight performance begins at takeoff or crossing a start point and ends
1126 with landing or crossing a finish point.
1127

1128 The flight crew shall not be changed during the flight performance.
 1129
 1130 Repairs or replacements of aeroplane components are permitted except that
 1131 engine(s), wings, and the fuselage shall not be changed.
 1132
 1133 The achieved speed shall be determined by dividing the distance of the
 1134 course by the elapsed time.
 1135
 1136 Any time spent on the ground shall count as flying time.
 1137
 1138 The achieved speed shall not be less than the minimum steady flight speed
 1139 of the aeroplane (stall speed with flaps up/ V_s). If the minimum steady flight
 1140 speed is not known, the achieved speed shall be greater than 100 kmh.
 1141
 1142
 1143
 1144 Time to Climb Record Tasks:
 1145
 1146
 1147 Time to Climb to 3,000 Meters
 1148 Time to Climb to 6,000 Meters
 1149 Time to Climb to 9,000 Meters
 1150 Time to Climb to 12,000 Meters
 1151 Time to Climb to 15,000 Meters
 1152 (and then by increases of 5,000 Meters)
 1153
 1154 Time to Climb to 3,000 Meters with Payload (see payload schedule)
 1155 Time to Climb to 6,000 Meters with Payload (see payload schedule)
 1156 Time to Climb to 9,000 Meters with Payload (see payload schedule)
 1157 Time to Climb to 12,000 Meters with Payload (see payload schedule)
 1158 Time to Climb to 15,000 Meters with Payload (see payload schedule)
 1159 (and then by increases of 5,000 Meters)
 1160
 1161 The objective of this record task is to achieve the minimum time to climb to
 1162 various heights.
 1163
 1164 The heights to be achieved are 3,000, 6,000, 9,000, 12,000, 15,000 meters,
 1165 and then by increases of 5,000 meters. Heights shall be measured from the
 1166 starting point on the aerodrome.
 1167
 1168 The flight performance begins with the first forward movement of the aircraft
 1169 after brakes or other restraining devices are released. For a vertical takeoff
 1170 for records under Class H and Class M, the flight performance begins when
 1171 any part of the aircraft ceases to be in contact with the surface. The flight
 1172 performance ends when reaching the required height.
 1173
 1174 Since the indicated barometric altitude corresponding to the required height
 1175 is dependent upon atmospheric conditions, the atmosphere should be

1176 sampled to determine the target altitude for the required height when using
1177 barometric instruments to control the task.
1178
1179 For Time to Climb with Payload, the payload shall be declared and weighed
1180 prior to takeoff.
1181
1182 No fuel, ballast, or equipment shall be jettisoned during the flight
1183 performance.
1184
1185 The achieved time to climb shall be the time from the beginning of the flight
1186 performance until reaching the required height.