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## 1.1 General Definitions.

### Subpart-A

**Accelerate-stop distance available:** The length of the take-off run available plus the length of stopway, if provided.

**Acceptable level of safety:** Level of safety which expressed in practical terms by two measures which are safety performance indicator and safety performance target.

**Accepted/acceptable:** Not objected to by Civil Aviation Regulatory Commission as suitable for the purpose intended.

**Accepting unit:** Air traffic control unit next to take control of an aircraft.

**Accepting unit/controller:** Air traffic control unit/air traffic controller next to take control of an aircraft.

Note. See definition of “transferring unit/controller”.

**Accident investigation authority:** The authority designated by a State as responsible for aircraft accident and incident investigations.

**Administrator:** Chief Commissioner/Chief Executive Officer.

**Accident:** An occurrence associated with the operation of an aircraft which, in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down in which:

- a) a person is fatally or seriously injured as a result of:
- being in the aircraft, or
  - direct contact with any part of the aircraft, including parts which have become detached from the aircraft, or
  - direct exposure to jet blast, except when the injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or

b) the aircraft sustains damage or structural failure which:

- adversely affects the structural strength, performance or flight characteristics of the aircraft, and

-component, except for engine failure or damage, when the damage is limited to a single engine, including its cowlings or accessories, to propellers, wing tips, antennas, probes, vanes, tires, brakes, wheels, fairings, panels, landing gear doors, windscreens, the aircraft skin such as small dents or puncture holes, or for minor damages to main rotor blades, tail rotor blades, landing gear, and those resulting from hail or bird strike including holes in the radome; or

c) the aircraft is missing or is completely inaccessible.

**Accountable executive:** A person who has full authority for human resources issues, major financial issues ,direct responsibility for the conduct of the organization's affairs, final authority over operations under certificate as well as responsibility for all safety issues.

**Accredited medical conclusion:** The conclusion reached by one or more medical experts acceptable to Civil Aviation Regulatory Commission for the purposes of the case concerned, in consultation with flight operations or other experts as necessary.

**Accredited representative:** A person designated by a State, on the basis of his or her qualifications, for the purpose of participating in an investigation conducted by another State. Where the State has established an accident investigation authority, the designated accredited representative would normally be from that authority.

**Acrobatic flight:** Maneuvers intentionally performed by an aircraft involving an abrupt change in its attitude, an abnormal attitude, or an abnormal variation in speed.

**Active Resolution Advisory Cancelled ( RAC).** An RAC is active if it currently constrains the selection of the RA. RACs that have been received within the last six seconds and have not been explicitly cancelled are active.

**Adviser:** A person appointed by a State, on the basis of his or her qualifications, for the purpose of assisting its accredited representative in an investigation.

**Advisory airspace:** An airspace of defined dimensions, or designated route, within which air traffic advisory service is available.

**Advisory route:** A designated route along which air traffic advisory service is available.

Note: Air traffic control service provides a much more complete service than air traffic advisory service; advisory areas and routes are therefore not established within controlled airspace, but air traffic advisory service may be provided below and above control areas.

**Aerial work:** An aircraft operation in which an aircraft is used for specialized services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.

**Aerodrome:** A defined area on land or water including any buildings, installations and equipment intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

Note: The term “aerodrome” where used in the provisions relating to flight plans and ATS messages is intended to cover also sites other than aerodromes which may be used by certain types of aircraft, e.g. helicopters or balloons.

**Aerodrome beacon:** Aeronautical beacon used to indicate the location of an aerodrome from the air.

**Aerodrome certificate:** A certificate issued by the appropriate authority under applicable regulations for the operation of an aerodrome.

**Aerodrome climatologically summary:** Concise summary of specified meteorological elements at an aerodrome, based on statistical data.

**Aerodrome climatological table:** Table providing statistical data on the observed occurrence of one or more meteorological elements at an aerodrome.

**Aerodrome control radio station:** A station providing radio communication between an aerodrome control tower and aircraft or mobile aeronautical stations.

**Aerodrome control service:** Air traffic control service for aerodrome traffic.

**Aerodrome control tower:** A unit established to provide air traffic control service to aerodrome traffic.

**Note:** An aircraft is in the vicinity of an aerodrome when it is in, entering or leaving an aerodrome traffic circuit.

**Aerodrome elevation:** The elevation of the highest point of the landing area.

**Aerodrome identification sign:** A sign placed on an aerodrome to aid in identifying the aerodrome from the air.

**Aerodrome mapping data (AMD).** Data collected for the purpose of compiling aerodrome mapping information.

**Note.**— Aerodrome mapping data are collected for purposes that include the improvement of the user’s situational awareness, surface navigation operations, training, charting and planning.

**Aerodrome mapping database (AMDB).** A collection of aerodrome mapping data organized and arranged as a structured data set.

**Aerodrome meteorological office:** An office, located at an aerodrome, designated to provide meteorological service for international air navigation.

**Aerodrome operating minima:** The limits of usability of an aerodrome for:

- a) take-off, expressed in terms of runway visual range and/or visibility and, if necessary, cloud conditions;
- b) landing in precision approach and landing operations, expressed in terms of visibility and/or runway visual range and decision altitude/height DA/H as appropriate to the category of the operation;
- c) landing in approach and landing operations with vertical guidance, expressed in terms of visibility and/or runway visual range and decision altitude/height DA/H; and
- c) landing in non-precision approach and landing operations, expressed in terms of visibility and/or runway visual range, minimum descent altitude/height MDA/H and, if necessary, cloud conditions.
- d)

**Aerodrome reference point:** The designated geographical location of an aerodrome.

**Aerodrome traffic:** All traffic on the maneuvering area of an aerodrome and all aircraft flying in the vicinity of an aerodrome.

**Note:** An aircraft is in the vicinity of an aerodrome when it is in, entering or leaving an aerodrome traffic circuit.

**Aerodrome traffic circuit:** The specified path to be flown by aircraft operating in the vicinity of an aerodrome.

**Aerodrome traffic density:**

- a) light. Where the number of movements in the mean busy hour is not greater than 15 per runway or typically less than 20 total aerodrome movements.
- b) medium. Where the number of movements in the mean busy hour is of the order of 16 to 25 per runway or typically between 20 to 35 total aerodrome movements.
- c) heavy. Where the number of movements in the mean busy hour is of the order of 26 or more per runway or typically more than 35 total aerodrome movements.

**Note 1:** The number of movements in the mean busy hour is the arithmetic mean over the year of the number of movements in the daily busiest hour.

**Note 2:** Either a take-off or a landing constitutes a movement.

**Aerodrome traffic zone:** An airspace of defined dimensions established around an aerodrome for the protection of aerodrome traffic.

**Aerodynamic coefficients:** Non-dimensional coefficients for aerodynamic forces and moments.

**Aeromedical board:** Jordan Aeromedical board .

**Aeronautical broadcasting service:** A broadcasting service intended for the transmission of information relating to air navigation.

**Aeronautical information management (AIM).** The dynamic, integrated management of aeronautical information through the provision and exchange of quality-assured digital aeronautical data in collaboration with all parties.

**Aeronautical information product.** Aeronautical data and aeronautical information provided either as digital data sets or as a standardized presentation in paper or electronic media. Aeronautical information products include:

- Aeronautical Information Publication (AIP), including Amendments and Supplements;
- Aeronautical Information Circulars (AIC);
- Aeronautical charts;
- NOTAM; and
- Digital data sets.

Note.—Aeronautical information products are intended primarily to satisfy international requirements for the exchange of aeronautical information.

**Aeronautical information regulation and control:** An acronym aeronautical information regulation and control signifying a system aimed at advance notification based on common effective dates, of circumstances that necessitate significant changes in operating practices.

**Aeronautical administrative communications:** Communications necessary for the exchange of aeronautical administrative messages.

**Aeronautical beacon:** An aeronautical ground light visible at all azimuths, either continuously or intermittently, to designate a particular point on the surface of the earth.

**Aeronautical chart:** A representation of a portion of the Earth, its culture and relief, specifically designated to meet the requirements of air navigation.

**Aeronautical data:** A representation of aeronautical facts, concepts or instructions in a formalized manner suitable for communication, interpretation or processing.

**Aeronautical fixed circuit:** A circuit forming part of the aeronautical fixed service AFS.

**Aeronautical fixed service:** A telecommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air services.

**Aeronautical fixed station:** A station in the aeronautical fixed service.

**Aeronautical fixed telecommunication network:** A worldwide system of aeronautical fixed circuits provided, as part of the aeronautical fixed service, for the exchange of messages and/or digital data between aeronautical fixed stations having the same or compatible communications characteristics.

**Aeronautical Fixed Telecommunication Network (AFTN) communication centre.** An AFTN station whose primary function is the relay or retransmission of AFTN traffic from (or to) a number of other AFTN stations connected to it.

**Aeronautical Fixed Telecommunication Network (AFTN) destination station.** An AFTN station to which messages and/or digital data are addressed for processing for delivery to the addressee.

**Aeronautical Fixed Telecommunication Network (AFTN) origin station.** An AFTN station where messages and/or digital data are accepted for transmission over the AFTN.

**Aeronautical Fixed Telecommunication Network (AFTN) station.** A station forming part of the aeronautical fixed telecommunication network (AFTN) and operating as such under the authority or control of a State.

**Aeronautical fixed telecommunication Network circuit:** A circuit forming part of the aeronautical fixed telecommunication network Aeronautical fixed telecommunication network.

**Aeronautical ground light:** Any light specially provided as an aid to air navigation, other than a light displayed on an aircraft.

**Aeronautical information:** Information resulting from the assembly, analysis and formatting of aeronautical data.

**Aeronautical information circular:** A notice containing information that does not qualify for the origination of a NOTAM or for inclusion in the AIP, but which relates to flight safety, air navigation, technical, administrative or legislative matters.

**Aeronautical information publication:** A publication issued by or with the authority of a State and containing aeronautical information of a lasting character essential to air navigation.

**Aeronautical information service:** A service established within the defined area of coverage responsible for the provision of aeronautical information/ data necessary for the safety, regularity and efficiency of air navigation.

**Aeronautical information service product:** Aeronautical information provided in the form of the elements of the Integrated Aeronautical Information Package except NOTAM and PIB, including aeronautical charts, or in the form of suitable electronic media.

**Aeronautical meteorological station:** A station designated to make observations and meteorological reports for use in international air navigation.

**Aeronautical mobile service RR S1.32:** A mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radio beacon stations may also participate in this service on designated distress and emergency frequencies.

**Aeronautical mobile R\* service RR S1.33:** An aeronautical mobile service reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes.

**Aeronautical mobile-satellite service RR S1.35:** A mobile satellite service in which mobile earth stations are located on board aircraft; survival craft stations and emergency position-indicating radio beacon stations may also participate in this service.

**Aeronautical mobile-satellite R\* service RR S1.36:** An aeronautical mobile-satellite service reserved for communications relating to safety and regularity of flights, primarily along national or international civil air routes.

**Aeronautical operational control:** Communication required for the exercise of authority over the initiation, continuation, diversion or termination of flight for safety, regularity and efficiency reasons.

**Aeronautical radio navigation service RR S1.46:** A radio navigation service intended for the benefit and for the safe operation of aircraft.

Note: The following Radio Regulations are quoted for purposes of reference and/or clarity in understanding of the above definition of the aeronautical radio navigation service:

RR S1.10 Radio navigation: Radio determination used for the purpose of navigation, including obstruction warning.

RR S1.9 Radio determination: The determination of the position, velocity and/or other characteristics.

**Aeronautical station:** A land station in the aeronautical mobile service. In certain instances, an aeronautical station may be located, for example, on board ship or on a platform at sea.

**Aeronautical station RR S1.81:** A land station in the aeronautical mobile service. In certain instances, an aeronautical station may be located, for example, on board ship or on a platform at sea.

**Aeronautical telecommunication agency:** An agency responsible for operating a station or stations in the aeronautical telecommunication service.

**Aeronautical telecommunication log:** A record of the activities of an aeronautical telecommunication station.

**Aeronautical telecommunication network:** A global internetwork architecture that allows ground, air-ground and avionic data sub-networks to exchange digital data for the safety of air navigation and for the regular, efficient and economic operation of air traffic services.

**Aeronautical telecommunication service:** A telecommunication service provided for any aeronautical purpose.

**Aeronautical telecommunication station:** A station in the aeronautical telecommunication service.

**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.

**Aeroplane reference field length:** The minimum field length required for take-off at maximum certificated take-off mass, sea level, standard atmospheric conditions, still air and zero runway slope, as shown in the appropriate aeroplane flight manual prescribed by the certificating authority or equivalent data from the aeroplane manufacturer. Field length means balanced field length for aeroplanes, if applicable, or take-off distance in other cases.

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

**Aeronautical fixed telecommunication network communication centre:** An Aeronautical fixed telecommunication network station whose primary function is the relay or retransmission of Aeronautical fixed telecommunication network traffic from or to a number of other Aeronautical fixed telecommunication network stations connected to it.

**Aeronautical fixed telecommunication network destination station:** An Aeronautical fixed telecommunication network station to which messages and/or digital data are addressed for processing for delivery to the addressee.

**Aeronautical fixed telecommunication network origin station:** An Aeronautical fixed telecommunication network station where messages and/or digital data are accepted for transmission over the Aeronautical fixed telecommunication network.

**Aeronautical fixed telecommunication network station:** A station forming part of the aeronautical fixed telecommunication network and operating as such under the authority or control of a State.

**Aeronautical information publication amendment:** Permanent changes to the information contained in the Aeronautical information publication.

**Aeronautical information publication supplement:** Temporary changes to the information contained in the AIP which are provided by means of special pages.

**Afterburning:** A mode of engine operation wherein a combustion system fed (in whole or part) by vitiated air is used.

**Airborne Collision Avoidance System (ACAS) broadcast.** A long Mode S air-air surveillance interrogation (UF = 16) with the broadcast address.

**Airborne Collision Avoidance System ACAS I.** An ACAS which provides information as an aid to “see and avoid” action but does not include the capability for generating resolution advisories (RAs). Note.— ACAS I is not intended for international implementation and standardization by ICAO.

**Airborne Collision Avoidance System ACAS II.** An ACAS which provides vertical resolution advisories (RAs) in addition to traffic advisories (TAs).

**Airborne Collision Avoidance System ACAS III.** An ACAS which provides vertical and horizontal resolution advisories (RAs) in addition to traffic advisories (TAs).

**Air carrier:** A person who undertakes directly by lease, or other arrangement, to engage in air transportation with valid operating license or equivalent.

**Air commerce:** National, overseas, or foreign air commerce or the transportation of mail by aircraft or any operation or navigation of aircraft within the limits of any national operation or navigation of aircraft which directly affects, or which may endanger safety in Jordan, overseas, or foreign air commerce.

**Aircraft address.** A unique combination of twenty-four bits available for assignment to an aircraft for the purpose of air ground communications, navigation and surveillance.

**Aircraft-Based Augmentation System (ABAS).** An augmentation system that augments and/or integrates the information obtained from the other GNSS elements with information available on board the aircraft.

**Aircraft Data Circuit-terminating Equipment (ADCE).** An aircraft specific data circuit-terminating equipment that is associated with an airborne data link processor (ADLP). It operates a protocol unique to Mode S data link for data transfer between air and ground.

**Aircraft Data Link Processor (ADLP).** An aircraft-resident processor that is specific to a particular air-ground data link (e.g. Mode S) and which provides channel management, and segments and/or reassembles messages for transfer. It is connected to one side of aircraft elements common to all data link systems and on the other side to the air-ground link itself.

**Air defence identification zone (ADIZ).** Special designated airspace of defined dimensions within which aircraft are required to comply with special identification and/or reporting procedures additional to those related to the provision of air traffic services (ATS).

**Aircraft Incident:** Any occurrence that is not defined as Aircraft accident and is associated with the operation of an Aircraft, which affects the safety of operations.

**Air-initiated protocol:** A procedure initiated by a Mode S aircraft installation for delivering a standard length or extended length downlink message to the ground

**Aircraft/vehicle:** May be used to describe either a machine or device capable of atmospheric flight, or a vehicle on the airport surface movement area (i.e. runways and taxiways).

**Air defense identification zone:** Special designated airspace of defined dimensions within which aircraft are required to comply with special identification and/or reporting procedures additional to those related to the provision of air traffic services.

**Air-ground communication.** Two-way communication between aircraft and stations or locations on the surface of the earth.

**Air operator certificate:** A certificate authorizing an operator to carry out specified commercial air transport operations.

**Air traffic:** All aircraft in flight or operating on the maneuvering area of an aerodrome.

**Air traffic advisory service:** A service provided within advisory airspace to ensure separation, in so far as practical, between aircraft which are operating on IFR flight plans.

**Air traffic control clearance:** Authorization for an aircraft to proceed under conditions specified by an air traffic control unit.

Note1: For convenience, the term “air traffic control clearance” is frequently abbreviated to “clearance” when used in appropriate contexts.

Note 2: The abbreviated term “clearance” may be prefixed by the words “taxi”, “take-off”, “departure”, “en-route”, “approach” or “landing” to indicate the particular portion of flight to which the air traffic control clearance relates.

**Air traffic control instruction:** Directives issued by air traffic control for the purpose of requiring a pilot to take a specific action.

**Air traffic control service:** A service provided for the purpose of:

a) preventing collisions:

1- between aircraft, and

2- on the maneuvering area between aircraft and obstructions, and

b) expediting and maintaining an orderly flow of air traffic.

**Air traffic control unit:** A generic term meaning variously, area control centre, approach control unit or aerodrome control tower.

**Air traffic flow management:** A service established with the objective of contributing to a safe, orderly and expeditious flow of air traffic by ensuring that ATC capacity is utilized to the maximum extent possible, and that the traffic volume is compatible with the capacities declared by the appropriate ATS authority.

**Air traffic management:** The dynamic, integrated management of air traffic and airspace including air traffic services, airspace management and air traffic flow management - safely, economically and efficiently - through the provision of facilities and seamless services in collaboration with all parties and involving airborne and ground-based functions.

**Air traffic management system:** A system that provides Air Traffic Management through the collaborative integration of humans, information, technology, facilities and services, supported by air and ground- and/or space-based communications, navigation and surveillance.

**Air traffic service:** A generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control service area control service, approach control service or aerodrome control service.

**Air traffic services airspaces:** Airspaces of defined dimensions, alphabetically designated, within which specific types of flights may operate and for which air traffic services and rules of operation are specified.,

Note: ATS airspaces are classified as Class A to G.

**Air traffic services reporting office:** A unit established for the purpose of receiving reports concerning air traffic services and flight plans submitted before departure.

Note: An air traffic services reporting office may be established as a separate unit or combined with an existing unit, such as another air traffic services unit, or a unit of the aeronautical information service.

**Air traffic services unit:** A generic term meaning variously, air traffic control unit, flight information centre or air traffic services reporting office.

**Air transit route:** A defined route for the air transiting of helicopters.

**Air transportation:** National, overseas, or foreign air transportation or the transportation of mail by aircraft.

**Airborne collision avoidance system:** An aircraft system based on secondary surveillance radar transponder signals which operates independently of ground-based equipment to provide advice to the pilot on potential conflicting aircraft that are equipped with SSR transponders.

Note: Secondary surveillance radar transponders referred to above are those operating in Mode C or Mode S.

**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.

**Aircraft – category:** Classification of aircraft according to specified basic characteristics, e.g. aeroplane, helicopter, glider, free balloon.

**Aircraft accident:** Occurrence associated with the operation of an aircraft which takes place between the time any person boards aircraft with the intention of flight until such time as all such persons have disembarked, in which any person suffers death or serious injury as a result of being in or upon the aircraft or anything attached thereto, or the aircraft receives substantial damage.

**Aircraft address:** A unique combination of twenty-four bits available for assignment to an aircraft for the purpose of air-ground communications, navigation and surveillance.

Note: secondary surveillance radar Mode S transponders transmit extended squatters to support the broadcast of aircraft-derived position for surveillance purposes. The broadcast of this type of information is a form of automatic dependent surveillance known as automatic dependent surveillance -broadcast

**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.

**Aircraft certificated for single-pilot operation:** A type of aircraft which CARC has determined, during the certification process, can be operated safely with a minimum crew of one pilot.

**Aircraft classification number:** A number expressing the relative effect of an aircraft on a pavement for a specified standard sub-grade category.

Note: The aircraft classification number is calculated with respect to the centre of gravity position which yields the critical loading on the critical gear. Normally the aft most centre of gravity position appropriate to the maximum gross apron ramp mass is used to calculate the ACN. In exceptional cases the forward most centre of gravity position may result in the nose gear loading being more critical.

