



## DEFINITIONS

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# AIR NAVIGATION ORDER

VERSION : 1.0  
DATE OF IMPLEMENTATION : 25-10-2009  
OFFICE OF PRIME INTEREST : Personnel Licensing Office

	NAME	DESIGNATION	SIGNATURE
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TYPE OF DOCUMENT	AIR NAVIGATION ORDER (ANO).		
STATUS OF DOCUMENT	CONTROLLED		

**A. AUTHORITY:**

This Air Navigation Order (ANO) is issued by the Director General, Civil Aviation Authority in pursuance of the powers vested in him under Rules 4(3), 35 to 44, 58, 340, 342, 347, 348, 354, 355, 357, 359 and 360 and all other enabling provisions of the Civil Aviation Rules, 1994 (CARs, 94).

**B. PURPOSE:**

This ANO aims at ensuring compliance to the standards and recommended practices as given in ICAO Annex 1 by standardizing the use of terms with the specific understanding as desired by ICAO.

**C. SCOPE:**

The terms specifically defined in this ANO shall be utilized and referred to in all Licensing Regulations.

**D. DESCRIPTION:**

**D1. DEFINITIONS:**

The following terms shall have the meanings assigned to them hereunder. Any other term not defined have shall have the same meanings as given in Civil Aviation Ordinance, 1960 and Civil Aviation Rules, 1994 (CARs, 94).

**D1.1 ACCREDITED MEDICAL CONCLUSION:**

The conclusion reached by one or more medical experts acceptable to the Licensing Authority for the purposes of the case concerned, in consultation with flight operations or other experts as necessary.

**D1.2 AEROPLANE:**

A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces, which remain fixed under given conditions of flight.

**D1.3 AIRCRAFT:**

Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth's surface.

**D1.4 AIRCRAFT AVIONICS:**

A term designating any electronic device — including its electrical part — for use in an aircraft, including radio, automatic flight control and instrument systems.

**D1.5 AIRCRAFT — CATEGORY:**

Classification of aircraft according to specified basic characteristics, e.g. aeroplane, helicopter, glider, free balloon, etc.

**D1.6 AIRCRAFT CERTIFICATED FOR SINGLE-PILOT OPERATION:**

A type of aircraft, which the State of Registry has determined, during the certification process, can be operated safely with a minimum crew of one pilot.

**D1.7 AIRCRAFT REQUIRED TO BE OPERATED WITH A CO-PILOT:**

A type of aircraft that is required to be operated with a co-pilot, as specified in the flight manual or by the air operator certificate.

**D1.8 AIRCRAFT — TYPE OF:**

All aircraft of the same basic design including all modifications thereto except those modifications which result in a change in handling or flight characteristics.

**D1.9 AIRMANSHIP:**

The consistent use of good judgment and well developed knowledge, skills and attitudes to accomplish flight objectives.

**D1.10 AIRSHIP:**

A power-driven lighter-than-air aircraft.

**D1.11 APPROVED MAINTENANCE ORGANIZATION:**

An organization approved by a Contracting State, in accordance with the requirements of Annex 6, Part I, Chapter 8 — Aeroplane Maintenance, to perform maintenance of aircraft or parts thereof and operating under supervision approved by that State.

*Note:- “Nothing in this definition is intended to preclude that the organization and its supervision be approved by more than one State.”*

**D1.12 APPROVED TRAINING:**

Training conducted under special curricula and supervision approved by a Contracting State that, in the case of flight crew members, is conducted within an approved training organization.

**D1.13 APPROVED TRAINING ORGANIZATION:**

An organization approved by a Contracting State in accordance with the requirements of Annex 1, 1.2.8.2 and Appendix 2 to perform flight crew training and operating under the supervision of that State.

**D1.14 ATS SURVEILLANCE SERVICE:**

A term used to indicate a service provided directly by means of an ATS surveillance system.

**D1.15 ATS SURVEILLANCE SYSTEM:**

A generic term meaning variously, ADS-B, PSR, SSR or any comparable ground-based system that enables the identification of aircraft.

*Note:- “A comparable ground-based system is one that has been demonstrated, by comparative assessment or other methodology, to have a level of safety and performance equal to or better than monopulse SSR.”*

**D1.16 BALLOON:**

A non-power-driven lighter-than-air aircraft.

**Note:-** “For the purposes of Personnel Licensing, this definition applies to free balloons.”

**D1.17 CERTIFY AS AIRWORTHY (TO):**

To certify that an aircraft or parts thereof comply with current airworthiness requirements after maintenance has been performed on the aircraft or parts thereof.

**D1.18 COMMERCIAL AIR TRANSPORT OPERATION:**

An aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire.

**D1.19 COMPETENCY:**

A combination of skills, knowledge and attitudes required to perform a task to the prescribed standard.

**D1.20 COMPETENCY ELEMENT:**

An action that constitutes a task that has a triggering event and a terminating event that clearly defines its limits, and an observable outcome.

**D1.21 COMPETENCY UNIT:**

A discrete function consisting of a number of competency elements.