**Aircraft earth station:** A mobile earth station in the aeronautical mobile-satellite service located on board an aircraft see also “Ground earth station”.

**Aircraft engine:** An engine that is used or intended to be used for propelling aircraft. It includes turbo superchargers, appurtenances, and accessories necessary for its functioning, but does not include propellers.

**Aircraft identification:** A group of letters, figures or a combination thereof which is either identical to, or the coded equivalent of, the aircraft call sign to be used in air-ground communications, and which is used to identify the aircraft in ground-ground air traffic services communications.

**Aircraft observation:** The evaluation of one or more meteorological elements made from an aircraft in flight.

**Aircraft operating agency:** The person, organization or enterprise engaged in, or offering to engage in, an aircraft operation.

**Aircraft operating manual:** A manual, acceptable to the State of the Operator, containing normal, abnormal and emergency procedures, checklists, limitations, performance information, details of the aircraft systems and other material relevant to the operation of the aircraft.

Note: The aircraft operating manual is part of the operations manual.

**Aircraft proximity:** A situation in which, in the opinion of a pilot or air traffic services personnel, the distance between aircraft as well as their relative positions and speed have been such that the safety of the aircraft involved may have been compromised.

An aircraft proximity is classified as follows:

- a) risk of collision. The risk classification of an aircraft proximity in which serious risk of collision has existed.
- b) safety not assured. The risk classification of an aircraft proximity in which the safety of the aircraft may have been compromised.
- c) no risk of collision. The risk classification of an aircraft proximity in which no risk of collision has existed.
- d) risk not determined. The risk classification of an aircraft proximity in which insufficient information was available to determine the risk involved, or inconclusive or conflicting evidence precluded such determination.

**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.

**Aircraft stand:** A designated area on an apron intended to be used for parking an aircraft.

◦**Aircraft station RR S1.83:** A mobile station in the aeronautical mobile service, other than a survival craft station, located on board an aircraft.

**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.

**Airframe:** The fuselage, booms, nacelles, cowlings, fairings, airfoil surfaces including rotors but excluding propellers and rotating airfoils of engines, and landing gear of an aircraft and their accessories and controls.

**Air-ground communication:** Two-way communication between aircraft and stations or locations on the surface of the earth.

**Air-ground control radio station:** An aeronautical telecommunication station having primary responsibility for handling communications pertaining to the operation and control of aircraft in a given area.

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

**AIRMET information:** Information issued by a meteorological watch office concerning the occurrence or expected occurrence of specified en-route weather phenomena which may affect the safety of low-level aircraft operations and which was not already included in the forecast issued for low-level flights in the flight information region concerned or sub-area thereof.

**Airport:** An area of land or other hard surface, excluding water, that is used or intended to be used for the landing and takeoff of aircraft, and includes its buildings and facilities, if any.

**Airport available for public use:** An airport that is open to the general public with or without a prior request to use the airport.

**Airport certification manual:** Manual provides direction and lines of responsibility in the day-to-day operation of a certified airport. As well as, its details operating procedures to be followed for both routine matters and unusual circumstances or emergencies that may arise. The contents of this manual are designed to meet Civil Aviation Regulatory Commission rules and regulations for airport certification contained in JCAR Part 139.

**Airport noise compatibility program:** The program established by the official authorities regarding planning of land use according to JCAR Part 150.

**Airport operating certificate holder:** A holder of an airport operating certificate issued under JCAR Part 139.

**Airport operating certificate:** A certificate, issued under Jordan Civil Aviation Regulation Part 139, for operation of an airport serving public use operations of air carrier.

**Airport operator:** Party responsible to operate the airport and holds an airport operating certificate.

**AIRPROX:** The code word used in an air traffic incident report to designate aircraft proximity.

**Air-report:** A report from an aircraft in flight prepared in conformity with requirements for position, and operational and /or meteorological reporting.,

**Airship:** A power driven lighter than air aircraft.

**Air-taxiing:** Movement of a helicopter/VTOL above the surface of an aerodrome, normally in ground effect and at a ground speed normally less than 37 km/h 20 kt,

Note: The actual height may vary, and some helicopters may require air-taxiing above 8 m 25 ft AGL to reduce ground effect turbulence or provide clearance for cargo sling loads.

**Air-to-ground communication:** One-way communication from aircraft to stations or locations on the surface of the earth.

**Air traffic services surveillance service:** A term used to indicate a service provided directly by means of an ATS surveillance system.

**Air traffic services 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 mono pulse SSR.

**Airway:** A control area or portion thereof established in the form of a corridor.

**Airworthy:** The status of an aircraft, engine, propeller or part when it conforms to its approved design and is in a condition for safe operation.

**Alternate heliport:** A heliport to which a helicopter may proceed when it becomes either impossible or inadvisable to proceed to or to land at the heliport of intended landing where the necessary services and facilities are available, where aircraft performance requirements can be met and which is operational at the expected time of use. Alternate heliports include the following:

Take-off alternate. An alternate heliport at which a helicopter would be able to land should this become necessary shortly after take-off and it is not possible to use the heliport of departure.

En-route alternate. An alternate heliport at which a helicopter would be able to land in the event that a diversion becomes necessary while en route.

Destination alternate. An alternate heliport at which a helicopter would be able to land should it become either impossible or inadvisable to land at the heliport of intended landing.

Note.— The heliport from which a flight departs may be an en-route or a destination alternate heliport for that flight.

**Alert:** An indication provided to other aircraft systems or annunciation to the pilot to identify that an operating parameter of a navigation system is out of tolerance.

**Alert limit:** For a given parameter measurement, the error tolerance not to be exceeded without issuing an alert.

**Alert phase:** The code word used to designate an alert phase.

**Alert area:** An alert area is established to inform pilots of a specific area wherein a high volume of pilot training or an unusual type of aeronautical activity is conducted.

**Alert phase:** A situation wherein apprehension exists as to the safety of an aircraft and its occupants.

**Alerting post:** Any facility intended to serve as an intermediary between a person reporting an emergency and a rescue coordination centre or rescue sub-centre.

**Alerting service:** A service provided to notify appropriate organizations regarding aircraft in need of search and rescue aid, and assist such organizations as required.

**Allocation, allocate:** Distribution of frequencies, SSR codes, etc. to a State, unit or service. Distribution of 24-bit aircraft addresses to a State or common mark registering authority.

**Alphanumeric characters alphanumeric:** A collective term for letters and figures digits.

**Alternate aerodrome:** An aerodrome to which an aircraft may proceed when it becomes either impossible or inadvisable to proceed to or to land at the aerodrome of intended landing where the necessary services and facilities are available, where aircraft performance requirements can be met and which is operational at the expected time of use. Alternate aerodromes include the following:

a) Take-off alternate: an alternate aerodrome at which an aircraft would be able to land should this become necessary shortly after take-off and it is not possible to use the aerodrome of departure.

b) En-route alternate: an alternate aerodrome at which an aircraft would be able to land in the event that a diversion becomes necessary while en route.

c) Destination alternate: an alternate aerodrome at which an aircraft would be able to land should it become either impossible or inadvisable to land at the aerodrome of intended landing.

Note: the aerodrome from which a flight departs may also be an en-route or a destination alternate aerodrome for that flight.

**Alternative means of communication:** A means of communication provided with equal status, and in addition to the primary means.

**Altimetry system error:** The difference between the altitude indicated by the altimeter display, assuming a correct altimeter barometric setting, and the pressure altitude corresponding to the undisturbed ambient pressure.

**Altitude:** The vertical distance of a level, a point or an object considered as a point, measured from mean sea level MSL.

**Altitude crossing resolution advisories (RA).** A resolution advisory is altitude crossing if own ACAS aircraft is currently at least 30 m (100 ft) below or above the threat aircraft for upward or downward sense advisories, respectively.

**Altitude engine:** a reciprocating aircraft engine having a rated takeoff power that is producible from sea level to an established higher altitude.

**Altitude layer.** Each encounter is attributed to one of six altitude layers as

<i>Layer</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
<i>from</i>		2 300 ft	5 000 ft	10 000 ft	20 000 ft	41 000 ft
<i>to</i>	2 300 ft	5 000 ft	10 000 ft	20 000 ft	41 000 ft	

follows:

The altitude layer of an encounter is determined by the average altitude of the two aircraft at closest approach.

Note.— For the purposes of defining the performance of the collision avoidance logic, there is no need to specify the physical basis of the altitude measurement or the relationship between altitude and ground level.

**Ampere (A):** The ampere is that constant electric current which, if maintained in two straight parallel conductors of infinite length, of negligible circular cross-section, and placed 1 metre apart in a vacuum, would produce between these conductors a force equal to  $2 \times 10^{-7}$  newton per metre of length.

**Angular displacement sensitivity.** The ratio of measured DDM to the corresponding angular displacement from the appropriate reference line.

**Anticipated operating conditions:** Those conditions which are known from experience or which can be reasonably envisaged to occur during the operational life of the aircraft taking into account the operations for which the aircraft is made eligible, the conditions so considered being relative to the meteorological state of the atmosphere, the configuration of terrain, to the functioning of the aircraft, to the efficiency of personnel and to all the factors affecting safety in flight. Anticipated operating conditions do not include:

- a) those extremes which can be effectively avoided by means of operating procedures; and
- b) those extremes which occur so infrequently that to require the Standards to be met in such extremes would give a higher level of airworthiness than experience has shown to be necessary and practical.

**Appliance:** Any instrument, mechanism, equipment, part, apparatus, appurtenance, or accessory, including communications equipment, that is used or intended to be used in operating or controlling an aircraft in flight, is installed in or attached to the aircraft, and is not part of an airframe, engine, or propeller.

**Application:** Manipulation and processing of data in support of user requirements

**Application Entity (AE).** An AE represents a set of ISO/OSI communication capabilities of a particular application process (see ISO/IEC 9545 for further details).

**Approach and landing operations using instrument approach procedures:** Instrument approach and landing operations are classified as follows:

-Non-precision approach and landing operations. An instrument approach and landing which utilizes lateral guidance but does not utilize vertical guidance.

-Approach and landing operations with vertical guidance. An instrument approach and landing which utilizes lateral and vertical guidance but does not meet the requirements established for precision approach and landing operations.

-Precision approach and landing operations. An instrument approach and landing using precision lateral and vertical guidance with minima as determined by the category of operation.

Note: Lateral and vertical guidance refers to the guidance provided either by:

- a) A ground-based navigation aid; or
- b) computer generated navigation data.

-Categories of precision approach and landing operations:

Category I CAT I operation. A precision instrument approach and landing with:

- a) a decision height not lower than 60 m 200 ft; and
- b) with either a visibility not less than 800 m or a runway visual range not less than 550 m.

-Category II CAT II operation. A precision instrument approach and landing with:

- a) a decision height lower than 60 m 200 ft, but not lower than 30 m 100 ft; and
- b) a runway visual range not less than 300 m.

-Category IIIA CAT IIIA operation. A precision instrument approach and landing with:

- a) a decision height lower than 30 m 100 ft or no decision height; and
- b) a runway visual range not less than 175 m.

-Category IIIB CAT IIIB operation. A precision instrument approach and landing with:

- a) a decision height lower than 15 m 50 ft, or no decision height; and
- b) a runway visual range less than 175 m but not less than 50 m.

-Category IIIC CAT IIIC operation. A precision instrument approach and landing with no decision height and no runway visual range limitations.

Note: Where decision height DH and runway visual range RVR fall into different categories of operation, the instrument approach and landing operation would be conducted in accordance with the requirements of the most demanding category e.g. an operation with a DH in the range of CAT IIIA but with an RVR in the range of CA T IIIB would be considered a CAT IIIB operation or an operation with a DH in the range of CAT II but with an RVR in the range of CAT I would be considered a CAT II operation.

**Approach angle.** The difference in the ground headings of the two aircraft at closest approach, with 180 degrees defined as head on and 0 degrees defined as parallel.

**Approach control service:** Air traffic control service for arriving or departing controlled flights.

**Approach control unit:** A unit established to provide air traffic control service to controlled flights arriving at, or departing from, one or more aerodromes.

**Approach and landing phase — helicopters:** That part of the flight from 300 m (1 000 ft) above the elevation of the FATO, if the flight is planned to exceed this height, or from the commencement of the descent in the other cases, to landing or to the bailed landing point.

**Approach phase:** The operating phase defined by the time during which the engine is operated in the approach operating mode.

**Approach procedure with vertical guidance:** An instrument approach procedure which utilizes lateral and vertical guidance but does not meet the requirements established for precision approach and landing operations.

**Approach sequence:** The order in which two or more aircraft are cleared to approach to land at the aerodrome.

**Appropriate Air traffic services authority:** The relevant authority designated by the State responsible for providing air traffic services in the airspace concerned.

**Appropriate airworthiness requirements:** The comprehensive and detailed airworthiness codes established, adopted or accepted by CARC for the class of aircraft, engine, propeller under consideration.

**Appropriate authority:**

- a) Regarding flight over the high seas: The relevant authority of the State of Registry.
- b) Regarding flight other than over the high seas:  
-The relevant authority of the State having sovereignty over the territory being over flown.

**Approval:** An authorization granted by an appropriate national authority for:

- a) the transport of dangerous goods forbidden on passenger and/or cargo aircraft where the Technical Instructions state that such goods may be carried with an approval; or
- b) other purposes as provided for in the Technical Instructions.

Note: In the absence of a specific reference in the Technical Instructions allowing the granting of an approval, an exemption may be sought.

**Approved:** Means documented (by CARC) as suitable for the purpose intended.

**Approved maintenance organization:** An organization approved by Civil Aviation Regulatory Commission, in accordance with the requirements of Part 145 to perform maintenance of aircraft or parts thereof and operating under supervision approved by Civil Aviation Regulatory Commission.

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

**Approved maintenance training organization:** An organization approved by and operating under the supervision of Civil Aviation Regulatory Commission in accordance with the requirements of Part 147 to perform approved training.

**Approved parachute :**A parachute manufactured under a type certificate or approved Technical Standard Order.

**Approved training:** Training conducted under special curricula and supervision approved by Civil Aviation Regulatory Commission.

**Approved training organization:** An organization approved by and operating under the supervision of Civil Aviation Regulatory Commission to perform approved training.

**Apron:** A defined area, on a land aerodrome, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fuelling, parking or maintenance.

**Apron management service :** A service provided to regulate the activities and the movement of aircraft and vehicles on an apron.

**Area control centre:** A unit established to provide air traffic control service to controlled flights in control areas under its jurisdiction.

**Area control service:** Air traffic control service for controlled flights in control areas.

**Area minimum altitude:** The minimum altitude to be used under instrument meteorological conditions, that provides a minimum obstacle clearance within a specified area, normally formed by parallels and meridians.

**Area navigation:** A method of navigation which permits aircraft operations on any desired flight path within the coverage of station-referenced navigation aids or within the limits of capability of self-contained aids, or a combination of these.

Note: Area navigation includes performance-based navigation as well as other operations that do not meet the definition of performance-based navigation.

**Area navigation specification:** A navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV, e.g. RNAV 5, RNAV 1

**Area navigation high route:** an area navigation route within the airspace extending upward from, and including, 18500 feet 6000 meters MSL to flight level 450.

**Area navigation low route:** an area navigation route within the airspace extending upward from 1200 feet 400 meters above the surface of the earth to, but not including, 18500 feet 6000 meters MSL.

**Area navigation route:** An ATS route established for the use of aircraft capable of employing area navigation.

**Area navigation way point W/P:** A predetermined geographical position used for route or instrument approach definition or progress reporting purposes that is defined relative to a VORTAC station position.

**Arrival routes:** Routes identified in an instrument approach procedure by which aircraft may proceed from the en-route phase of flight to an initial approach fix.

**ASHTAM:** A special series NOTAM notifying by means of a specific format change in activity of a volcano, a volcanic eruption and/or volcanic ash cloud that is of significance to aircraft operations.

**Assemble:** A process of merging data from multiple sources into a database and establishing a baseline for subsequent processing.

Note: The assemble phase includes checking the data and ensuring that detected errors and omissions are rectified.

**Assignment, assign:** Distribution of frequencies to stations. Distribution of SSR codes or 24-bit aircraft addresses to aircraft.

**Associated aircraft systems:** Those aircraft systems drawing electrical/pneumatic power from an auxiliary power unit during ground operations.

**Air traffic services direct speech circuit:** An aeronautical fixed service AFS telephone circuit, for direct exchange of information between air traffic services ATS units.

**Air traffic services route:** A specified route designed for channeling the flow of traffic as necessary for the provision of air traffic services.

Note 1: The term “Air traffic services route” is used to mean variously, airway, advisory route, controlled or uncontrolled route, arrival or departure route, etc.

Note 2: An ATS route is defined by route specifications which include an ATS route designator, the track to or from significant points waypoints, distance between significant points, reporting requirements and, as determined by the appropriate ATS authority, the lowest safe altitude.

**ATN security services.** A set of information security provisions allowing the receiving end system or intermediate system to unambiguously identify (i.e. authenticate) the source of the received information and to verify the integrity of that information.

**ATS Interfacility Data Communication (AIDC).** Automated data exchange between air traffic services units in support of flight notification, flight coordination, transfer of control and transfer of communication

**ATS Message Handling Service (ATSMHS).** An ATN application consisting of procedures used to exchange ATS messages in store-and-forward mode over the ATN such that the conveyance of an ATS message is in general not correlated with the conveyance of another ATS message by the service provider.

**ATS Message Handling System (AMHS).** The set of computing and communication resources implemented by ATS organizations to provide the ATS message handling service

**ATS direct speech circuit.** An aeronautical fixed service (AFS) telephone circuit, for direct exchange of information between air traffic services (ATS) units

**Authorized path.** A communication path suitable for a given message category.

**Automatic activation device:** A self-contained mechanical or electro-mechanical device that is attached to the interior of the reserve parachute container, which

automatically initiates parachute deployment of the reserve parachute at a pre-set altitude, time, percentage of terminal velocity, or combination thereof.

**Automatic dependent surveillance:** A surveillance technique in which aircraft automatically provide, via a data link, data derived from on-board navigation and position fixing systems, including aircraft identification, four dimensional position and additional data as appropriate

**Automatic dependent surveillance - broadcast ADS-B:** A means by which aircraft, aerodrome vehicles and other objects can automatically transmit and/or receive data such as identification, position and additional data, as appropriate, in a broadcast mode via a data link.

**Automatic dependent surveillance agreement:** An Automatic dependent surveillance reporting plan which establishes the conditions of ADS data reporting i.e. data required by the air traffic services unit and frequency of ADS reports which have to be agreed to prior to the provision of the ADS services

Note: The terms of the agreement will be exchanged between the ground system and the aircraft by means of a contract, or a series of contracts.

**Automatic dependent surveillance contract:** A means by which the terms of an ADS agreement will be exchanged between the ground system and the aircraft, specifying under what conditions ADS reports would be initiated, and what data would be contained in the reports.

Note: The term “ADS contract” is a generic term meaning variously, ADS event contract, ADS demand contract, ADS periodic contract or an emergency mode. Ground forwarding of ADS reports may be implemented between ground systems.

**Automatic dependent surveillance -C agreement:** A reporting plan which establishes the conditions of ADS-C data reporting i.e. data required by the air traffic services unit and frequency of ADS-C reports which have to be agreed to prior to using ADS-C in the provision of air traffic services.

Note: The terms of the agreement will be exchanged between the ground system and the aircraft by means of a contract, or a series of contracts.

**Automatic dependent surveillance-broadcast ADS-B IN:** A function that receives surveillance data from ADS-B OUT data sources.

**Automatic dependent surveillance-broadcast ADS-B OUT:** A function on an aircraft or vehicle that periodically broadcasts its state vector position and velocity and other information derived from on-board systems in a format suitable for ADS-B IN capable receivers.

**Automatic dependent surveillance - contract ADS-C:** A means by which the terms of an ADS-C agreement will be exchanged between the ground system and the aircraft, via a data link, specifying under what conditions ADS-C reports would be initiated, and what data would be contained in the reports.

Note: The abbreviated term “ADS contract” is commonly used to refer to ADS event contract, ADS demand contract, ADS periodic contract or an emergency mode.

**Automatic deployable emergency locator transmitter (AD):** An Emergency locator transmitter which is rigidly attached to an aircraft and which is automatically deployed and activated by impact, and, in some cases, also by hydrostatic sensors. Manual deployment is also provided.

**Automatic fixed emergency locator transmitter (ELTAF):** An automatically activated Emergency locator transmitter which is permanently attached to an aircraft.

**Automatic portable emergency locator transmitter (ELTAP):** An automatically activated Emergency locator transmitter which is rigidly attached to an aircraft but readily removable from the aircraft.

**Automatic relay installation:** A teletypewriter installation where automatic equipment is used to transfer messages from incoming to outgoing circuits.

Note: This term covers both fully automatic and semiautomatic installations.

**Automatic telecommunication log:** A record of the activities of an aeronautical telecommunication station recorded by electrical or mechanical means.

**Automatic terminal information service:** The automatic provision of current, routine information to arriving and departing aircraft throughout 24 hours or a specified portion thereof:

- a) data link-automatic terminal information service .The provision of ATIS via data link.
- b) voice-automatic terminal information service Voice-ATIS.  
The provision of ATIS by means of continuous and repetitive voice broadcasts.

**Autorotation:** A rotorcraft flight condition in which the lifting rotor is driven entirely by action of the air when the rotorcraft is in motion.

**Auxiliary data:** Data, transmitted in addition to basic data, that provide ground equipment sitting information for use in refining airborne position calculations and other supplementary information.

**Auxiliary power-unit:** A self-contained power-unit on an aircraft providing electrical/pneumatic power to aircraft systems during ground operations.

**Auxiliary rotor:** A rotor that serves either to counteract the effect of the main rotor torque on a rotorcraft or to maneuver the rotorcraft about one or more of its three principal axes.

**Average radius of rated coverage.** The radius of a circle having the same area as the rated coverage.

**Average sound level:** The level, in decibels, of the mean-square, A-weighted sound pressure during a specified period, with reference to the square of the standard reference sound pressure of 20 Micropascals.

## Subpart-B

**Back course sector.** The course sector which is situated on the opposite side of the localizer from the runway.

**Balked landing:** A landing maneuver that is unexpectedly discontinued at any point below the obstacle clearance altitude/height OCA/H.

**Balloon:** A non-power-driven lighter-than-air aircraft.

Note: For the purposes of this part, this definition applies to free balloons.

**Bare earth:** Surface of the Earth including bodies of water and permanent ice and snow, and excluding vegetation and man-made objects.

**Barrette:** Three or more aeronautical ground lights closely spaced in a transverse line so that from a distance they appear as a short bar of light.

**Base turn:** A turn executed by the aircraft during the initial approach between the end of the outbound track and the beginning of the intermediate or final approach track. The tracks are not reciprocal.

Note: Base turns may be designated as being made either in level flight or while descending, according to the circumstances of each individual procedure.

**Basic data:** Data transmitted by the ground equipment that are associated directly with the operation of the landing guidance system.

**Basket:** The container, suspended beneath the envelope, for the balloon occupants.

**Beam centre.** The midpoint between the two minus 3-dB points on the leading and trailing edges of the scanning beam main lobe.

**Beamwidth.** The width of the scanning beam main lobe measured at the minus 3-dB points and defined in angular units on the boresight, in the horizontal plane for the azimuth function and in the vertical plane for the elevation function.

**Becquerel:** The activity of a radionuclide having one spontaneous nuclear transition per second.

**Bit error rate:** The number of bit errors in a sample divided by the total number of bits in the sample, generally averaged over many such samples.

**Blind transmission:** A transmission from one station to another station in circumstances where two-way communication cannot be established but where it is believed that the called station is able to receive the transmission.

**Brake horsepower:** The power delivered at the propeller shaft main drive or main output of an aircraft engine.

**Briefing:** Oral commentary on existing and/or expected meteorological conditions.

**Broadcast:** A transmission of information relating to air navigation that is not addressed to a specific station or stations.

**Broadcast Mode S system :** The protocol within the Mode S system that permits uplink messages to be sent to all aircraft in coverage area, and downlink messages to be made available to all interrogators that have the aircraft wishing to send the message under surveillance.

**Burst.** A time-defined, contiguous set of one or more related signal units which may convey user information and protocols, signalling, and any necessary preamble

**By-pass ratio:** The ratio of the air mass flow through the by-pass ducts of a gas turbine engine to the air mass flow through the combustion chambers calculated at maximum thrust when the engine is stationary in an international standard atmosphere at sea level.

### Subpart-C

**Cabin crew member:** A crew member who performs in the interest of safety of passengers, duties assigned by the operator or the pilot-in-command of the aircraft, but who shall not act as a flight crew member.

**Calendar:** Discrete temporal reference system that provides the basis for defining temporal position to a resolution of one day.

**Calibrated airspeed:** The indicated airspeed of an aircraft, corrected for position and instrument error. Calibrated airspeed is equal to true airspeed in standard atmosphere at sea level.

**Canard:** The forward wing of a canard configuration and may be a fixed, movable, or variable geometry surface, with or without control surfaces.

**Canard configuration:** A configuration in which the span of the forward wing is substantially less than that of the main wing.

**Cancellation:** To terminate a certificate or license or authorization issued by CARC in case of:

- a) the desire of the holder of the certificate or license or authorization to terminate his/her valid certificate or license or authorization, or
- b) the certificate or license or authorization is expired, or
- c) the licensing or certification process time scheduled as per JCAR's are breached by the fault of the applicant.

In accordance with the above cases, an applicant or holder may appeal for recertification/ reissuance.

**Candela:** The luminous intensity, in the perpendicular direction, of a surface of 1/600 000 square meter of black body at the temperature of freezing platinum under a pressure of 101 325 Newton per square meter.

**Canopy:** Bare Earth supplemented by vegetation height.

**Capability report.** Information identifying whether the transponder has a data link capability as reported in the capability (CA) field of an all-call reply or squitter transmission (see "data link capability report").

**Capacitor discharge light:** A lamp in which high-intensity flashes of extremely short duration are produced by the discharge of electricity at high voltage through a gas enclosed in a tube.

**Cargo aircraft:** Any aircraft, other than a passenger aircraft, which is carrying goods or property.

**Carrier-to-multipath ratio:** The ratio of the carrier power received directly, i.e. without reflection, to the multipath power, i.e. carrier power received via reflection.

**Carrier-to-noise density ratio:** The ratio of the total carrier power to the average noise power in a 1 Hz bandwidth, usually expressed in dBHz.

**Category:**

1) as used with respect to the certification, ratings, privileges, and limitations of airmen, means a broad classification of aircraft. Examples include: airplane; rotorcraft; glider; and lighter-than-air; and

b) as used with respect to the certification of aircraft, means a grouping of aircraft based upon intended use or operating limitations. Examples include: transport, normal, utility, acrobatic, limited, restricted, and provisional.

**Category A, with respect to helicopters:** Multiengine helicopters designed with engine and system isolation features specified in the applicable of Jordan Civil Aviation Regulation and capable of operations using takeoff and landing data scheduled under a critical engine failure concept which assures adequate designated surface area and adequate performance capability for continued safe flight or safe rejected takeoff

**Category B, with respect to helicopter:** Single-engine helicopter or multiengine helicopter which does not meet Category A standards. Category B helicopters have no guaranteed capability to continue safe flight in the event of engine failure and forced landing is assumed

**Category A, with respect to transport category rotorcraft:** Multiengine rotorcraft designed with engine and system isolation features specified in the applicable of Jordan Civil Aviation Regulation and utilizing scheduled takeoff and landing operations under a critical engine failure concept which assures adequate designated surface area and adequate performance capability for continued safe flight in the event of engine failure.

**Category B, with respect to transport category rotorcraft:** single-engine or multiengine rotorcraft which do not fully meet all Category A standards. Category B rotorcraft have no guaranteed stay-up ability in the event of engine failure and unscheduled landing is assumed.

**Category I:** An instrument approach procedure which provides for approaches to decision height DH of not less than 200 feet 65 meters and visibility of not less than ½ mile 800 meters or RVR 2400 RVR 1800 with operative touchdown zone and runway centerline lights.

**Category II operations, with respect to the operation of aircraft:** An instrument approach procedure which provides approaches to minima of less than DH 200 feet 65 meters / RVR 2400 to as low as DH 100 feet 30 meters/RVR 1200.

**Category III operations, with respect to the operation of aircraft:** An ILS approach to, and landing on, the runway of an airport using a Category III ILS instrument approach procedure issued by the C

**Category IIIa operations:** An ILS approach and landing with no decision height DH, or a DH below 100 feet 30 meters, and controlling runway visual range not less than 700 feet 200 meters.

**Category IIIb operations:** An ILS approach and landing with no DH, or with a DH below 50 feet 15 meters, and controlling runway visual range less than 700 feet 200 meters, but not less than 150 feet 50 meters.

**Category IIIc operations:** An ILS approach and landing with no DH and no runway visual range limitation.

**Category of aircraft:** Categorization of aircraft according to specified basic characteristics, e.g. airplane, helicopter, glider, free balloon.

**Causes:** Actions, omissions, events, conditions, or a combination thereof, which led to the accident or incident. The identification of causes does not imply the assignment of fault or the determination of administrative, civil or criminal liability.

**Ceiling:** The height above the ground or water of the base of the lowest layer of cloud below 6 000 meters 20 000 feet covering more than half the sky.

**Celsius temperature  $t^{\circ}\text{C}$ :** The Celsius temperature is equal to the difference  $t^{\circ}\text{C} = T - T_0$  between two thermodynamic temperatures T and  $T_0$  where  $T_0$  equals 273.15 kelvin.

**Certified aerodrome:** An aerodrome whose operator has been granted an aerodrome certificate.

**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.

**Certifying staff:** Personnel responsible for the release of an aircraft or a component after maintenance;

**Change-over point:** The point at which an aircraft navigating on an ATS route segment defined by reference to very high frequency omni directional radio ranges is expected to transfer its primary navigational reference from the facility behind the aircraft to the next facility ahead of the aircraft.

Note: Change-over points are established to provide the optimum balance in respect of signal strength and quality between facilities at all levels to be used and to ensure a common source of azimuth guidance for all aircraft operating along the same portion of a route segment.

**Channel of Standard Accuracy (CSA).** The specified level of positioning, velocity and timing accuracy that is available to any GLONASS user on a continuous, worldwide basis.

**Channel rate accuracy:** This is relative accuracy of the clock to which the transmitted channel bits are synchronized. For example, at a channel rate of 1.2 kbits/s, maximum error of one part in  $10^6$  implies the maximum allowed error in the clock is  $\pm 1.2 \times 10^{-3}$  Hz.

**Channel rate:** The rate at which bits are transmitted over the RF channel. These bits include those bits used for framing and error correction, as well as the information bits. For burst transmission, the channel rate refers to the instantaneous burst rate over the period of the burst.

**Circuit mode:** A configuration of the communications network which gives the appearance to the application of a dedicated transmission path.

**Civil aircraft:** Any aircraft other than Government aircraft.

**Class:**

a) As used with respect to the certification, ratings, privileges, and limitations of airmen, means a classification of aircraft within a category having similar operating characteristics. Examples include: single engine; multiengine; land; water; gyroplane; helicopter; airship; and free balloon; and

b) As used with respect to the certification of aircraft, means a broad grouping of aircraft having similar characteristics of propulsion, flight, or landing. Examples include: airplane; rotorcraft; glider; balloon; landplane; and seaplane.

**Clearance guidance sector.** The volume of airspace, inside the coverage sector, within which the azimuth guidance information provided is not proportional to the angular displacement of the aircraft, but is a constant left or right indication of which side the aircraft is with respect to the proportional guidance sector

**Clearance limit:** The point to which an aircraft is granted an air traffic control clearance.

**Clearway:** A defined rectangular area on the ground or water under the control of the appropriate authority, selected or prepared as a suitable area over which an aeroplane may make a portion of its initial climb to a specified height.

**Clearway:**

a) For turbine engine powered airplanes certificated, an area beyond the runway, not less than 500 feet 150 meters wide, centrally located about the extended centerline of the runway, and under the control of the airport authorities. The clearway is expressed in terms of a clearway plane, extending from the end of the runway with an upward slope not exceeding 1.25 percent, above which no object nor any terrain protrudes. However, threshold lights may protrude above the plane if their height above the end of the runway is 26 inches 65 cm or less and if they are located to each side of the runway.

b) For turbine engine powered airplanes certificated, an area beyond the takeoff runway extending no less than 300 feet 100 meters on either side of the extended centerline of the runway, at an elevation no higher than the elevation of the end of the runway, clear of all fixed obstacles, and under the control of the airport authorities.

**Climb out speed:** with respect to rotorcraft, means a referenced airspeed which results in a flight path clear of the height-velocity envelope during initial climb out.

**Climb phase:** The operating phase defined by the time during which the engine is operated in the climb operating mode.

**Climb resolution advisories RA.** A positive RA recommending a climb but not an increased climb.

**Close-out.** A command from a Mode S interrogator that terminates a Mode S link layer communication transaction

**Closest approach.** The occurrence of minimum range between own ACAS aircraft and the intruder. Thus range at closest approach is the smallest range between the two aircraft and time of closest approach is the time at which this occurs.

**Cloud of operational significance:** A cloud with the height of cloud base below 1 500 m 5 000 ft or below the highest minimum sector altitude, whichever is greater, or a cumulonimbus cloud or a towering cumulus cloud at any height.

**Cluster of interrogators.** Two or more interrogators with the same interrogator identifier (II) code, operating cooperatively to ensure that there is no interference to the required surveillance and data link performance of each of the interrogators, in areas of common coverage

**Cockpit voice recorder:** A device used to record the audio environment in the flight deck for the purpose of investigation of accidents and incidents. The Cockpit Voice Recorder records and stores the audio signals of the microphones and earphones of the pilots' headsets and of an area microphone installed in the cockpit.

**Coded chip.** A "1" or "0" output of the rate  $\frac{1}{2}$  or  $\frac{1}{4}$  convolutional code encoder.

**Code SS R:** The number assigned to a particular multiple pulse reply signal transmitted by a transponder in Mode A or Mode C.

**Collision avoidance logic:** The sub-system or part of ACAS that analyses data relating to an intruder and own aircraft, decides whether or not advisories are appropriate and, if so, generates the advisories. It includes the following functions: range and altitude tracking, threat detection and RA generation. It excludes surveillance.

**Command and control C2 link:** The data link between the remotely piloted aircraft and the remote pilot station for the purposes of managing the flight.

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

**Commercial operator:** A person who, for compensation or hire, engages in the carriage by aircraft in air commerce of persons or property, other than as an air carrier or foreign air carrier. Where it is doubtful that an operation is for "compensation or hire", the test applied is whether the carriage by air is merely incidental to the person's other business or is, in itself, a major enterprise for profit.

**Comm-A.** A 112-bit interrogation containing the 56-bit MA message field. This field is used by the uplink standard length message (SLM) and broadcast protocols.

**Comm-B.** A 112-bit reply containing the 56-bit MB message field. This field is used by the downlink SLM, ground-initiated and broadcast protocols.

**Comm-B Data Selector BDS.** The 8-bit BDS code determines the register whose contents are to be transferred in the MB field of a Comm-B reply. It is expressed in two groups of 4 bits each, BDS1 (most significant 4 bits) and BDS2 (least significant 4 bits)

**Comm-C.** A 112-bit interrogation containing the 80-bit MC message field. This field is used by the uplink extended length message (ELM) protocol.

**Comm-D.** A 112-bit reply containing the 80-bit MD message field. This field is used by the downlink ELM protocol

**Common mark :** A mark assigned by the international civil aviation organization to the common mark registering authority registering aircraft of an international operating agency on other than a national basis.

Note: All aircraft of an international operating agency which are registered on other than national biases will bear the same common mark.

**Common mark registering authority:** The authority maintaining the non-national register or, where appropriate, the part thereof, in which aircraft of an international operating agency are registered.

**Common point:** A point on the surface of the earth common to the tracks of two aircraft, used as a basis for the application of separation e.g. significant point, waypoint, navigation aid, fix.

**Communication centre:** An aeronautical fixed station which relays or retransmits telecommunication traffic from or to a number of other aeronautical fixed stations directly connected to it.

**Compatible land use:** The use of land that is identified under JCAR Part 150 as normally compatible with the outdoor noise environment or an adequately attenuated noise level reduction for any indoor activities involved at the location because the yearly day-night average sound level is at or below that identified for that or similar use under appendix A Table 1 of JCAR Part 150 or any CARC approved equivalent.

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

**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.

**Competency unit:** A discrete function consisting of a number of competency elements.

**Component:** Any engine, propeller, part or appliance;

**Competent authority :** Any authorized department, agency, institution or other body of the Jordanian Government, including the CARC or any successor information on associated operating limitations and performance correction.

**Computer:** A device which performs sequences of arithmetical and logical steps upon data without human intervention.

Note: When the word “computer” is used in this document it may de Note a computer complex, which includes one or more computers and peripheral equipment.

**Conference communications:** Communication facilities whereby direct speech conversation may be conducted between three or more locations simultaneously.

**Confidence level.** The probability that the true value of a parameter is within a certain interval around the estimate of its value.

Note.— The interval is usually referred to as the accuracy of the estimate.

**Configuration as applied to the aeroplane :** A particular combination of the position of the moveable elements, such as wing flaps and landing gear, etc, that affect the aerodynamic characteristics of the aeroplane.

**Configuration deviation list:** A list established by the organization responsible for the type design with the approval of the State of Design which identifies any external parts of an aircraft type which may be missing at the commencement of a flight, and which contains, where necessary, any information on associated operating limitations and performance correction.

**Congested area.** In relation to a city, town or settlement, any area which is substantially used for residential, commercial or recreational purposes.

**Congested hostile environment.** A hostile environment within a congested area.

**Connection establishment delay.** Connection establishment delay, as defined in ISO 8348, includes a component, attributable to the called subnetwork (SN) service user, which is the time between the SN-CONNECT indication and the SN-CONNECT response. This user component is due to actions outside the boundaries of the satellite subnetwork and is therefore excluded from the AMS(R)S specifications

**Connection:** A logical association between peer-level entities in a communication system.

**Consignment:** One or more packages of dangerous goods accepted by an operator from one shipper at one time and at one address, receipted for in one lot and moving to one consignee at one destination address.

**Consultation:** Discussion with a meteorologist or another qualified person of existing and/or expected meteorological conditions relating to flight operations; a discussion includes answers to questions.

**Continuing airworthiness:** All of the processes ensuring that, at any time in its operating life, the aircraft complies with the airworthiness requirements in force and is in a condition for safe operation;

**Contour line:** A line on a map or chart connecting points of equal elevation.

**Contributing factors:** Actions, omissions, events, conditions, or a combination thereof, which, if eliminated, avoided or absent, would have reduced the probability of the accident or incident occurring, or mitigated the severity of the consequences of the accident or incident. The identification of contributing factors does not imply the assignment of fault or the determination of administrative, civil or criminal liability.

**Control area:** A controlled airspace extending upwards from a specified limit above the earth.

**Control Motion Noise (CMN).** That portion of the guidance signal error which causes control surface, wheel and column motion and could affect aircraft attitude angle during coupled flight, but does not cause aircraft displacement from the desired course and/or glide path.

**Control zone:** A controlled airspace extending upwards from the surface of the earth to a specified upper limit.

**Controlled aerodrome:** An aerodrome at which air traffic control service is provided to aerodrome traffic.

Note: The term “controlled aerodrome” indicates that air traffic control service is provided to aerodrome traffic but does not necessarily imply that a control zone exists.

**Controlled airspace:** An airspace of defined dimensions within which air traffic control service is provided in accordance with the airspace classification.

Note: Controlled airspace is a generic term which covers ATS airspace Classes A, B, C, D and E .

**Controlled firing area:** A controlled firing area is established to contain activities, which if not conducted in a controlled environment, would be hazardous to nonparticipating aircraft.

**Controlled flight:** Any flight which is subject to an air traffic control clearance.

**Controller pilot data link communications:** A means of communication between controller and pilot, using data link for ATC communications.

**Conversion of a license:** The issue of a JCAR-FCL 1 license on the bases of a license issued by a foreign state.

**Coordinate system — conical:** A function is said to use conical coordinates when the decoded guidance angle varies as the minimum angle between the surface of a cone containing the receiver antenna, and a plane perpendicular to the axis of the cone and passing through its apex. The apex of the cone is at the antenna phase centre. For approach azimuth or back azimuth functions, the plane is the vertical plane containing the runway centre line. For elevation functions, the plane is horizontal.

**Coordinate system — planar:** A function is said to use planar coordinates when the decoded guidance angle varies as the angle between the plane containing the receiver antenna and a reference plane. For azimuth functions, the reference plane is the vertical plane containing the runway centre line and the plane containing the receiver antenna is a vertical plane passing through the antenna phase centre.