**D1.22 CO-PILOT:**

A licensed pilot serving in any piloting capacity other than as pilot-in-command but excluding a pilot who is on board the aircraft for the sole purpose of receiving flight instruction.

**D1.23 CREDIT:**

Recognition of alternative means or prior qualifications.

**D1.24 CROSS-COUNTRY:**

A flight between a point of departure and a point of arrival following a pre-planned route using standard navigation procedures.

**D1.25 DUAL INSTRUCTION TIME:**

Flight time during which a person is receiving flight instruction from a properly authorized pilot on board the aircraft.

**D1.26 ERROR:**

An action or inaction by an operational person that leads to deviations from organizational or the operational person's intentions or expectations.

**D1.27 ERROR MANAGEMENT:**

The process of detecting and responding to errors with countermeasures that reduce or eliminate the consequences of errors and mitigate the probability of further errors or undesired states.

**D1.28 FLIGHT CREW MEMBER:**

A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.

**D1.29 FLIGHT PLAN:**

Specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft.

**D1.30 FLIGHT PROCEDURES TRAINER:**

See paragraph D1.31 Flight simulation training device.

**D1.31 FLIGHT SIMULATION TRAINING DEVICE:**

D1.31.1 Any one of the following three types of apparatus in which flight conditions are simulated on the ground:

D1.31.1.1 A flight simulator, which provides an accurate representation of the flight deck of a particular aircraft type to the extent that the mechanical, electrical, electronic, etc. aircraft systems control functions, the normal environment of flight crew members, and the performance and flight characteristics of that type of aircraft are realistically simulated;

D1.31.1.2 A flight procedures trainer, which provides a realistic flight deck environment, and which simulates instrument responses, simple control functions of mechanical, electrical, electronic, etc. aircraft systems, and the performance and flight characteristics of aircraft of a particular class;

D1.31.1.3 A basic instrument flight trainer, which is equipped with appropriate instruments, and which simulates the flight deck environment of an aircraft in flight in instrument flight conditions.

**D1.32 FLIGHT SIMULATOR:**

See paragraph D1.31 Flight simulation training device.

**D1.33 FLIGHT TIME — AEROPLANES:**

The total time from the moment an aeroplane first moves for the purpose of taking off until the moment it finally comes to rest at the end of the flight.

*Note:- "Flight time as here defined is synonymous with the term "block to block" time or "chock to chock" time in general usage which is measured from the time an aeroplane first moves for the purpose of taking off until it finally stops at the end of the flight."*

**D1.34 FLIGHT TIME — HELICOPTERS:**

The total time from the moment a helicopter's rotor blades start turning until the moment the helicopter finally comes to rest at the end of the flight, and the rotor blades are stopped.

**D1.35 GLIDER:**

A non-power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces, which remain fixed under given conditions of flight.

**D1.36 GLIDER FLIGHT TIME:**

The total time occupied in flight, whether being towed or not, from the moment the glider first moves for the purpose of taking off until the moment it comes to rest at the end of the flight.

**D1.37 HELICOPTER:**

A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power driven rotors on substantially vertical axes.

**D1.38 HUMAN PERFORMANCE:**

Human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.

**D1.39 INSTRUMENT FLIGHT TIME:**

Time during which a pilot is piloting an aircraft solely by reference to instruments and without external reference points. Instrument ground time. Time during which a pilot is practising, on the ground, simulated instrument flight in a flight simulation training device approved by the Licensing Authority.

**D1.40 INSTRUMENT TIME:**

Instrument flight time or instrument ground time.

**D1.41 LICENSING AUTHORITY:**

D1.41.1 The Authority designated by a Contracting State as responsible for the licensing of personnel.

**Note:-** *In the provisions of this Annex, the Licensing Authority is deemed to have been given the following responsibilities by the Contracting State:*

D1.41.1.1 assessment of an applicant's qualifications to hold a licence or rating;

D1.41.1.2 issue and endorsement of licenses and ratings;

D1.41.1.3 designation and authorization of approved persons;

D1.41.1.4 approval of training courses;

D1.41.1.5 approval of the use of flight simulation training devices and authorization for their use in gaining the experience or in demonstrating the skill required for the issue of a licence or rating; and

D1.41.1.6 validation of licenses issued by other Contracting States.

**D1.42 LIKELY:**

In the context of the medical provisions, likely means with a probability of occurring that is unacceptable to the medical assessor.

**D1.43 MAINTENANCE:**

The performance of tasks required to ensure the continuing airworthiness of an aircraft, including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair.

**D1.44 MEDICAL ASSESSMENT:**

The evidence issued by a Contracting State that the licence holder meets specific requirements of medical fitness.

**D1.45 MEDICAL ASSESSOR:**

A physician, appointed by the Licensing Authority, qualified and experienced in the practice of aviation medicine and competent in evaluating and assessing medical conditions of flight safety significance.