**Coordination interrogation:** A Mode S interrogation (uplink transmission) radiated by ACAS II or III and containing a resolution message.

**Coordination reply:** A Mode S reply (downlink transmission) acknowledging the receipt of a coordination interrogation by the Mode S transponder that is part of an ACAS II or III installation.

**Coordination.** The process by which two ACAS-equipped aircraft select compatible resolution advisories (RAs) by the exchange of resolution advisory complements (RACs).

**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.

**Core satellite constellation(s).** The core satellite constellations are GPS and GLONASS.

**Corrective RA.** A resolution advisory that advises the pilot to deviate from the current flight path.

**Coulomb:** The quantity of electricity transported in 1 second by a current of 1 ampere.

**Course line.** The locus of points nearest to the runway centre line in any horizontal plane at which the DDM is zero.

**Course sector.** A sector in a horizontal plane containing the course line and limited by the loci of points nearest to the course line at which the DDM is 0.155.

**Coverage sector.** A volume of airspace within which service is provided by a particular function and in which the signal power density is equal to or greater than the specified minimum.

**Credit:** Recognition of alternative means or prior qualifications.

**Crew member:** A person assigned by an operator to duty on an aircraft during a flight duty period.

**Critical engines:** Any engine whose failure gives the most adverse effect on the aircraft characteristics relative to the case under the consideration.

Note: In some aircraft there may be more than one equally critical engine . in this case , the expression. “ the critical engine “ means one of those of critical engine.

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

**Crossing encounter:** An encounter in which the altitude separation of the two aircraft exceeds 100 ft at the beginning and at the end of the encounter window, and the relative vertical position of two aircraft at the end of the encounter window is reversed from that at the beginning of the encounter window.

**Cruise climb:** An aeroplane cruising technique resulting in a net increase in altitude as the aeroplane mass decreases.

**Cruise relief pilot:** A flight crew member who is assigned to perform pilot tasks during cruise flight, to allow the pilot-in-command or a co-pilot to obtain planned rest.

**Cruising level:** A level maintained during a significant portion of a flight.

**Culture:** All man-made features constructed on the surface of the Earth, such as cities, railways and canals.

**Current data authority:** The designated ground system through which a CPDLC dialogue between a pilot and a controller currently responsible for the flight is permitted to take place.

**Current flight plan:** The flight plan, including changes, if any, brought about by subsequent clearances.

Note: When the word “message” is used as a suffix to this term, it denotes the content and format of the current flight plan data sent from one unit to another.

**Current slot.** The slot in which a received transmission begins.

**Cyclic redundancy check:** A mathematical algorithm applied to the digital expression of data that provides a level of assurance against loss or alteration of data.

**Cycle.** The term “cycle” used in this chapter refers to one complete pass through the sequence of functions executed by ACAS II or ACAS III, nominally once a second.

### Subpart-D

**Danger area:** An airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times.

**Dangerous goods:** Articles or substances which are capable of posing a risk to health, safety, property or the environment and which are shown in the list of dangerous goods in the Technical Instructions or which are classified according to those Instructions.

**Dangerous goods accident:** An occurrence associated with and related to the transport of dangerous goods by air which results in fatal or serious injury to a person or major property or environmental damage.

**Dangerous goods incident:** An occurrence, other than a dangerous goods accident, associated with and related to the transport of dangerous goods by air, not necessarily occurring on board an aircraft, which results in injury to a person, property or environmental damage, fire, breakage, spillage, leakage of fluid or radiation or other evidence that the integrity of the packaging has not been maintained. Any occurrence relating to the transport of dangerous goods which seriously jeopardizes the aircraft or its occupants is also deemed to constitute a dangerous goods incident.

**Data Accuracy:** A degree of conformance between the estimated or measured value and the true value.

**Data completeness.** The degree of confidence that all of the data needed to support the intended use is provided.

**Data convention:** An agreed set of rules governing the manner or sequence in which a set of data may be combined into a meaningful communication.

**Data circuit-terminating equipment (DCE):** A DCE is a network provider equipment used to facilitate communications between DTEs

**Data format.** A structure of data elements, records and files arranged to meet standards, specifications or data quality requirements.

**Data integrity (assurance level).** A degree of assurance that an aeronautical and its value has not been lost or altered since the origination or authorized amendment.

**Data Link capability report:** Information in a Comm-B reply identifying the complete Mode S communications capabilities of the aircraft installation.

**Data Link communications:** A form of communication intended for the exchange of messages via a data link.

**Data Link Entity (DLE).** A protocol state machine capable of setting up and managing a single data link connection.

**Data link flight information services:** The provision of FIS via data link.

**Data link initiation capability:** A data link application that provides the ability to exchange addresses, names and version numbers necessary to initiate data link applications.

**Data link service (DLS) sublayer:** The sublayer that resides above the MAC sublayer. For VDL Mode 4, the DLS sublayer resides above the VSS sublayer. The DLS manages the transmit queue, creates and destroys DLEs for connection oriented communications, provides facilities for the LME to manage the DLS, and provides facilities for connectionless communications

**Data processing:** A systematic sequence of operations performed on data.

Note: Examples of operations are the merging, sorting, computing or any other transformation or rearrangement with the object of extracting or revising information, or of altering the representation of information.

**Data product:** Data set or data set series that conforms to a data product specification.

**Data product specification:** Detailed description of a data set or data set series together with additional information that will enable it to be created, supplied to and used by another party.

Note: A data product specification provides a description of the universe of discourse and a specification for mapping the universe of discourse to a data set. It may be used for production, sales, end-use or other purpose.

Data quality. A degree or level of confidence that the data provided meet the requirements of the data user in terms of accuracy, resolution, integrity (or equivalent assurance level), traceability, timeliness, completeness and format.

**Data resolution.** A number of units or digits to which a measured or calculated value is expressed and used.

**Data set:** Identification collection of data.

**Data set series:** Collection of data sets sharing the same product specification.

**Data signalling rate.** Data signalling rate refers to the passage of information per unit of time, and is expressed in bits/second. Data signalling rate is given by the

$$\sum_{i=1}^m \frac{1}{T_i} \log_2 n_i$$

formula: where m is the number of parallel channels,  $T_i$  is the minimum interval for the  $i$ th channel expressed in seconds,  $n_i$  is the number of significant conditions of the modulation in the  $i$ th channel.

Note 1.— a) For a single channel (serial transmission) it reduces to  $(1/T)\log_2 n$ ; with a two-condition modulation ( $n = 2$ ), it is  $1/T$ . b) For a parallel transmission with equal minimum intervals and equal number of significant conditions on each channel, it is  $m(1/T)\log_2 n$  ( $m(1/T)$  in case of a two-condition modulation). Note 2.— In the above definition, the term “parallel channels” is interpreted to mean: channels, each of which carries an integral part of an information unit, e.g. the parallel transmission of bits forming a character. In the case of a circuit comprising a number of channels, each of which carries information “independently”, with the sole purpose of increasing the traffic handling capacity, these channels are not to be regarded as parallel channels in the context of this definition.

**Data Terminal Equipment (DTE).** A DTE is an endpoint of a subnetwork connection

**Data timeliness.** The degree of confidence that the data is applicable to the period of its intended use.

**Data traceability.** The degree that a system or a data product can provide a record of the changes made to that product and thereby enable an audit trail to be followed from the end-user to the originator.

**Data transfer delay (95th percentile).** The 95th percentile of the statistical distribution of delays for which transit delay is the average.

**Data transit delay.** In accordance with ISO 8348, the average value of the statistical distribution of data delays. This delay represents the subnetwork delay and does not include the connection establishment delay.

**Database:** One or more files of data so structured that appropriate applications may draw from the files and update them.

Note: This primarily refers to data stored electronically and accessed by computer rather than in files of physical records.

**Date of manufacture:** The date of issue of the document attesting that the individual aircraft or engine as appropriate conforms to the requirements of the type or the date of an analogous document.

**Datum:** Any quantity or set of quantities that may serve as a reference or basis for the calculation of other quantities .

**Day-night average sound level:** The 24-hour average sound level, in decibels, for the period from midnight to midnight, obtained after the addition of ten decibels to sound levels for the periods between midnight and 7 a.m., and between 10 p.m., and midnight, local time. The symbol for DNL is Ldn.

**Decision altitude or decision height:** A specified altitude or height in a 3D instrument approach operation at which a missed approach must be initiated if the required visual reference to continue the approach has not been established.

Note 1: Decision altitude is referenced to mean sea level and decision height DH is referenced to the threshold elevation.

Note 2: The required visual reference means that section of the visual aids or the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position in relation to the desired flight path in Category 111 operation with a decision height the required visual reference is that specified for the particular procedure and operation.

Note 3: For convenience where both expressions are used they may be written in the form “decision altitude / height “ and abbreviated “**DA /H**”.

**Decision Height helicopters:** with respect to the operation of aircraft, means the wheel height above the runway elevation by which a go-around must be initiated unless adequate visual reference has been established and the aircraft position and approach path have been visually assessed as satisfactory to continue the approach and landing in safety

**Declared capacity:** A measure of the ability of the Air Traffic Control system or any of its subsystems or operating positions to provide service to aircraft during normal activities. It is expressed as the number of aircraft entering a specified portion of airspace in a given period of time, taking due account of weather, Air Traffic Control unit configuration, staff and equipment available, and any other factors that may affect the workload of the controller responsible for the airspace.

**Declared distances:**

a )Take-off run available TORA. The length of runway declared available and suitable for the ground run of an aeroplane taking off.

b) Take-off distance available TODA. The length of the take-off run available plus the length of the clearway, if provided.

c) Accelerate-stop distance available ASDA. The length of the take-off run available plus the length of the stopway, if provided.

d) Landing distance available LDA. The length of runway which is declared available and suitable for the ground run of an aeroplane landing.

**Defined point after take-off (DPATO).** The point, within the take-off and initial climb phase, before which the helicopter's ability to continue the flight safely, with one engine inoperative, is not assured and a forced landing may be required.

Note.— Defined points apply to helicopters operating in performance Class 2 only.

**Defined point before landing (DPBL).** The point, within the approach and landing phase, after which the helicopter's ability to continue the flight safely, with one engine inoperative, is not assured and a forced landing may be required.

Note.— Defined points apply to helicopters operating in performance Class 2 only.

**Degree Celsius °C:** The special name for the unit Kelvin for use in stating values of Celsius temperature.

**Degree of standardized test distortion.** The degree of distortion of the restitution measured during a specific period of time when the modulation is perfect and corresponds to a specific text.

**De-icing/anti-icing facility:** A facility where frost, ice or snow is removed de-icing from the aeroplane to provide clean surfaces, and/or where clean surfaces of the aeroplane receive protection anti-icing against the formation of frost or ice and accumulation of snow or slush for a limited period of time.

**De-icing/anti-icing pad:** An area comprising an inner area for the parking of an aeroplane to receive de-icing/anti-icing treatment and an outer area for the maneuvering of two or more mobile de-icing/anti-icing equipment.

**Dependent parallel approaches:** Simultaneous approaches to parallel or near-parallel instrument runways where radar separation minima between aircraft on adjacent extended runway centre lines are prescribed.

**Dependent parallel approaches:** Simultaneous approaches to parallel or near-parallel instrument runways where radar separation minima between aircraft on adjacent extended runway centre lines are prescribed.

**Derivative version:** An aircraft gas turbine engine of the same generic family as an originally type-certificated engine and having features which retain the basic core

engine and combustor design of the original model and for which other factors, as judged by the certificating authority, have not changed.

**Derived version of a helicopter:** A helicopter which, from the point of view of airworthiness, is similar to the noise certificated prototype but incorporates changes in type design which may affect its noise characteristics adversely,

Note 1: In applying the standards, a helicopter that is based on an existing prototype but which is considered by the certificating authority to be a new type design for airworthiness purposes shall nevertheless be considered as a derived version if the noise source characteristics are judged by the certificating authority to be the same as the prototype:

Note 2: “Adversely” refers to an increase of more than 0.3 dB in any one of the noise certification levels.

**Derived version of an aeroplane:** An aeroplane which, from the point of view of airworthiness, is similar to the noise certificated prototype but incorporates changes in type design which may affect its noise characteristics adversely.

Note 1: Where the Civil Aviation Regulatory Commission certificating authority finds that the proposed change in design, configuration, power or mass is so extensive that a substantially new investigation of compliance with the applicable airworthiness regulations is required, the aeroplane should be considered to be a new type design rather than a derived version,

Note 2: “Adversely” refers to an increase of more than 0.10 dB in any one of the noise certification levels unless the cumulative effects of changes in type design are tracked by an approved procedure in which case “adversely” refers to a cumulative increase in the noise level in any one of the noise certification levels of more than 0.30 dB or the margin of compliance, whichever is smaller.

**Design landing mass:** The maximum mass of the aircraft at which, for structural design purpose, it is assumed that it will be planned to land

**Design take-off mass:** The maximum mass at which the aircraft for structural design purposes, is assumed to be planned to be at the start of the takeoff-run.

**Design taxiing mass:** The maximum mass of the aircraft at which structural provision is made for load liable to occur during use of aircraft on the ground prior to the start of the take-off.

**Designated operational coverage (DOC) area:** The area in which a particular service is provided and in which the service is afforded frequency protection. Note.— This area may, after proper coordination to ensure frequency protection, extend to areas outside the allotment areas contained in Appendix S27 to the Radio Regulations.

**Designated Postal Operator :** Any governmental or non- governmental entity officially designated by a Universal Postal Union (UPU) member country to operator postal services and to fulfill the related obligations arising from the acts of the UPU Convention on its territory

**Destination alternate:** An alternate aerodrome at which an aircraft would be able to land should it become either impossible or inadvisable to land at the aerodrome of intended landing. Note: The aerodrome from which a flight departs may also be an en-route or a destination alternate aerodrome for that flight.

**Detect and avoid:** The capability to see, sense or detect conflicting traffic or other hazards and take the appropriate action.

**Difference in depth of modulation(DDM):** The percentage modulation depth of the larger signal minus the percentage modulation depth of the smaller signal, divided by 100.

**Digital elevation model:** The representation of terrain surface by continuous elevation values at all intersections of a defined grid, referenced to common datum. Note: Digital Terrain Model DTM is sometimes referred to as DEM.

**Direct link service (DLS).** A data communications service which makes no attempt to automatically correct errors, detected or undetected, at the link layer of the air-ground communications path. (Error control may be effected by end-user systems.)

**Direct transit arrangements:** Special arrangements approved by the public authorities concerned by which traffic which is pausing briefly in its passage through the Contracting State may remain under their direct control.

**Discrete code:** A four-digit SSR code with the last two digits not being “00”.

**Discrete source damage:** Structural damage of the aeroplane that is likely to result from: impact with a bird, uncontained fan blade failure, uncontained engine failure, uncontained high energy rotating machinery failure, or similar causes.

**Directory service (DIR).** A service, based on the ITU-T X.500 series of recommendations, providing access to and management of structured information relevant to the operation of the ATN and its users.

**Displaced threshold:** A threshold not located at the extremity of a runway.

**Displacement sensitivity (localizer).** The ratio of measured DDM to the corresponding lateral displacement from the appropriate reference line.

**Distance measuring equipment (DME) dead time.** A period immediately following the decoding of a valid interrogation during which a received interrogation will not cause a reply to be generated.

**Distance measuring equipment (DME) /N.** Distance measuring equipment, primarily serving operational needs of en-route or TMA navigation, where the “N” stands for narrow spectrum characteristics.

**Distance measuring equipment (DME) /P.** The distance measuring element of the MLS, where the “P” stands for precise distance measurement. The spectrum characteristics are those of DME/N.

**Distance measuring equipment (DME) /P.** The distance measuring element of the MLS, where the “P” stands for precise distance measurement. The spectrum characteristics are those of DME/N.

**Distress phase:** A situation wherein there is a reasonable certainty that an aircraft and its occupants are threatened by grave and imminent danger and require immediate assistance.

**Ditching:** The forced landing of an aircraft on water.

**Doppler shift:** The frequency shift observed at a receiver due to any relative motion between transmitter and receiver.

**Double channel simplex:** Simplex using two frequency channels, one in each direction.

Note: This method was sometimes referred to as cross band.

**Downlink ELM (DELM).** A term referring to extended length downlink communication by means of 112-bit Mode S Comm-D replies, each containing the 80-bit Comm-D message field (MD).

**Downlink.** A term referring to the transmission of data from an aircraft to the ground. Mode S air-to-ground signals are transmitted on the 1 090 MHz reply frequency channel

**Downstream clearance:** A clearance issued to an aircraft by an air traffic control unit that is not the current controlling authority of that aircraft.

**Downstream data authority:** A designated ground system, different from the current data authority through which the pilot can contact an appropriate ATC unit for the purposes of receiving a downstream clearance.

**Drop zone:** Any pre-determined area upon which parachutists or objects land after making an intentional parachute jump or drop. The center-point target of a drop zone

is expressed in nautical miles from the nearest VOR facility when 30 nautical miles or less; or from the nearest airport, town, or city depicted on the appropriate Coast and Geodetic Survey World Aeronautical Chart, when the nearest VOR facility is more than 30 nautical miles from the drop zone.

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

**Duplex:** A method in which telecommunication between two stations can take place in both directions simultaneously.

**Duty:** Any task that flight or cabin crew members are required by the operator to perform, including, for example, flight duty, administrative work, training, positioning and standby when it is likely to induce fatigue.

**Duty period:** A period which starts when a flight or cabin crew member is required by an operator to report for or to commence a duty and ends when that person is free from all duties.

## Subpart-E

**Economic Operating License:** An authorization issued by the CARC, for the carriage by air of passengers, mail and/or cargo, for hire or reward.

**EDTO critical fuel:** The fuel quantity necessary to fly to an en-route alternate aerodrome considering, at the most critical point on the route, the most limiting system failure.

**EDTO significant system:** An aeroplane system whose failure or degradation could adversely affect the safety particular to an EDTO flight, or whose continued functioning is specifically important to the safe flight and landing of an aeroplane during an EDTO diversion.

**Effective acceptance bandwidth:** The range of frequencies with respect to the assigned frequency for which reception is assured when all receiver tolerances have been taken into account.

**Effective adjacent channel rejection:** The rejection that is obtained at the appropriate adjacent channel frequency when all relevant receiver tolerances have been taken into account.

**Effective coverage.** The area surrounding an NDB within which bearings can be obtained with an accuracy sufficient for the nature of the operation concerned.

**Effective intensity:** The effective intensity of a flashing light is equal to the intensity of a fixed light of the same color which will produce the same visual range under identical conditions of observation.

**Effective margin.** That margin of an individual apparatus which could be measured under actual operating conditions.

**Electronic aeronautical chart display:** An electronic device by which flight crews are enabled to execute, in a convenient and timely manner, route planning, route monitoring and navigation by displaying required information.

**Elevated heliport:** A heliport located on a raised structure on land.

**Elevation:** The vertical distance of a point or a level, on or affixed to the surface of the earth, measured from mean sea level.

**Ellipsoid height geodetic height:** The height related to the reference ellipsoid, measured along the ellipsoidal outer normal through the point in question.

**Emergency locator transmitter:** A generic term describing equipment which broadcast distinctive signals on designated frequencies and, depending on

application, may be automatically activated by impact or be manually activated. An ELT may be any of the following:

- a) Automatic fixed ELT ELTAF. An automatically activated ELT which is permanently attached to an aircraft.
- b) Automatic portable ELT ELTAP. An automatically activated ELT which is rigidly attached to an aircraft but readily removable from the aircraft.
- c) Automatic deployable ELT ELTAD. An ELT which is rigidly attached to an aircraft and which is automatically deployed and activated by impact, and, in some cases, also by hydrostatic sensors. Manual deployment is also provided.
- d) Survival ELT ELTS. An ELT which is removable from an aircraft, stowed so as to facilitate its ready use in an emergency, and manually activated by survivors.

**Emergency phase:** A generic term meaning, as the case may be, uncertainty phase, alert phase or distress phase.

**Emissions:** gases and particles emitted as a result of fossil fuel combustion.

**Encounter class.** Encounters are classified according to whether or not the aircraft are transitioning at the beginning and end of the encounter window, and whether or not the encounter is crossing.

**Encounter window.** The time interval [ $tca - 40$  s,  $tca + 10$  s].

**Encounter.** For the purposes of defining the performance of the collision avoidance logic, an encounter consists of two simulated aircraft trajectories. The horizontal coordinates of the aircraft represent the actual position of the aircraft but the vertical coordinate represents an altimeter measurement of altitude.