*Note 1:- Medical assessors evaluate medical reports submitted to the Licensing Authority by medical examiners.*

*Note 2:- Medical assessors are expected to maintain the currency of their professional knowledge.*

**D1.46 MEDICAL EXAMINER:**

A physician with training in aviation medicine and practical knowledge and experience of the aviation environment, who is designated by the Licensing Authority to conduct medical examinations of fitness of applicants for licences or ratings for which medical requirements are prescribed.

**D1.47 NIGHT:**

The hours between the end of evening civil twilight and the beginning of morning civil twilight or such other period between sunset and sunrise, as may be prescribed by the appropriate authority.

*Note:- Civil twilight ends in the evening when the centre of the sun's disc is 6 degrees below the horizon and begins in the morning when the centre of the sun's disc is 6 degrees below the horizon.*

**D1.48 PERFORMANCE CRITERIA:**

Simple, evaluative statements on the required outcome of the competency element and a description of the criteria used to judge whether the required level of performance has been achieved.

**D1.49 PILOT (TO):**

To manipulate the flight controls of an aircraft during flight time.

**D1.50 PILOT-IN-COMMAND:**

The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.

**D1.51 PILOT-IN-COMMAND UNDER SUPERVISION:**

Co-pilot performing, under the supervision of the pilot-in-command, the duties and functions of a pilot-in-command, in accordance with a method of supervision acceptable to the Licensing Authority.

**D1.52 POWERED-LIFT:**

A heavier-than-air aircraft capable of vertical take-off, vertical landing, and low-speed flight, which depends principally on engine-driven lift devices or engine thrust for the lift during these flight regimes and on non-rotating aerofoil(s) for lift during horizontal flight.

**D1.53 PROBLEMATIC USE OF SUBSTANCES:**

- D1.53.1 The use of one or more psychoactive substances by aviation personnel in a way that:  
D1.53.1.1 constitutes a direct hazard to the user or endangers the lives, health or welfare of others;  
and/or  
D1.53.1.2 causes or worsens an occupational, social, mental or physical problem or disorder.

**D1.54 PSYCHOACTIVE SUBSTANCES:**

Alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens, and volatile solvents, whereas coffee and tobacco are excluded.

**D1.55 QUALITY SYSTEM:**

Documented organizational procedures and policies; internal audit of those policies and procedures; management review and recommendation for quality improvement.

**D1.56 RATED AIR TRAFFIC CONTROLLER:**

An air traffic controller holding a licence and valid ratings appropriate to the privileges to be exercised.

**D1.57 RATING:**

An authorization entered on or associated with a licence and forming part thereof, stating special conditions, privileges or limitations pertaining to such licence.

**D1.58 RENDERING (A LICENCE) VALID:**

The action taken by a Contracting State, as an alternative to issuing its own licence, in accepting a licence issued by any other Contracting State as the equivalent of its own licence.

**D1.59 SAFETY MANAGEMENT SYSTEM:**

A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.

**D1.60 STATE SAFETY PROGRAMME:**

An integrated set of regulations and activities aimed at improving safety.

**D1.61 SIGN A MAINTENANCE RELEASE (TO):**

To certify that maintenance work has been completed satisfactorily in accordance with the applicable Standards of airworthiness, by issuing the maintenance release referred to in Annex 6.

**D1.62 SIGNIFICAT:**

In the context of the medical provisions , significant means to a degree or of a nature that is likely to jeopardize flight safety.

**D1.63 SOLO FLIGHT TIT:**

Flight time during which a student pilot is the sole occupant of an aircraft.

**D1.64 THREAT:**

Events or errors that occur beyond the influence of an operational person, increase operational complexity and must be managed to maintain the margin of safety.

**D1.65 THREAT MANAGEMENT:**

D1.65.1 The process of detecting and responding to threats with countermeasures that reduce or eliminate the consequences of threats and mitigate the probability of errors or undesired states.

**D2 AMENDMENT (ADDITION/DELETION) PROCEDURE:**

D2.1 Any amendment when approved and made applicable / effective by ICAO shall be immediately included in this ANO after adequate consultation with the concerned specialist directorate.

**E. EVIDENCES (ACRONYMS / RECORDS / REFERENCES):**

**E1. ACRONYMS:**

ADS-B	:	AUTOMATED DATA SURVEILLANCE- BROADCAST
ANO	:	AIR NAVIGATION ORDER
APM	:	AIRPORT MANAGER
ATS	:	AIR TRAFFIC SERVICES
CARs	:	CIVIL AVIATION REGULATIONS
PSR	:	PRIMARY SURVEILLANCE RADAR
SSR	:	SECONDARY SURVEILLANCE RADAR

**E2. RECORDS:**

Nil

**E3. REFERENCES:**

E3.1 ICAO Annex 1

**IMPLEMENTATION:**

This Air Navigation Order shall be implemented with effect from 25<sup>th</sup> October, 2009.

**(M. JUNAID AMEEN)**  
Director General,  
Pakistan Civil Aviation Authority

Dated:     October, 2009

**(CAPT. S. AFTAB HUSAIN)**

General Manager Licensing  
Dated:     October, 2009  
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