**End-to-end:** Pertaining or relating to an entire communication path, typically from :

- a) the interface between the information source and the communication system at the transmitting end to
- b) the interface between the communication system and the information user or processor or application at the receiving end.

**End-user:** An ultimate source and/or consumer of information.

**Energy per symbol to noise density ratio:** The ratio of the average energy transmitted per channel symbol to the average noise power in a 1 Hz bandwidth, usually expressed in dB. For A-BPSK and A-QPSK, one channel symbol refers to one channel bit.

**En-route phase- helicopters :** That part of the flight from the end of the take-off and initial climb phase to the commencement of the approach and landing phase.

Note.— Where adequate obstacle clearance cannot be guaranteed visually, flights must be planned to ensure that obstacles can be cleared by an appropriate margin. In the event of failure of the critical engine, operators may need to adopt alternative procedures.

**Engine:** A unit used or intended to be used for aircraft propulsion. It consists of at least those components and equipment necessary for functioning and control, but excludes the propeller/rotors if applicable.

**Enhanced vision system:** A system to display electronic real-time images of the external scene achieved through the use of image sensors.

**Envelope:** The enclosure in which the lifting means is contained.

**Environment:** Has the same meaning as “environment” as defined in Environmental Protection Law, No. 52 of 2006, - “The surroundings which include the living and nonliving beings, the materials contained, and what surrounds it, such as air, water, soil, and interactions of any of them, as well as the establishments built by the human being.”

**Equivalent airspeed:** The calibrated airspeed of an aircraft corrected for adiabatic compressible flow for the particular altitude. Equivalent airspeed is equal to calibrated airspeed in standard atmosphere at sea level.

**Equivalent Isotropically Radiated Power (EIRP).** The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna (absolute or isotropic gain).

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

**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.

**Essential radio navigation service:** A radio navigation service whose disruption has a significant impact on operations in the affected airspace or aerodrome.

**Established Track.** A track generated by ACAS air-air surveillance that is treated as the track of an actual aircraft.

**Estimated elapsed time:** The estimated time required to proceed from one significant point to another.

**Estimated off-block time:** The estimated time at which the aircraft will commence movement associated with departure.

**Estimated time of arrival:** For IFR flights, the time at which it is estimated that the aircraft will arrive over that designated point, defined by reference to navigation aids, from which it is intended that an instrument approach procedure will be commenced, or, if no navigation aid is associated with the aerodrome, the time at which the aircraft will arrive over the aerodrome.

For VFR flights, the time at which it is estimated that the aircraft will arrive over the aerodrome.

**Exception:** A provision in this Part which excludes a specific item of dangerous goods from the requirements normally applicable to that item.

**Exemption:** An authorization, other than an approval, granted by an appropriate CARC providing relief from the provisions of the Technical Instructions.

**Exhaust nozzle:** In the exhaust emissions sampling of gas turbine engines where the jet effluxes are not mixed (as in some turbofan engines for example) the nozzle considered is that for the gas generator (core) flow only. Where, however, the jet efflux is mixed the nozzle considered is the total exit nozzle.

**Expected approach time:** The time at which Air Traffic Control expects that an arriving aircraft, following a delay, will leave the holding fix to complete its approach for a landing.

Note: The actual time of leaving the holding fix will depend upon the approach clearance.

**Extended diversion time operation:** Any operation by an aeroplane with two or more turbine engines where the diversion time to an en-route alternate aerodrome is greater than the threshold time established by the State of the operator.

**Extended Golay Code.** An error correction code capable of correcting multiple bit errors

**Extended Length Message (ELM).** A series of Comm-C interrogations (uplink ELM) transmitted without the requirement for intervening replies, or a series of Comm-D replies (downlink ELM) transmitted without intervening interrogations.

**Extended range operation:** Any flight by an aeroplane with two turbine engines where the flight time at the one engine inoperative cruise speed in ISA and still air

conditions, from a point on the route to an adequate alternate aerodrome, is greater than the threshold time approved by the State of the Operator.

**External equipment helicopter:** Any instrument, mechanism, part, apparatus, appurtenance, or accessory that is attached to or extends from the helicopter exterior but is not used nor is intended to be used for operating or controlling a helicopter in flight and is not part of an airframe or engine.

**External load:** A load that is carried, or extends, outside of the aircraft fuselage.

**External-load attaching:** The structural components used to attach an external load to an aircraft, including external-load containers, the backup structure at the attachment points, and any quick-release device used to jettison the external load.

## Subpart-F

**Factor of safety:** A design factor used to provide for the possibility of loads greater than those assumed, and for uncertainties in design and fabrication.

**Facility Performance Category I — ILS.** An ILS which provides guidance information from the coverage limit of the ILS to the point at which the localizer course line intersects the ILS glide path at a height of 60 m (200 ft) or less above the horizontal plane containing the threshold.

**Facility Performance Category II — ILS.** An ILS which provides guidance information from the coverage limit of the ILS to the point at which the localizer course line intersects the ILS glide path at a height of 15 m (50 ft) or less above the horizontal plane containing the threshold.

**Facility Performance Category III — ILS.** An ILS which, with the aid of ancillary equipment where necessary, provides guidance information from the coverage limit of the facility to, and along, the surface of the runway.

**Fan marker beacon:** A type of radio beacon, the emissions of which radiate in a vertical fan-shaped pattern.

**Farad:** The capacitance of a capacitor between the plates of which there appears a difference of potential of 1 volt when it is charged by a quantity of electricity equal to 1 coulomb.

**Fatigue:** A physiological state of reduced mental or physical performance capability resulting from sleep loss or extended wakefulness, circadian phase, or workload mental and/or physical activity that can impair a crew member's alertness and ability to safely operate an aircraft or perform safety-related duties.

**Fatigue risk management system:** A data-driven means of continuously monitoring and managing fatigue-related safety risks, based upon scientific principles and knowledge as well as operational experience that aims to ensure relevant personnel are performing at adequate levels of alertness.

**Feature:** Abstraction of real world phenomena .

**Feature attribute:** Characteristic of a feature .

Note: A feature attribute has a name, a data type and a value domain associated with it.

**Feature operation:** Operation that every instance of a feature type may perform .

Note: An operation upon the feature type dam is to raise the dam. The result of this operation is to raise the level of water in the reservoir.

**Feature relationship:** Relationship that links instances of one feature type with instances of the same or a different feature type .

**Feature type:** Class of real world phenomena with common properties.

Note: In a feature catalogue, the basic level of classification is the feature type.

**Filed flight plan:** The flight plan as filed with an ATS unit by the pilot or a designated representative, without any subsequent changes.

**Final approach:** That part of an instrument approach procedure which commences at the specified final approach fix or point, or where such a fix or point is not specified:

a) at the end of the last procedure turn, base turn or inbound turn of a racetrack procedure, if specified; or

b ) at the point of interception of the last track specified in the approach procedure; and

c ) ends at a point in the vicinity of an aerodrome from which:

1) a landing can be made; or

2) a missed approach procedure is initiated.

**Final approach and take-off area:** A defined area over which the final phase of the approach maneuver to hover or landing is completed and from which the take-off maneuver is commenced. Where the Final approach and take-off area is to be used by performance Class 1 helicopters, the defined area includes the rejected take-off area available.

**Final approach and take-off area (FATO)- helicopter .** A defined area over which the final phase of the approach manoeuvre to hover or landing is completed and from which the take-off manoeuvre is commenced. Where the FATO is to be used by helicopters operating in performance Class 1, the defined area includes the rejected take-off area available.

**Final approach fix or point:** That fix or point of an instrument approach procedure where the final approach segment commences.

**Final approach segment:** That segment of an instrument approach procedure in which alignment and descent for landing are accomplished.

**Final Approach (FA) mode.** The condition of DME/P operation which supports flight operations in the final approach and runway regions.

**Final take off speed:** the speed of the airplane that exists at the end of the takeoff path in the en-route configuration with one engine inoperative.

**Fire resistant:**

a) with respect to sheet or structural members means the capacity to withstand the heat associated with fire at least as well as aluminum alloy in dimensions appropriate for the purpose for which they are used; and

b) with respect to fluid-carrying lines, fluid system parts, wiring, air ducts, fittings, and power plant controls, means the capacity to perform the intended functions under the heat and other conditions likely to occur when there is a fire at the place concerned.

**Fireproof material:**

a) with respect to materials and parts used to confine fire in a designated fire zone, means the capacity to withstand at least as well as steel in dimensions appropriate for the purpose for which they are used, the heat produced when there is a severe fire of extended duration in that zone; and

b) with respect to other materials and parts, means the capacity to withstand the heat associated with fire at least as well as steel in dimensions appropriate for the purpose for which they are used.

**Fireproof:** The capability to withstand the application of heat by a flame for period of 15 minutes.

**Fire resistant:** The capability to withstand the application of heat by a flame for period of 5 minutes.

**Fixed light:** A light having constant luminous intensity when observed from a fixed point.

**Flame resistant:** Not susceptible to combustion to the point of propagating a flame, beyond safe limits, after the ignition source is removed.

**Flammable:** With respect to a fluid or gas, means susceptible to igniting readily or to exploding.

**Flap extended speed:** The highest speed permissible with wing flaps in a prescribed extended position.

**Flash resistant:** Not susceptible to burning violently when ignited.

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

**Flight Data Analysis:** A process of analyzing recorded flight data in order to improve the safety of flight operations.

**Flight Data Recorder:** Device used to record specific aircraft performance parameters. The purpose of a FDR system is to collect and record data from a variety of airplane sensors onto a medium designed to survive an accident.

Flight recorders comprise two systems, a flight data recorder FDR and a cockpit voice recorder CVR. Sometimes, both FDR and CVR functions are combined into a single unit ICAO Definition: Combination recorders. Combination recorders need to meet the flight recorder equipage requirements as specifically indicated in ICAO Annex 6 - Operation of Aircraft.

**Flight documentation:** Written or printed documents, including charts or forms, containing meteorological information for a flight.

**Flight duty period:** A period which commences when a flight or cabin crew member is required to report for duty that includes a flight or a series of flights and which finishes when the aeroplane finally comes to rest and the engines are shut down at the end of the last flight on which he/she is a crew member.

**Flight engineer:** A Flight Engineer is a person who complies with the requirements in JCAR-FCL4

**Flight information centre:** A unit established to provide flight information service and alerting service.

**Flight information region:** An airspace of defined dimensions within which flight information service and alerting service are provided.

**Flight information service FIS:** A service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights.

**Flight level:** A surface of constant atmospheric pressure which is related to a specific pressure datum, 1 013.2 hectopascals hPa, and is separated from other such surfaces by specific pressure intervals.

Note 1: A pressure type altimeter calibrated in accordance with the Standard Atmosphere:

- a) when set to a QNH altimeter setting, will indicate altitude;

- b) when set to QFE altimeter setting, will indicate height above the QFE reference datum;
- c) when set to a pressure of 1 013.2 hPa, may be used to indicate flight levels.,  
Note 2: The terms “height” and “altitude”, used in Note 1 above, indicate altimetric rather than geometric heights and altitudes.

**Flight manual:** A manual, associated with the certificate of airworthiness, containing limitations within which the aircraft is to be considered airworthy, and instructions and information necessary to the flight crew members for the safe operation of the aircraft.

**Flight operations officer/flight dispatcher:** A person designated by the operator to engage in the control and supervision of flight operations, whether licensed or not, suitably qualified, who supports, briefs and/or assists the pilot-in-command in the safe conduct of the flight.

**Flight path monitoring:** The use of Air Traffic Service surveillance systems for the purpose of providing aircraft with information and advice relative to significant deviations from nominal flight path, including deviations from the terms of their air traffic control clearances.

Note: Some applications may require a specific technology, e.g. radar, to support the function of flight path monitoring.

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

Note: Specifications for flight plans are contained in Annex 2. A Model Flight Plan Form is contained in Appendix 2 to this document.

**Flight procedures trainer:** See Flight simulation training device.

**Flight recorder:** Any type of recorder installed in the aircraft for the purpose of complementing accident/incident investigation.

**Flight safety documents system:** A set of inter-related documentation established by the operator, compiling and organizing information necessary for flight and ground operations, and comprising, as a minimum, the operations manual and the operator’s maintenance control manual.

**Flight simulation training device:** Any one of the following three types of apparatus in which flight conditions are simulated on the ground:

- a) 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:

b) 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;

c) 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.

**Flight simulator:** See Flight simulation training device.

**Flight status:** An indication of whether a given aircraft requires special handling by air traffic services units or not.

**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.

**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.

Note 1: The State may provide guidance in those cases where the definition of flight time does not describe or permit normal practices. Examples are: crew change without stopping the rotors; and rotors running engine wash procedure following a flight. In any case, the time when rotors are running between sectors of a flight is included within the calculation of flight time

Note 2: This definition is intended only for the purpose of flight and duty time regulations.

**Flight visibility:** The visibility forward from the cockpit of an aircraft in flight.

**Flow control:** Measures designed to adjust the flow of traffic into a given airspace, along a given route, or bound for a given aerodrome, so as to ensure the most effective utilization of the airspace.

**Foot ft:** The length equal to 0.304 8 metre exactly.

**Forecast:** A statement of expected meteorological conditions for a specified time or period, and for a specified area or portion of airspace.

**Foreign air carrier:** any person other than a citizen of Jordan, who undertakes directly, by lease or other arrangement, to engage in air transportation.

**Foreign air commerce:** the carriage by aircraft of persons or property for compensation or hire, or the carriage of mail by aircraft, or the operation or navigation of aircraft in the conduct or furtherance of a business or vocation, in commerce between a place in Jordan and any place outside thereof; whether such commerce moves wholly by aircraft or partly by aircraft and partly by other forms of transportation.

**Foreign air transportation:** The carriage by aircraft of persons or property as a common carrier for compensation or hire, or the carriage of mail by aircraft, in commerce between a place in Jordan and any place outside of Jordan, whether that commerce moves wholly by aircraft or partly by aircraft and partly by other forms of transportation.

**Forward error correction:** The process of adding redundant information to the transmitted signal in a manner which allows correction, at the receiver, of errors incurred in the transmission.

**Forward wing:** A forward lifting surface of a canard configuration or tandem-wing configuration airplane. The surface may be a fixed, movable, or variable geometry surface, with or without control surfaces.

**Frame.** The link layer frame is composed of a sequence of address, control, FCS and information fields. For VDL Mode 2, these fields are bracketed by opening and closing flag sequences, and a frame may or may not include a variable-length information field

**Frangible object:** An object of low mass designed to break, distort or yield on impact so as to present the minimum hazard to aircraft.

**Free Balloon:** An un-tethered balloon.

**Freefall:** The portion of a parachute jump or drop between aircraft exit and parachute deployment in which the parachute is activated manually by the parachutist at the parachutist's discretion or automatically, or in the case of an object, is activated automatically.

**Frequency channel:** A continuous portion of the frequency spectrum appropriate for a transmission utilizing a specified class of emission

Note: The classification of emissions and information relevant to the portion of the frequency spectrum appropriate for a given type of transmission bandwidths are specified in the Radio Regulations.

**Front course sector.** The course sector which is situated on the same side of the localizer as the runway.

**Fully automatic relay installation:** A teletypewriter installation where interpretation of the relaying responsibility in respect of an incoming message and the resultant setting up of the connections required to effect the appropriate retransmissions is carried out automatically, as well as all other normal operations of relay, thus obviating the need for operator intervention, except for supervisory purposes.

**Function.** A particular service provided by the MLS, e.g. approach azimuth guidance, back azimuth guidance or basic data, etc.

## Subpart-G

**Gain-to-noise temperature ratio:** The ratio, usually expressed in dB/K, of the antenna gain to the noise at the receiver output of the antenna subsystem. The noise is expressed as the temperature that a 1 ohm resistor must be raised to produce the same noise power density.

**Gaussian filtered frequency shift keying (GFSK).** A continuous-phase, frequency shift keying technique using two tones and a Gaussian pulse shape filter

**GAMET area forecast:** An area forecast in abbreviated plain language for low-level flights for a flight information region or sub-area thereof, prepared by the meteorological office designated by the meteorological authority concerned and exchanged with meteorological offices in adjacent flight information regions, as agreed between the meteorological authorities concerned.

**General aviation operation:** An aircraft operation other than a commercial air transport operation or an aerial work operation.

**General Formatter/Manager (GFM).** The aircraft function responsible for formatting messages to be inserted in the transponder registers. It is also responsible for detecting and handling error conditions such as the loss of input data

**Geodesic distance:** The shortest distance between any two points on a mathematically defined ellipsoidal surface.

**Geodetic datum:** A minimum set of parameters required to define location and orientation of the local reference system with respect to the global reference system/frame.

**Geoid:** The equipotential surface in the gravity field of the Earth which coincides with the undisturbed mean sea level MSL extended continuously through the continents.

Note: The geoid is irregular in shape because of local gravitational disturbances wind tides, salinity, current, etc. and the direction of gravity is perpendicular to the geoid at every point.

**Geoid undulation:** The distance of the geoid above positive or below negative the mathematical reference ellipsoid.

Note.— In respect to the World Geodetic System — 1984 (WGS-84) defined ellipsoid, the difference between the WGS-84 ellipsoidal height and orthometric height represents WGS-84 geoid undulation.

**Glide path:** A descent profile determined for vertical guidance during a final approach.

**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.

**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.

**Gliding organization:** The holder of an aviation recreation organization certificate issued in accordance with Jordan Civil Aviation Regulations, which authorizes specified privileges associated with the operation of gliders.

**Global Signalling Channel (GSC).** A channel available on a worldwide basis which provides for communication control

**Global navigation Satellite System (GNSS).** A worldwide position and time determination system that includes one or more satellite constellations, aircraft receivers and system integrity monitoring, augmented as necessary to support the required navigation performance for the intended operation.

**Global Positioning System (GPS).** The satellite navigation system operated by the United States.

**Global Signalling Channel (GSC).** A channel available on a worldwide basis which provides for communication control.

**GNSS position error.** The difference between the true position and the position determined by the GNSS receiver.

**Go-around power or thrust setting:** The maximum allowable in-flight power or thrust setting identified in the performance data.

**Government aircraft:** An aircraft used only for Jordan Government , or owned and operated except for commercial purposes , or exclusively leased for at least 90 continuous days, by the Government, but does not include a government-owned aircraft transporting property for commercial purposes, or transporting passengers other than transporting for other than commercial purposes crewmembers or other persons aboard the aircraft whose presence is required to perform , or is associated with the performance of, a governmental function such as firefighting , search and rescue, law enforcement, aeronautical research, or biological or geological resource management; or transporting for other than commercial purposes persons aboard the aircraft if the aircraft is operated by the Jordanian Air Force .

**Gray:** The energy imparted by ionizing radiation to a mass of matter corresponding to 1 joule per kilogram.

**Gregorian calendar:** Calendar in general use; first introduced in 1582 to define a year that more closely approximates the tropical year than the Julian calendar .

Note: In the Gregorian calendar, common years have 365 days and leap years 366 days divided into twelve sequential months.

**Grid point data in digital form:** Computer processed meteorological data for a set of regularly spaced points on a chart, for transmission from a meteorological computer to another computer in a code form suitable for automated use.

Note: In most cases, such data are transmitted on medium- or high-speed telecommunications channels.

**Ground-Based Augmentation System (GBAS).** An augmentation system in which the user receives augmentation information directly from a ground-based transmitter.

**Ground-Based Regional Augmentation System (GRAS).** An augmentation system in which the user receives augmentation information directly from one of a group of ground-based transmitters covering a region.

**Ground Data Circuit-Terminating Equipment (GDCE).** A ground specific data circuit-terminating equipment associated with a ground data link processor (GDLP). It operates a protocol unique to Mode S data link for data transfer between air and ground.

**Ground Data Link Processor (GDLP).** A ground-resident processor that is specific to a particular air-ground data link (e.g. Mode S), and which provides channel management, and segments and/or reassembles messages for transfer. It is connected on one side (by means of its DCE) to ground elements common to all data link systems, and on the other side to the air-ground link itself.

**Ground earth station:** An earth station in the fixed satellite service, or, in some cases, in the aeronautical mobile-satellite service, located at a specified fixed point on land to provide a feeder link for the aeronautical mobile satellite service.

Note: This definition is used in the ITU's Radio Regulations under the term "aeronautical earth station". The definition herein as "GES" for use in the SARPs is to clearly distinguish it from an aircraft earth station AES, which is a mobile station on an aircraft.

**Ground effect:** A condition of improved performance lift due to the interference of the surface with the airflow pattern of the rotor system when a helicopter or other VTOL aircraft is operating near the ground.

Note: Rotor efficiency is increased by ground effect to a height of about one rotor diameter for most helicopters.

**Ground handling:** Services necessary for an aircraft arriving at, and departing from, an airport, other than air traffic services.

**Ground handling company:** An organization intending to perform ground handling functions, and must be registered in the Hashemite Kingdom of Jordan according to the applicable Companies Law.

**Ground level at its site:** The highest ground within a 600 m 2000 ft radius of the site, for the purpose of establishing the maximum height for objects.

**Ground-Initiated Comm-B (GICB).** The ground-initiated Comm-B protocol allows the interrogator to extract Comm-B replies containing data from a defined source in the MB field.

**Ground-Initiated Protocol.** A procedure initiated by a Mode S interrogator for delivering standard length or extended length messages to a Mode S aircraft installation

**Ground visibility:** The visibility at an aerodrome, as reported by an accredited observer.

**Ground-to-air communication:** One-way communication from stations or locations on the surface of the earth to aircraft.

**Group of balloon:** A categorization of balloons taking into account the size or capacity of the envelope.

**Gyrodyne:** A rotorcraft whose rotors are normally engine-driven for takeoff, hovering, landing, and for forward flight through part of its speed range, and whose means of propulsion, consisting usually of conventional propellers, is independent of the rotor system.

**Gyroplane:** A heavier- than- aircraft supported in flight by the reactions of the air on one or more rotors which rotate freely on substantially vertical axes.

## Subpart-H

**Half course sector:** The sector, in a horizontal plane containing the course line and limited by the loci of points nearest to the course line at which the DDM is 0.0775.

**Half ILS glide path sector.** The sector in the vertical plane containing the ILS glide path and limited by the loci of points nearest to the glide path at which the DDM is 0.0875.

**Hazard beacon:** An aeronautical beacon used to designate a danger to air navigation.

**Hazard:** Condition, object or activity with the potential of causing injuries to personnel, damage to equipment or structures, loss of material, or reduction of ability to perform a prescribed function.

**Hazardous waste:** Has the same meaning as “hazardous and harmful waste”

**Heading:** The direction in which the longitudinal axis of an aircraft is pointed, usually expressed in degrees from North true, magnetic, compass or grid.

**Head-up display:** A display system that presents flight information into the pilot’s forward external field of view.

**Heavier-than-air:** Any aircraft deriving its lift in flight chiefly from aerodynamic forces.

**Heavier-than-aircraft:** Any aircraft deriving its lift in flight chiefly from aerodynamic forces.

**Height:** The vertical distance of a level, a point or an object considered as a point, measured from a specified datum.

**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.

Note: Some States use the term “rotorcraft” as an alternative to “helicopter”.

**Helicopter air taxiway.** A defined path on the surface established for the air taxiing of helicopters.

**Helicopter clearway.** A defined area on the ground or water, selected and/or prepared as a suitable area over which a helicopter operated in performance class 1 may accelerate and achieve a specific height.

**Helicopter ground taxiway.** A ground taxiway intended for the ground movement of wheeled undercarriage helicopters.

**Helicopter stand:** An aircraft stand which provides for parking a helicopter and where ground taxi operations are completed or where the helicopter touches down and lifts off for air taxi operations.

**Helideck:** A heliport located on an offshore structure such as an exploration or production platform used for the exploitation of oil or gas.

**Heliport:** An aerodrome or a defined area on a structure intended to be used wholly or in part for the arrival, departure and surface movement of helicopters.

**Heliport operating minima:** The limits of usability of a heliport for:

- a) take-off, expressed in terms of runway visual range and/or visibility and, if necessary, cloud conditions;
- b) landing in precision approach and landing operations, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) as appropriate to the category of the operation;
- c) landing in approach and landing operations with vertical guidance, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H); and
- d) landing in non-precision approach and landing operations, expressed in terms of visibility and/or runway visual range, minimum descent altitude/height (MDA/H) and, if necessary, cloud conditions.

**Heliport reference point (HRP).** The designated location of a heliport or a landing location.

**Henry:** The inductance of a closed circuit in which an electromotive force of 1 volt is produced when the electric current in the circuit varies uniformly at a rate of 1 ampere per second.

**Hertz:** The frequency of a periodic phenomenon of which the period is 1 second.

**High performance receiver.** A UAT receiver with enhanced selectivity to further improve the rejection of adjacent frequency DME interference (see 12.3.2.2 for further details).

**Holding bay:** A defined area where aircraft can be held, or bypassed, to facilitate efficient surface movement of aircraft.

**Holding fix:** A geographical location that serves as a reference for a holding procedure.

**Holding procedure:** A predetermined manoeuvre which keeps an aircraft within a specified airspace while awaiting further clearance.

**Holdover time:** The estimated time the anti-icing fluid treatment will prevent the formation of ice and frost and the accumulation of snow on the protected treated surfaces of an aeroplane.

**Homing:** The procedure of using the direction-finding equipment of one radio station with the emission of another radio station, where at least one of the stations is mobile, and whereby the mobile station proceeds continuously towards the other station.

**Horizontal Miss Distance (HMD).** The minimum horizontal separation observed in an encounter.

**Hostile environment.** An environment in which:

- a) a safe forced landing cannot be accomplished because the surface and surrounding environment are inadequate; or
- b) the helicopter occupants cannot be adequately protected from the elements; or
- c) search and rescue response/capability is not provided consistent with anticipated exposure; or
- d) there is an unacceptable risk of endangering persons or property on the ground.

**Hot Air Balloon:** A balloon that derives its lift from heated air.

**Hot spot:** A location on an aerodrome movement area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots/drivers is necessary.

**Human factors principles:** Principles which apply to aeronautical design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration to human performance.

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

**Hypsometric tints:** A succession of shades or color gradations used to depict ranges of elevation.

## Subpart-I

**IATA Airport Handling Manual:** Published by the International Air Transport Association IATA. It contains the standard classification and numbering system AHM xxxx for the ground handling functions described in ground handling manuals.

**IATA Dangerous goods regulations:** Published by the International Air Transport Association IATA. The globally accepted field source reference for companies shipping hazardous materials by air, as amended

**ICAO meteorological information exchange model (IWXXM).** A data model for representing aeronautical meteorological information.

**Identification:** The situation which exists when the position indication of a particular aircraft is seen on a situation display and positively identified.

**Identification beacon:** An aeronautical beacon emitting a coded signal by means of which a particular point of reference can be identified.

**Idle thrust:** The jet thrust obtained with the engine power control level set at the stop for the least thrust position at which it can be placed.

**IFR flight:** A flight conducted in accordance with the instrument flight rules.

**Incident:** An occurrence, other than an accident, associated with the operation of an aircraft which affects or could affect the safety of operation.

**ILS glide path angle.** The angle between a straight line which represents the mean of the ILS glide path and the horizontal.

**ILS glide path sector.** The sector in the vertical plane containing the ILS glide path and limited by the loci of points nearest to the glide path at which the DDM is 0.175.

**ILS glide path.** That locus of points in the vertical plane containing the runway centre line at which the DDM is zero, which, of all such loci, is the closest to the horizontal plane.

**ILS integrity.** That quality which relates to the trust which can be placed in the correctness of the information supplied by the facility. The level of integrity of the localizer or the glide path is expressed in terms of the probability of not radiating

**ILS Point “A”.** A point on the ILS glide path measured along the extended runway centre line in the approach direction a distance of 7.5 km (4 NM) from the threshold.

**ILS Point “B”.** A point on the ILS glide path measured along the extended runway centre line in the approach direction a distance of 1 050 m (3 500 ft) from the threshold.

**ILS Point “C”.** A point through which the downward extended straight portion of the nominal ILS glide path passes at a height of 30 m (100 ft) above the horizontal plane containing the threshold.

**ILS Point “D”.** A point 4 m (12 ft) above the runway centre line and 900 m (3 000 ft) from the threshold in the direction of the localizer.

**ILS Point “E”.** A point 4 m (12 ft) above the runway centre line and 600 m (2 000 ft) from the stop end of the runway in the direction of the threshold.

**ILS reference datum (Point “T”).** A point at a specified height located above the intersection of the runway centre line and the threshold and through which the downward extended straight portion of the ILS glide path passes.

**Incompatible:** Describing dangerous goods which, if mixed, would be liable to cause a dangerous evolution of heat or gas or produce a corrosive substance.

**Increased rate RA.** A resolution advisory with a strength that recommends increasing the altitude rate to a value exceeding that recommended by a previous climb or descend RA.

**Independent parallel approaches:** Simultaneous approaches to parallel or near-parallel instrument runways where radar separation minima between aircraft on adjacent extended runway centre lines are not prescribed.

**Independent parallel departures:** Simultaneous departures from parallel or near-parallel instrument runways.

**Indicated airspeed:** The speed of an aircraft as shown on its pitot static airspeed indicator calibrated to reflect standard atmosphere adiabatic compressible flow at sea level uncorrected for airspeed system errors.

**Integrity.** A measure of the trust that can be placed in the correctness of the information supplied by the total system. Integrity includes the ability of a system to provide timely and valid warnings to the user (alerts).

**Integrated survival suit.** A survival suit which meets the combined requirements of the survival suit and life jacket.

**Interpilot Air-to-Air Communication.** Two-way communication on the designated air-to-air channel to enable aircraft engaged in flights over remote and oceanic areas out of range of VHF ground stations to exchange necessary operational information and to facilitate the resolution of operational problems.

**Initial Approach (IA) mode.** The condition of DME/P operation which supports those flight operations outside the final approach region and which is interoperable with DME/N.

**Initial approach segment:** That segment of an instrument approach procedure between the initial approach fix and the intermediate approach fix or, where applicable, the final approach fix or point.

**Instrument:** A device using an internal mechanism to show visually or aurally the attitude, altitude, or operation of an aircraft or aircraft part. It includes electronic devices for automatically controlling an aircraft in flight.

**Instrument approach operations:** An approach and landing using instruments for navigation guidance based on an instrument approach procedure. There are two methods for executing instrument approach operations:

- a) a two-dimensional 2D instrument approach operation, using lateral navigation guidance only; and
- b) a three-dimensional 3D instrument approach operation, using both lateral and vertical navigation guidance.

Note: Lateral and vertical navigation guidance refers to the guidance provided either by:

- a) a ground-based radio navigation aid; or
- b) computer-generated navigation data from ground-based, space-based, self-contained navigation aids or a combination of these.

**Instrument approach procedure:** A series of predetermined manoeuvres by reference to flight instruments with specified protection from obstacles from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en-route obstacle clearance criteria apply. Instrument approach procedures are classified as follows:

- a) non-precision approach NPA procedure. An instrument approach procedure which utilizes lateral guidance but does not utilize vertical guidance.
- b) approach procedure with vertical guidance APV. An instrument approach procedure which utilizes lateral and vertical guidance but does not meet the requirements established for precision approach and landing operations.
- c) precision approach PA procedure. An instrument approach procedure using precision lateral and vertical guidance with minima as determined by the category of operation.

Note: Lateral and vertical guidance refers to the guidance provided either by:

- a) a ground-based navigation aid; or
- b) computer-generated navigation data.

**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 practicing, on the ground, simulated instrument flight in a flight simulation training device approved by the Licensing Authority.

**Instrument Landing System (ILS) continuity of service.** That quality which relates to the rarity of radiated signal interruptions. The level of continuity of service of the localizer or the glide path is expressed in terms of the probability of not losing the radiated guidance signals.

**Instrument meteorological conditions:** Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling\*, less than the minima specified for visual meteorological conditions.

**Instrument runway:** One of the following types of runways intended for the operation of aircraft using instrument approach procedures:

a) non-precision approach runway. An instrument runway served by visual aids and a non-visual aid providing at least directional guidance adequate for a straight-in approach.

b) precision approach runway, category I. An instrument runway served by ILS and/or MLS and visual aids intended for operations with a decision height not lower than 60 m 200 ft and either a visibility not less than 800 m or a runway visual range not less than 550 m.

c) precision approach runway, category II. An instrument runway served by ILS and/or MLS and visual aids intended for operations with a decision height lower than 60 m 200 ft but not lower than 30 m 100 ft and a runway visual range not less than 300 m.

d) precision approach runway, category III. An instrument runway served by ILS and/or MLS to and along the surface of the runway and:

1) intended for operations with a decision height lower than 30 m 100 ft, or no decision height and a runway visual range not less than 175 m.

2) intended for operations with a decision height lower than 15 m 50 ft, or no decision height and a runway visual range less than 175 m but not less than 50 m.

c) intended for operations with no decision height and no runway visual range limitations.

Note: Visual aids need not necessarily be matched to the scale of non-visual aids provided. The criterion for the selection of visual aids is the conditions in which operations are intended to be conducted.

**Instrument time:** Instrument flight time or instrument ground time.

**Integrity aeronautical data:** A degree of assurance that an aeronautical data and its value has not been lost nor altered since the data origination or authorized amendment.

**Integrity classification (aeronautical data).** Classification based upon the potential risk resulting from the use of corrupted data. Aeronautical data are classified as:

a) routine data: there is a very low probability when using corrupted routine data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe;

b) essential data: there is a low probability when using corrupted essential data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe; and

c) critical data: there is a high probability when using corrupted critical data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe.

**Intermediate approach segment:** That segment of an instrument approach procedure between either the intermediate approach fix and the final approach fix or point, or between the end of a reversal, racetrack or dead reckoning track procedure and the final approach fix or point, as appropriate.

**Intermediate holding position:** A designated position intended for traffic control at which taxiing aircraft and vehicles shall stop and hold until further cleared to proceed, when so instructed by the aerodrome control tower.

**International airport:** Any airport designated by the Contracting State in whose territory it is situated as an airport of entry and departure for international air traffic, where the formalities incident to customs, immigration, public health, animal and plant quarantine and similar procedures are carried out.

**International airways volcano watch:** International arrangements for monitoring and providing warnings to aircraft of volcanic ash in the atmosphere.

Note: The IAVW is based on the cooperation of aviation and non-aviation operational units using information derived from observing sources and networks that are provided by States. The watch is coordinated by ICAO with the cooperation of other concerned international organizations.

**International NOTAM office NOF:** An office designated by a State for the exchange of NOTAM internationally.

**International operating agency :** An agency of the kind contemplated in Article 77 of the convention.

**International telecommunication service:** A telecommunication service between offices or stations of different States, or between mobile stations which are not in the same State, or are subject to different States.

**Inter pilot air-to-air communication:** Two-way communication on the designated air-to-air channel to enable aircraft engaged in flights over remote and oceanic areas out of range of VHF ground stations to exchange necessary operational information and to facilitate the resolution of operational problems.

**Intruder.** An SSR transponder-equipped aircraft within the surveillance range of ACAS for which ACAS has an established track.

**Investigation:** A process conducted for the purpose of accident prevention which includes the gathering and analysis of information, the drawing of conclusions, including the determination of causes and/or contributing factors and, when appropriate, the making of safety recommendations.

**Investigator-in-charge:** A person charged, on the basis of his or her qualifications, with the responsibility for the organization, conduct and control of an investigation.

Note: Nothing in the above definition is intended to preclude the functions of an investigator-in-charge being assigned to a commission or other body.

**Isogonal:** A line on a map or chart on which all points have the same magnetic variation for a specified epoch.

**Isogriv:** A line on a map or chart which joins points of equal angular difference between the North of the navigation grid and Magnetic North.

**Isolated Aerodrome:** A destination aerodrome for which there is no destination alternate aerodrome suitable for a given aeroplane type.

**Subpart-J**

**Joint rescue coordination centre:** A rescue coordination centre responsible for both aeronautical and maritime search and rescue operations.

**Joule:** The work done when the point of application of a force of 1 Newton is displaced a distance of 1 meter in the direction of the force.

## Subpart-K

**Kelvin:** A unit of thermodynamic temperature which is the fraction  $1/273.16$  of the thermodynamic temperature of the triple point of water.

**Key down time.** The time during which a dot or dash of a Morse character is being transmitted.

**Kilogram:** The unit of mass equal to the mass of the international prototype of the kilogram.

**Kite:** A framework, covered with paper, cloth, metal, or other material, intended to be flown at the end of a rope or cable, and having as its only support the force of the wind moving past its surfaces.

**Knot:** The speed equal to 1 nautical mile per hour.

## Subpart-L

**Landing area:** That part of a movement area intended for the landing or take-off of aircraft.

**Landing direction indicator:** A device to indicate visually the direction currently designated for landing and for take-off.

**Landing decision point (LDP)- helicopters.** The point used in determining landing performance from which, an engine failure occurring at this point, the landing may be safely continued or a bailed landing initiated.

Note.— LDP applies only to helicopters operating in performance Class 1.

**Landing distance available:** The length of runway which is declared available and suitable for the ground-run of an aeroplane landing.

**Landing gear extended speed:** The maximum speed at which an aircraft can be safely flown with the landing gear extended.

**Landing gear operating speed:** The maximum speed at which the landing gear can be safely extended or retracted.

**Landing surface:** That part of the surface of an aerodrome which the aerodrome authority has declared available for the normal ground or water run of aircraft landing in a particular direction.

**Large aeroplane:** An aeroplane of a maximum certificated take-off mass of over 5700 kg.

**Large aircraft:** An aircraft, classified as an aeroplane with a maximum take-off mass of more than 5700 kg, or a multi-engined helicopter;

**Laser-beam critical flight zone:** Airspace in the proximity of an aerodrome but beyond the LFFZ where the irradiance is restricted to a level unlikely to cause glare effects.

**Laser-beam free flight zone:** Airspace in the immediate proximity of the aerodrome where the irradiance is restricted to a level unlikely to cause any visual disruption.

**Laser-beam sensitive flight zone :** Airspace outside, and not necessarily contiguous with, the LFFZ and LCFZ where the irradiance is restricted to a level unlikely to cause flash-blindness or after-image effects.

**Level:** A generic term relating to the vertical position of an aircraft in flight and meaning variously, height, altitude or flight level.

**Licensing Authority:** The Authority designated to the Licensing Unit by CARC as responsible for the licensing of personnel.

- a) assessment of an applicant's qualifications to hold a license or rating
- b) issue and endorsement of licenses and ratings;
- c) designation and authorization of approved persons;
- d) approval of training courses;
- e) 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 license or rating; and
- e) Revalidation of licenses issued by other Contracting States.

**Lighter-than-air aircraft: Lighter-than-air aircraft:** Any aircraft supported chiefly by its buoyancy in the air.

**Lighting system reliability:** The probability that the complete installation operates within the specified tolerances and that the system is operationally usable.

**Likely:** In the context of the medical provision Likely means with a probability of occurring that is unacceptable to the medical assessor.

**Limit loads:** The maximum loads assumed to occur in the anticipated operating conditions.

**Link layer.** The layer that lies immediately above the physical layer in the Open Systems Interconnection protocol model. The link layer provides for the reliable transfer of information across the physical media. It is subdivided into the data link sublayer and the media access control sublayer.

**Link Management Entity (LME).** A protocol state machine capable of acquiring, establishing and maintaining a connection to a single peer system. An LME establishes data link and subnetwork connections, "hands-off" those connections, and manages the media access control sublayer and physical layer. An aircraft LME tracks how well it can communicate with the ground stations of a single ground system. An aircraft VME instantiates an LME for each ground station that it monitors. Similarly, the ground VME instantiates an LME for each aircraft that it monitors. An LME is deleted when communication with the peer system is no longer viable

**Link Protocol Data Unit (LPDU).** Data unit which encapsulates a segment of an HFNPDU.

**Link.** A link connects an aircraft DLE and a ground DLE and is uniquely specified by the combination of aircraft DLS address and the ground DLS address. A different subnetwork entity resides above every link endpoint.

**Litre L:** A unit of volume restricted to the measurement of liquids and gases which is equal to 1 cubic decimeter.

**Load :** Any item carried on an aircraft other than what is included in the basic operating weight.

**Load control :** A function to ensure the optimum utilization of the aircraft capacity and distribution of load as dictated by safety and operational requirements.

**Load factor:** the ratio of a specified load to the total weight of the aircraft. The specified load is expressed in terms of any of the following: aerodynamic forces, inertia forces, or ground or water reactions.

**Load factor:** the ratio of a specified load to the weight of the aircraft. the former being expressed in terms of aerodynamic forces, inertia forces, or ground reactions.

**Location indicator:** A four-letter code group formulated in accordance with rules prescribed by ICAO and assigned to the location of an aeronautical fixed station.

**Logon address:** A specified code used for data link logon to an ATS unit.

**Long-range communication system LRCS:** A system that uses satellite relay, data link, high frequency, or another approved communication system which extends beyond line of sight.

**Long-range navigation system LRNS:** An electronic navigation unit that is approved for use under instrument flight rules as a primary means of navigation, and has at least one source of navigational input, such as inertial navigation system, global positioning system, Omega/very low frequency, or Loran C.

**Low modulation rates.** Modulation rates up to and including 300 bauds.

**Light sport aircraft:** A light sport aeroplane which has all of the following characteristics:

a) maximum Take-off Mass MTOM of not more than 600 kg;

b) a maximum stalling speed in the landing configuration  $V_{S0}$  of not more than 45 knots Calibrated Airspeed CAS at the aircraft's maximum certificated takeoff mass and most critical centre of gravity;

c) a maximum seating capacity of no more than two persons, including the pilot;

d) a single, non-turbine engine fitted with a propeller;

e) a non-pressurized cabin;

**Lumen:** The luminous flux emitted in a solid angle of 1 steradian by a point source having a uniform intensity of 1 candela.

**Lux:** The illuminance produced by a luminous flux of 1 lumen uniformly distributed over a surface of 1 square meter.

## Subpart-M

**M-ary phase shift keying (M-PSK) modulation.** A digital phase modulation that causes the phase of the carrier waveform to take on one of a set of M values.

**Mach number:** The ratio of true airspeed to the speed of sound.

**M burst.** A management channel data block of bits used in VDL Mode 3. This burst contains signalling information needed for media access and link status monitoring.

**Magnetic variation:** The angular difference between True North and Magnetic North.

Note: The value given indicates whether the angular difference is East or West of True North.

**Main parachute:** A parachute worn as the primary parachute used or intended to be used in conjunction with a reserve parachute.

**Main rotor:** The rotor that supplies the principal lift to a rotorcraft.

**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.

**Maintenance organization's procedures manual:** A document endorsed by the head of the maintenance organization which details the maintenance organization's structure and management responsibilities, scope of work, description of facilities, maintenance procedures and quality assurance or inspection systems.

**Maintenance programme:** A document which describes the specific scheduled maintenance tasks and their frequency of completion and related procedures, such as a reliability programme, necessary for the safe operation of those aircraft to which it applies.

**Maintenance release:** A document which contains a certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner, either in accordance with the approved data and the procedures described in the maintenance organization's procedures manual or under an equivalent system.

**Major alteration:** An alteration not listed in the aircraft, aircraft engine, or propeller specifications:

- a) that might appreciably affect weight, balance, structural strength, performance, powerplant operation, flight characteristics, or other qualities affecting airworthiness;
- or

b) that is not done according to accepted practices or cannot be done by elementary operations.

**Major repair:**

A repair

a) that, if improperly done, might appreciably affect weight, balance, structural strength, performance, power plant operation, flight characteristics, or other qualities affecting airworthiness; or

b) that is not done according to accepted practices or cannot be done by elementary operations.

**Maneuvering area:** That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons.

**Manifold pressure:** Absolute pressure as measured at the appropriate point in the induction system and usually expressed in inches of mercury.

**Margin.** The maximum degree of distortion of the circuit at the end of which the apparatus is situated which is compatible with the correct translation of all the signals which it may possibly receive.

**Marker:** An object displayed above ground level in order to indicate an obstacle or delineate a boundary.

**Marking:** A symbol or group of symbols displayed on the surface of the movement area in order to convey aeronautical information.

**Master minimum equipment list:** A list established for a particular aircraft type by the organization responsible for the type design with the approval of the State of Design containing items, one or more of which is permitted to be unserviceable at the commencement of a flight. The MMEL may be associated with special operating conditions, limitations or procedures.

**Maximum Diversion Time:** Maximum allowable range, expressed in time, from a point a route to an en-route alternate aerodrome.

**Maximum mass:** Maximum certificated take-off mass.

**Mean power of a radio transmitter:** The average power supplied to the antenna transmission line by a transmitter during an interval of time sufficiently long compared with the lowest frequency encountered in the modulation taken under normal operating conditions.

Note: A time of 1/10 second during which the mean power is greatest will be selected normally.

**Media Access control (MAC).** The sublayer that acquires the data path and controls the movement of bits over the data path.

**Media Access Protocol Data Unit (MPDU).** Data unit which encapsulates one or more LPDUs

**Medical Assessment:** The evidence issued by CARC that the license holder meets specific requirements of medical fitness.

**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

Note2: Medical assessors are expected to maintain the currency of their professional knowledge.

**Medical certificate:** acceptable evidence of physical fitness on a form prescribed by the Chief Commissioner.

**Medical examiner:** A physician with training in aviation medicine and practical knowledge and experience of the aviation environment, who is designated by CARC to conduct medical examinations of fitness of applicants for licenses or ratings for which medical requirements are prescribed.

**Medium modulation rates.** Modulation rates above 300 and up to and including 3 000 bauds.

**Message field:** An assigned area of a message containing specified elements of data.

**Metadata.** Data about data (ISO 19115\*).

Note.— A structured description of the content, quality, condition or other characteristics of data.

**Meteorological authority:** The authority providing or arranging for the provision of meteorological service for international air navigation on behalf of CARC.

**Meteorological bulletin:** A text comprising meteorological information preceded by an appropriate heading.

**Meteorological information:** Meteorological report, analysis, forecast, and any other statement relating to existing or expected meteorological conditions.

**Meteorological office:** An office designated to provide meteorological service for international air navigation.

**Meteorological operational channel:** A channel of the aeronautical fixed service AFS, for the exchange of aeronautical meteorological information.

**Meteorological operational telecommunication network:** An integrated system of meteorological operational channels, as part of the aeronautical fixed service AFS, for the exchange of aeronautical meteorological information between the aeronautical fixed stations within the network.

Note: “Integrated” is to be interpreted as a mode of operation necessary to ensure that the information can be transmitted and received by the stations within the network in accordance with pre-established schedules.

**Meteorological report:** A statement of observed meteorological conditions related to a specified time and location.

**Meteorological satellite:** An artificial Earth satellite making meteorological observations and transmitting these observations to Earth.

**Metre:** The distance travelled by light in a vacuum during  $1/299\,792\,458$  of a second.

**Military operations area:** A military operations area MOA is airspace established outside Class A airspace to separate or segregate certain nonhazardous military activities from IFR Traffic and to identify for VFR traffic where these activities are conducted.

**Minimum descent altitude or minimum descent height:** A specified altitude or height in a 2D approach or circling approach below which descent must not be made without the required visual reference.

Note 1: Minimum descent altitude MDA is referenced to mean sea level and minimum descent height MDH is referenced to the aerodrome elevation or to the threshold elevation if that is more than 2 m 7 ft below the aerodrome elevation .A minimum descent height for a circling approach is referenced to the aerodrome elevation.

Note 2: The required visual reference means that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path. In the case of a circling approach the required visual reference is the runway environment.

Note 3: For convenience when both expressions are used they may be written in the form “minimum descent altitude/ height” and abbreviated “MDA/H”.

**Minimum en-route altitude:** The altitude for an en-route segment that provides adequate reception of relevant navigation facilities and ATS communications, complies with the airspace structure and provides the required obstacle clearance.

**Minimum equipment list:** A list including a preamble which provides for the operation of aircraft, under specified conditions, with particular instruments, items of equipment or functions inoperative at the commencement of flight. This list is prepared by the operator for his own particular aircraft taking account of their aircraft definition and the relevant operational and maintenance conditions in accordance with a procedure approved by CARC.

**Minimum fuel:** The term used to describe a situation in which an aircraft’s fuel supply has reached a state where the flight is committed to land at a specific aerodrome and no additional delay can be accepted.

**Minimum obstacle clearance altitude(MOCA):** The minimum altitude for a defined segment of flight that provides the required obstacle clearance.

**Minimum sector altitude (MSA).** The lowest altitude which may be used which will provide a minimum clearance of 300 m (1 000 ft) above all objects located in an area contained within a sector of a circle of 46 km (25 NM) radius centered on a significant point, the aerodrome reference point (ARP), or the heliport reference point (HRP).

**Minor alteration:** An alteration other than a major alteration.

**Minor repair:** A repair other than a major repair.

**Missed approach point:** That point in an instrument approach procedure at or before which the prescribed missed approach procedure must be initiated in order to ensure that the minimum obstacle clearance is not infringed.

**Missed approach procedure:** The procedure to be followed if the approach cannot be continued.

**Mitigation:** Measures to eliminate the potential hazard or to reduce the risk probability or severity

**Mobile surface station:** A station in the aeronautical telecommunication service, other than an aircraft station, intended to be used while in motion or during halts at unspecified points.

- Mode 2.** A data-only VDL mode that uses D8PSK modulation and a carrier sense multiple access (CSMA) control scheme.
- Mode 3.** A voice and data VDL mode that uses D8PSK modulation and a TDMA media access control scheme.
- Mode 4.** A data-only VDL mode using a GFSK modulation scheme and self-organizing time division multiple access (STDMA).
- Mode S air-initiated Comm-B (AICB) protocol.** A procedure initiated by a Mode S transponder for transmitting a single Comm-B segment from the aircraft installation.
- Mode S broadcast protocols.** Procedures allowing standard length uplink or downlink messages to be received by more than one transponder or ground interrogator respectively.
- Mode S Ground-Initiated Comm-B (GICB) protocol.** A procedure initiated by a Mode S interrogator for eliciting a single Comm-B segment from a Mode S aircraft installation, incorporating the contents of one of 255 Comm-B registers within the Mode S transponder.
- Mode S multisite-directed protocol.** A procedure to ensure that extraction and close-out of a downlink standard length or extended length message is affected only by the particular Mode S interrogator selected by the aircraft.
- Mode S packet.** A packet conforming to the Mode S subnetwork standard, designed to minimize the bandwidth required from the air-ground link. ISO 8208 packets may be transformed into Mode S packets and vice-versa.
- Mode S Specific Protocol (MSP).** A protocol that provides restricted datagram service within the Mode S subnetwork.
- Mode S Specific Services Entity (SSE).** An entity resident within an XDLP to provide access to the Mode S specific services
- Mode S specific services.** A set of communication services provided by the Mode S system which are not available from other air-ground subnetworks, and therefore not interoperable.
- Mode SSR:** The conventional identifier related to specific functions of the interrogation signals transmitted by an SSR interrogator.

**Mode S subnetwork.** A means of performing an interchange of digital data through the use of secondary surveillance radar (SSR) Mode S interrogators and transponders in accordance with defined protocols.

**Modulation rate.** The reciprocal of the unit interval measured in seconds. This rate is expressed in bauds.

Note.— Telegraph signals are characterized by intervals of time of duration equal to or longer than the shortest or unit interval. The modulation rate (formerly telegraph speed) is therefore expressed as the inverse of the value of this unit interval. If, for example, the unit interval is 20 milliseconds, the modulation rate is 50 bauds.

**Mole mol:** The amount of substance of a system which contains as many elementary entities as there are atoms in 0.012 kilogram of carbon-12.

Note: When the mole is used, the elementary entities must be specified and may be atoms, molecules, ions, electrons, other particles or specified groups of such particles.

**Movement:** an aircraft take off and related taxiing or other motion, or an aircraft landing and related taxiing or other motion.

**Movement area:** That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the maneuvering area and the aprons.

**M-PSK symbol.** One of the M possible phase shifts of the M-PSK modulated carrier representing a group of  $\log_2 M$  coded chips.

**Multi-crew co-operation:** The functioning of the flight crew as a team of co-operating members led by the pilot command.

**Multilateration (MLAT) System.** A group of equipment configured to provide position derived from the secondary surveillance radar (SSR) transponder signals (replies or squitters) primarily using time difference of arrival (TDOA) techniques. Additional information, including identification, can be extracted from the received signals.

**Multilateration MLAT system:** A group of equipment configured to provide position derived from the secondary surveillance radar SSR transponder signals replies or squatters primarily using time difference of arrival TDOA techniques. Additional information, including identification, can be extracted from the received signals.

**Multi-pilot airplanes:** Airplanes certificated for operation with a minimum crew of at least two pilots.

**Multiple departure:** applies only to flying training organizations and means either an agreed number of take-offs or “touch-and-goes” by an individual aircraft during a notified flight, such agreement being between the airport operator and the aircraft operator, or the actual number of recorded departures during the notified flight.

## Subpart-N

**Nautical mile:** The length equal to 1852 meters exactly.

**Navigable airspace:** Airspace at and above the minimum flight altitudes prescribed by or under JCAR, including airspace needed for safe takeoff and landing.

**Navigation specification.** A set of aircraft and flight crew requirements needed to support performance-based navigation operations within a defined airspace. There are two kinds of navigation specifications:

Required navigation performance (RNP) specification. A navigation specification based on area navigation that includes the requirement for performance monitoring and alerting, designated by the prefix RNP, e.g. RNP 4, RNP APCH.

Area navigation (RNAV) specification. A navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV, e.g. RNAV 5, RNAV 1.

Note 1.— The Performance-based Navigation (PBN) Manual (Doc 9613), Volume II, contains detailed guidance on navigation specifications.

Note 2.— The term RNP, previously defined as “a statement of the navigation performance necessary for operation within a defined airspace”, has been removed from this Annex as the concept of RNP has been overtaken by the concept of PBN. The term RNP in this Annex is now solely used in the context of navigation specifications that require performance monitoring and alerting, e.g. RNP 4 refers to the aircraft and operating requirements, including a 4 NM lateral performance with on-board performance monitoring and alerting that are detailed in Doc 9613.

**Near-parallel runways:** Non-intersecting runways whose extended centre lines have an angle of convergence/divergence of 15 degrees or less.

**Network (N).** The word “network” and its abbreviation “N” in ISO 8348 are replaced by the word “subnetwork” and its abbreviation “SN”, respectively, wherever they appear in relation to the subnetwork layer packet data performance

**Network station:** An aeronautical station forming part of a radiotelephony network.

**Newton:** The force which when applied to a body having a mass of 1 kilogram gives it an acceleration of 1 meter per second squared.

**Next data authority:** The ground system so designated by the current data authority through which an onward transfer of communications and control can take place.

**Next intended user.** The entity that receives the aeronautical data or information from the Aeronautical Information Service.

**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.

**No transgression zone:** In the context of independent parallel approaches, a corridor of airspace of defined dimensions located centrally between the two extended runway centre lines, where a penetration by an aircraft requires a controller intervention to manoeuvre any threatened aircraft on the adjacent approach.

**Noise exposure map:** A scaled, geographic depiction of an airport, its noise contours, and surrounding area developed in accordance with section A150.101 of appendix A of JCAR Part 150 or any CARC approved equivalent, including the accompanying documentation setting forth the required descriptions of forecast aircraft operations at that airport during the fifth calendar year beginning after submission of the map, together with the ways, if any, those operations will affect the map including noise contours and the forecast land uses.

**Noise level reduction:** The amount of noise level reduction in decibels achieved through incorporation of noise attenuation between outdoor and indoor levels in the design and construction of a structure.

**Non-compatible land use :** The use of land that is identified under JCAR Part 150 as normally not compatible with the outdoor noise environment or an adequately attenuated noise reduction level for the indoor activities involved at the location because the yearly day-night average sound level is above that identified for that or similar use under appendix A Table 1 of JCAR Part 150 or any CARC approved equivalent.

**Non-congested hostile environment.** A hostile environment outside a congested area.

**Non-hostile environment.** An environment in which:

- a) a safe forced landing can be accomplished because the surface and surrounding environment are adequate;
- b) the helicopter occupants can be adequately protected from the elements;
- c) search and rescue response/capability is provided consistent with anticipated exposure; and

d) the assessed risk of endangering persons or property on the ground is acceptable.

Note.— Those parts of a congested area satisfying the above requirements are considered non-hostile.

**Non-instrument runway:** A runway intended for the operation of aircraft using visual approach procedures, with no straight-in instrument approach procedure and no instrument designation indicated on a CARC approved airport layout plan or by any planning document submitted to the CARC by the appropriate authority.

**Non-network communications:** Radiotelephony communications conducted by a station of the aeronautical mobile service, other than those conducted as part of a radiotelephony network.

**Non-precision approach procedure:** A standard instrument approach procedure in which no electronic glide slope is provided.

**Non-precision instrument runway:** A runway having an existing instrument approach procedure utilizing air navigation facilities with only horizontal guidance, or area type navigation equipment, for which a straight-in non-precision instrument approach procedure has been approved or planned.

**Normal flight zone:** Airspace not defined as LFFZ, LCFZ or LSFZ but which must be protected from laser radiation capable of causing biological damage to the eye.

**Normal operating zone:** Airspace of defined dimensions extending to either side of an ILS localizer course and/or MLS final approach track. Only the inner half of the normal operating zone is taken into account in independent parallel approaches.

**NOTAM:** A notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.

**Notice of construction or alteration:** The notification presented to the CARC by any sponsor about any construction or alteration of any structure prior to the release of any construction or alteration license.

**NP type.** A containment value expressed as a distance in nautical miles from the intended position within which flights would be for at least 95 per cent of the total flying time.

Example.— RNP 4 represents a navigation accuracy of plus or minus 7.4 km (4 NM) on

a 95 per cent containment basis.

### Subpart-O

**Observation meteorological:** The evaluation of one or more meteorological elements.

**Obstacle:** All fixed whether temporary or permanent and mobile objects, or parts thereof, that:

- a) are located on an area intended for the surface movement of aircraft; or
- b) extend above a defined surface intended to protect aircraft in flight; or
- c) stand outside those defined surfaces and that have been assessed as being a hazard to air navigation.

**Obstacle clearance altitude or obstacle clearance height:** The lowest altitude or the lowest height above the elevation of the relevant runway threshold or the aerodrome elevation as applicable, used in establishing compliance with appropriate obstacle clearance criteria.

Note 1: Obstacle clearance altitude is referenced to mean sea level and obstacle clearance height is referenced to the threshold elevation or in the case of non-precision approaches to the aerodrome elevation or the threshold elevation if that is more than 2 m 7 ft below the aerodrome elevation. An obstacle clearance height for a circling approach is referenced to the aerodrome elevation.

Note 2: For convenience when both expressions are used they may be written in the form “obstacle clearance altitude/ height” and abbreviated “OCA/H”.

**Obstacle free zone:** The airspace above the inner approach surface, inner transitional surfaces, and balked landing surface and that portion of the strip bounded by these surfaces, which is not penetrated by any fixed obstacle other than a low-mass and frangible mounted one required for air navigation purposes.

**Obstacle limitation surfaces:** Imaginary surfaces established within the boundary or in the vicinity of airports for the purpose of defining the volume of airspace that should ideally be kept free from obstacles to ensure safe operation of aircraft, in compliance with the requirements established in CARC Publication AN 14-I.

**Obstacle/terrain data collection surface:** A defined surface intended for the purpose of collecting obstacle/terrain data.

**Obstruction Management Committee:** A committee formed by the Chief Commissioner/CEO of the CARC entrusted to ensure implementation of the requirements of JCAR Part 77.

**Occurrence:** Indicates accident or incident.

**Offset frequency simplex:** A variation of single channel simplex wherein telecommunication between two stations is effected by using in each direction frequencies that are intentionally slightly different but contained within a portion of the spectrum allotted for the operation.

**Offshore operations.** Operations which routinely have a substantial proportion of the flight conducted over sea areas to or from offshore locations. Such operations include, but are not limited to, support of offshore oil, gas and mineral exploitation and sea-pilot transfer.

**Ohm:** The electric resistance between two points of a conductor when a constant difference of potential of 1 volt, applied between these two points, produces in this conductor a current of 1 ampere, this conductor not being the source of any electromotive force.

**Operate, with respect to aircraft:** Use, cause to use or authorize to use aircraft, for the purpose except as provided in 91.13 of JCAR of air navigation including the piloting of aircraft, with or without the right of legal control as owner, lessee, or otherwise.

**Operation.** An activity or group of activities which are subject to the same or similar hazards and which require a set of equipment to be specified, or the achievement and maintenance of a set of pilot competencies, to eliminate or mitigate the risk of such hazards.

Note.— Such activities could include, but would not be limited to, offshore operations, heli-hoist operations or emergency medical service.

**Operational control:** The exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of the safety of the aircraft and the regularity and efficiency of the flight.

**Operational control communications:** Communications required for the exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of the safety of the aircraft and the regularity and efficiency of a flight.

Note: Such communications are normally required for the exchange of messages between aircraft and aircraft operating agencies.

**Operational flight plan:** The operator's plan for the safe conduct of the flight based on considerations of aeroplane performance, other operating limitations and relevant expected conditions on the route to be followed and at the aerodromes concerned.

**Operational planning:** The planning of flight operations by an operator.

**Operations manual:** A manual containing procedures, instructions and guidance for use by operational personnel in the execution of their duties concerned.

**Operations specifications:** The authorizations, conditions and limitations associated with the air operator certificate and subject to the conditions in the operations manual.

**Operator:** A person, organization or enterprise engaged in or offering to engage in an aircraft operation.

Note: In the context of remotely piloted aircraft, an aircraft operation includes the remotely piloted aircraft system.

**Operator's maintenance control manual:** A document which describes the operator's procedures necessary to ensure that all scheduled and unscheduled maintenance is performed on the operator's aircraft on time and in a controlled and satisfactory manner.

**Optimum sampling point.** The optimum sampling point of a received UAT bit stream is at the nominal centre of each bit period, when the frequency offset is either plus or minus 312.5 kHz.

**Origination (aeronautical data or aeronautical information).** The creation of the value associated with new data or information or the modification of the value of an existing data or information.

**Originator (aeronautical data or aeronautical information).** An entity that is accountable for data or information origination and/or from which the AIS organization receives aeronautical data and information.

**Organization:** A natural person, a legal person or part of a legal person. Such an organization may be established at more than one location within the territory of the Hashemite kingdom of Jordan;

**Original rate.** The original rate of an ACAS-equipped aircraft at any time is its altitude rate at the same time when it followed the original trajectory.

**Original trajectory.** The original trajectory of an ACAS-equipped aircraft is that followed by the aircraft in the same encounter when it was not ACAS equipped.

**Ornithopter:** A heavier than air aircraft supported in a flight chiefly by the reaction of the air on airplanes to which a flapping motion is imparted .

**Orthometric height.** Height of a point related to the geoid, generally presented as an MSL elevation.

**Other training devices:** Training aids other than flight simulators, flight training devices or flight and navigation procedures trainers, which provide means for training where a complete flight deck environment is not necessary.

**Out-of-coverage indication signal.** A signal radiated into areas outside the intended coverage sector where required to specifically prevent invalid removal of an airborne warning indication in the presence of misleading guidance information.

**Overpack:** An enclosure used by a single shipper to contain one or more packages and to form one handling unit for convenience of handling and stowage.

**Over-the-top:** Above the layer of clouds or other obscuring phenomena forming the ceiling.

**Own aircraft.** The aircraft fitted with the ACAS that is the subject of the discourse, which ACAS is to protect against possible collisions, and which may enter a manoeuvre in response to an ACAS indication.

**Oxides of nitrogen:** The sum of the amounts of the nitric oxide and nitrogen dioxide contained in a gas sample calculated as if the nitric oxide were in the form of nitrogen dioxide.

## Subpart-P

**Package:** The complete product of the packing operation consisting of the packaging and its contents prepared for transport.

**Packaging:** Receptacles and any other components or materials necessary for the receptacle to perform its containment function.

**Packet:** The basic unit of data transfer among communication devices within the network layer (e.g. an ISO 8208 packet or a Mode S packet).

**Parachute drop:** The descent of an object to the surface from an aircraft in flight when a parachute is used or intended to be used during all or part of that descent.

**Parachute jump:** A parachute operation that involves the descent of one or more persons to the surface from an aircraft in flight when an aircraft is used or intended to be used during all or part of that descent.

**Parachute operation:** The performance of all activity for the purpose of, or in support of, a parachute jump or a parachute drop. This parachute operation can involve, but is not limited to, the following persons: parachutist, parachutist in command and passenger in tandem parachute operations, drop zone or owner or operator, jump master, certificated parachute rigger, or pilot.

**Parachute:** A device used or intended to be used to retard the fall of a body or object through the air.

**Parachutist in command:** The person responsible for the operation and safety of a tandem parachute operation.

**Parachutist:** A person who intends to exit an aircraft while in flight using a single-harness, dual parachute system to descend to the surface.

**Partial rise time.** The time as measured between the 5 and 30 per cent amplitude points on the leading edge of the pulse envelope,

**Pascal:** The pressure or stress of 1 newton per square metre.

**Passenger aircraft:** An aircraft that carries any person other than a crew member, an operator's employee in an official capacity, an authorized representative of the CARC or a person accompanying a consignment or other cargo.

**Path Following Error (PFE).** That portion of the guidance signal error which could cause aircraft displacement from the desired course and/or glide path.

**Path Following Noise (PFN).** That portion of the guidance signal error which could cause aircraft displacement from the mean course line or mean glide path as appropriate.

**Pavement classification number:** A number expressing the bearing strength of a pavement for unrestricted operations.

**Peak Envelope Power (PEP):** The peak power of the modulated signal supplied by the transmitter to the antenna transmission line.

**Performance-based communication (PBC).** Communication based on performance specifications applied to the provision of air traffic services.

Note.— An RCP specification includes communication performance requirements that are allocated to system components in terms of the communication to be provided and associated transaction time, continuity, availability, integrity, safety and functionality needed for the proposed operation in the context of a particular airspace concept.

**Performance-based surveillance (PBS).** Surveillance based on performance specifications applied to the provision of air traffic services.

Note.— An RSP specification includes surveillance performance requirements that are allocated to system components in terms of the surveillance to be provided and associated data delivery time, continuity, availability, integrity, accuracy of the surveillance data, safety and functionality needed for the proposed operation in the context of a particular airspace concept.

**Performance Class 1 helicopter:** A helicopter with performance such that, in case of engine failure, it is able to land on the rejected take-off area or safely continue the flight to an appropriate landing area.

**Performance Class 2 helicopter:** A helicopter with performance such that, in case of engine failure, it is able to safely continue the flight, except when the failure occurs prior to a defined point after take-off or after a defined point before landing, in which cases a forced landing may be required.

**Performance Class 3 helicopter:** A helicopter with performance such that, in case of engine failure at any point in the flight profile, a forced landing must be performed.

**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.

**Performance-based navigation:** Area navigation based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in a designated airspace.

Note: Performance requirements are expressed in navigation specifications RNAV specification, RNP specification in terms of accuracy, integrity, continuity, availability and functionality needed for the proposed operation in the context of a particular airspace concept.

**Person:** An individual, firm, partnership, corporation, company, association, joint-stock association, or governmental entity. It includes a trustee, receiver, assignee, or similar representative of any of them.

**Physical Layer Protocol Data Unit (PPDU).** Data unit passed to the physical layer for transmission, or decoded by the physical layer after reception.

**Physical Layer.** The lowest level layer in the Open Systems Interconnection protocol model. The physical layer is concerned with the transmission of binary information over the physical medium (e.g. VHF radio).

**Pilot to:** To manipulate the flight controls of an aircraft during flight time.

**Pilot chute:** A small parachute used to initiate and/or accelerate deployment of a main or reserve parachute.

**Pilotage:** Navigation by visual reference to landmarks.

**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.

**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.

**Pitch setting:** The propeller blade setting as determined by the blade angle measured in a manner, and at a radius, specified by the instruction manual for the propeller.

**Point light:** A luminous signal appearing without perceptible length.

**Point of no return:** The last possible geographic point at which an aeroplane can proceed to the destination aerodrome as well as to an available en route alternate aerodrome for a given flight.

**Point-to-point:** Pertaining or relating to the interconnection of two devices, particularly end-user instruments. A communication path of service intended to connect two discrete end-users; as distinguished from broadcast or multipoint service.

**Portrayal:** Presentation of information to humans.

**Position geographical:** Set of coordinates latitude and longitude referenced to the mathematical reference ellipsoid which define the position of a point on the surface of the Earth.

**Position indication:** The visual indication, in non-symbolic and/or symbolic form, on a situation display, of the position of an aircraft, aerodrome vehicle or other object.

**Position symbol:** The visual indication in symbolic form, on a situation display, of the position of an aircraft, aerodrome vehicle or other object, obtained after automatic processing of positional data derived from any source.

**Positive control:** Control of all air traffic, within designated airspace, by air traffic control.

**Positive RA:** A resolution advisory that advises the pilot either to climb or to descend (applies to ACAS II).

**Post spacing:** Angular or linear distance between two adjacent elevation points.

**Potential Threat:** An intruder deserving special attention either because of its close proximity to own aircraft or because successive range and altitude measurements indicate that it could be on a collision or near-collision course with own aircraft.

**Procedures for Air Navigation Services- Aircraft Operations :** Is an air traffic control acronym which stands for procedures for Air Navigation Services – Aircraft Operations .PANS-OPS are rules for designing instrument approach and departure procedures.

**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 aerofoils for lift during horizontal flight.

**Powerplant:** The system consisting of all engines, drive system components if applicable, and propellers if installed their accessories, ancillary parts, and fuel and oil systems installed on an aircraft but excluding the rotors for a helicopter.

**Power-unit:** A system of one or more engines and ancillary parts which are together necessary to provide thrust, independently of the continued operation of any other power-units, but not including short period thrust-producing devices.

**Precision:** The smallest difference that can be reliably distinguished by a measurement process.

Note: In reference to geodetic surveys, precision is a degree of refinement in performance of an operation or a degree of perfection in the instruments and methods used when taking measurements.

**Precision approach PA procedure:** An instrument approach procedure using precision lateral and vertical guidance with minima as determined by the category of operation.

Note: Lateral and vertical guidance refers to the guidance provided either by:

a) a ground-based navigation aid; or

b) computer-generated navigation data.

**Precision approach procedure:** An instrument approach procedure utilizing azimuth and glide path information provided by ILS or PAR.

**Precision approach procedure:** A standard instrument approach procedure in which an electronic glide slope is provided, such as ILS and PAR.

**Precision approach radar :** Primary radar equipment used to determine the position of an aircraft during final approach, in terms of lateral and vertical deviations relative to a nominal approach path, and in range relative to touchdown.

**Precision instrument runway:** A runway having an existing instrument approach procedure utilizing an Instrument Landing System ILS, or a Precision Approach Radar PAR, as specified in CARC Publication AN 14-I. It also means a runway for which a precision approach system is planned and is so indicated by a CARC approved airport layout plan or any other CARC planning document.

**Predictive:** The predictive method captures system performance as it happens in real-time normal operations.

**Pre-flight information bulletin:** A presentation of current NOTAM information of operational significance, prepared prior to flight.

**Pre-flight inspection:** The inspection carried out before flight to ensure that the aircraft is fit for the intended flight.

**Preliminary report:** The communication used for the prompt dissemination of data obtained during the early stages of the investigation.

**Pressure altitude:** An atmospheric pressure expressed in terms of altitude which corresponds to that pressure in the Standard Atmosphere.

**Prevailing visibility:** The greatest visibility value, observed in accordance with the definition of “visibility”, which is reached within at least half the horizon circle or within at least half of the surface of the aerodrome. These areas could comprise contiguous or non-contiguous sectors.

Note: This value may be assessed by human observation and/or instrumented systems. When instruments are installed, they are used to obtain the best estimate of the prevailing visibility.

**Preventive maintenance:** Simple or minor preservation operations and the replacement of small standard parts not involving complex assembly operations.

**Preventive RA.** A resolution advisory that advises the pilot to avoid certain deviations from the current flight path but does not require any change in the current flight path.

**Primary frequency:** The radiotelephony frequency assigned to an aircraft as a first choice for air-ground communication in a radiotelephony network.

**Primary means of communication:** The means of communication to be adopted normally by aircraft and ground stations as a first choice where alternative means of communication exist.

**Primary radar:** A radar system which uses reflected radio signals.

**Primary runways:** Runways used in preference to others whenever conditions permit.

**Primary surveillance radar:** A surveillance radar system which uses reflected radio signals.

**Principal place of business:** The head office or the registered office of the undertaking within which the principal financial functions and operational control of the activities referred to in this Regulation are exercised.

**Printed communications:** Communications which automatically provide a permanent printed record at each terminal of a circuit of all messages which pass over such circuit.

**Private pilot:** A pilot who holds a license, which prohibits the piloting of aircraft in operations for which remuneration is given.

**Proactive:** The proactive method looks actively for the identification of safety risks through the analysis of the organization's activities.

**Probability:** The chance that a situation of danger might occur.

**Problematic use of substances:** The use of one or more psychoactive substances by aviation personnel in a way that:

a) constitutes a direct hazard to the user or endangers the lives, health or welfare of others; and/or

b) causes or worsens an occupational, social, mental or physical problem or disorder.

**Procedure altitude/height:** A published altitude/height used in defining the vertical profile of a flight procedure, at or above the minimum obstacle clearance altitude/height where established.

**Procedural control:** Term used to indicate that information derived from an ATS surveillance system is not required for the provision of air traffic control service.

**Procedural separation:** The separation used when providing procedural control.

**Procedure altitude/height:** A specified altitude/height flown operationally at or above the minimum altitude/height and established to accommodate a stabilized descent at a prescribed descent gradient/angle in the intermediate/final approach segment.

**Procedure turn:** A maneuver in which a turn is made away from a designated track followed by a turn in the opposite direction to permit the aircraft to intercept and proceed along the reciprocal of the designated track.

Note 1: Procedure turns are designated "left" or "right" according to the direction of the initial turn.

Note 2: Procedure turns may be designated as being made either in level flight or while descending, according to the circumstances of each individual procedure.

**Professional pilot:** A pilot who holds a license, which permits the piloting of aircraft in operations for which remuneration is given.

**Proficiency checks:** Demonstrations of skill to revalidate or renew ratings, and including such oral examination as the examiner may require.

**Profile:** The orthogonal projection of a flight path or portion thereof on the vertical surface containing the nominal track.

**Prognostic chart:** A forecast of a specified meteorological elements for a specified time or period and a specified surface or portion of airspace, depicted graphically on a chart.

**Prohibited area:** An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is prohibited. As defined in JCAR part 73.

**Propeller:** A device for propelling an aircraft that has blades on an engine-driven shaft and that, when rotated, produces by its action on the air, a thrust approximately perpendicular to its plane of rotation. It includes control components normally supplied by its manufacturer, but does not include main and auxiliary rotors or rotating airfoils of engines.

**Proportional guidance sector.** The volume of airspace within which the angular guidance information provided by a function is directly proportional to the angular displacement of the airborne antenna with respect to the zero angle reference.

**Protected flight zones:** Airspace specifically designated to mitigate the hazardous effects of laser radiation.

**Protected service volume:** A part of the facility coverage where the facility provides a particular service in accordance with relevant SARPs and within which the facility is afforded frequency protection.

**Protection area.** An area within a taxi-route and around a helicopter stand which provides separation from objects, the FATO, other taxi-routes and helicopter stands, for safe maneuvering of helicopters.

**Pseudo-range.** The difference between the time of transmission by a satellite and reception by a GNSS receiver multiplied by the speed of light in a vacuum, including bias due to the difference between a GNSS receiver and satellite time reference.

**Pseudorandom message data block.** Several UAT requirements state that performance will be tested using pseudorandom message data blocks. Pseudorandom message data blocks should have statistical properties that are nearly indistinguishable from those of a true random selection of bits. For instance, each bit should have (nearly) equal probability of being a ONE or a ZERO, independent of its neighbouring bits. There should be a large number of such pseudorandom message data blocks for each message type (Basic ADS-B, Long ADS-B or Ground Uplink) to provide sufficient independent data for statistical performance measurements.

**PSR blip:** The visual indication, in non-symbolic form, on a situation display of the position of an aircraft obtained by primary radar.

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

**Pulse amplitude.** The maximum voltage of the pulse envelope,

**Pulse code.** The method of differentiating between W, X, Y and Z modes and between FA and IA modes.

**Pulse Decay Time.** The time as measured between the 90 and 10 per cent amplitude points on the trailing edge of the pulse envelope.

**Pulse duration.** The time interval between the 50 per cent amplitude point on leading and trailing edges of the pulse envelope.

**Pulse rise time.** The time as measured between the 10 and 90 per cent amplitude points on the leading edge of the pulse envelope.

## Subpart- Q

**Quality assurance:** Part of quality management focused on providing confidence that quality requirements will be fulfilled .

**Quality control:** Part of quality management focused on fulfilling quality requirements .

**Quality management:** Coordinated activities to direct and control an organization with regard to quality .

**Quality of service.** The information relating to data transfer characteristics used by various communication protocols to achieve various levels of performance for network users

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

**Quality:** Degree to which a set of inherent characteristics fulfils requirements .

Note 1: The term “quality” can be used with adjectives such as poor, good or excellent.

Note 2: “Inherent”, as opposed to “assigned”, means existing in something, especially as a permanent characteristic.

**Quarantine waste:** organic waste generated on a flight arriving in Jordan from another country, and includes vegetable, fruit, meat, food, beverage and similar wastes and any materials that may be in contact with these wastes such as cutlery.

## Subpart-R

**Radar approach:** An approach in which the final approach phase is executed under the direction of a controller using radar.

**Radar clutter:** The visual indication on a situation display of unwanted signals.

**Radar contact:** The situation which exists when the radar position of a particular aircraft is seen and identified on a situation display.

**Radar separation:** The separation used when aircraft position information is derived from radar sources.

**Radar:** A radio detection device which provides information on range, azimuth and/or elevation of objects.

**Radian:** The plane angle between two radii of a circle which cut off on the circumference an arc equal in length to the radius.

**Radio bearing:** The angle between the apparent direction of a definite source of emission of electro-magnetic waves and a reference direction, as determined at a radio direction finding station. A true radio bearing is one for which the reference direction is that of true North. A magnetic radio bearing is one for which the reference direction is that of magnetic North.

**Radio direction finding (RR S1.12).** Radio determination using the reception of radio waves for the purpose of determining the direction of a station or object.

**Radio direction-finding station RR S1.91:** A radio determination station using radio direction finding.

Note: The aeronautical application of radio direction finding is in the aeronautical radio navigation service.

**Radio navigation service:** A service providing guidance information or position data for the efficient and safe operation of aircraft supported by one or more radio navigation aids.

**Radiotelephony network:** A group of radiotelephony aeronautical stations which operate on and guard frequencies from the same family and which support each other in a defined manner to ensure maximum dependability of air-ground communications and dissemination of air-ground traffic.

**Radiotelephony.** A form of radio communication primarily intended for the exchange of information in the form of speech.

**RA sense.** The sense of an ACAS II RA is “upward” if it requires climb or limitation of descent rate and “downward” if it requires descent or limitation of climb rate. It can be both upward and downward simultaneously if it requires limitation of the vertical rate to a specified range.

Note.— The RA sense may be both upward and downward when, having several simultaneous threats, ACAS generates an RA aimed at ensuring adequate separation below some threat(s) and above some other threat(s).

**Rated 2 1/2-minute OEI power, with respect to rotorcraft turbine engines:** The approved brake horsepower developed under static conditions at specified altitudes and temperatures within the operating limitations established for the engine as per the applicable regulation, and limited in use to a period of not more than 2 1/2 minutes after the failure of one engine of a multiengine rotorcraft.

**Rated 30-minute OEI power, with respect to rotorcraft turbine engines:** The approved brake horsepower developed under static conditions at specified altitudes and temperatures within the operating limitations established for the engine as per the applicable regulation, and limited in use to a period of not more than 30 minutes after the failure of one engine of a multiengine rotorcraft.

**Rated air traffic controller:** An air traffic controller holding a license and valid ratings appropriate to the privileges to be exercised.

**Rated continuous OEI power, with respect to rotorcraft turbine engines:** The approved brake horsepower developed under static conditions at specified altitudes and temperatures within the operating limitations established for the engine as per the applicable regulation, and limited in use to the time required to complete the flight after the failure of one engine of a multiengine rotorcraft.

**Rated coverage.** The area surrounding an NDB within which the strength of the vertical field of the ground wave exceeds the minimum value specified for the geographical area in which the radio beacon is situated.

**Rated maximum continuous augmented thrust, with respect to turbojet engine type certification:** The approved jet thrust that is developed statically or in flight, in standard atmosphere at a specified altitude, with fluid injection or with the burning of fuel in a separate combustion chamber, within the engine operating limitations established as per the applicable regulation, and approved for unrestricted periods of use.

**Rated maximum continuous power, with respect to reciprocating, turbo propeller, and turbo-shaft engines:** The approved brake horsepower that is developed statically or in flight, in standard atmosphere at a specified altitude, within the engine operating limitations established as per the applicable regulation, and approved for unrestricted periods of use.

**Rated takeoff power, with respect to reciprocating, turbo propeller, and turbo shaft engine type certification:** The approved brake horsepower that is developed statically under standard sea level conditions, within the engine operating limitations established as per the applicable regulation, and limited in use to periods of not over 5 minutes for takeoff operation.

**Rated takeoff thrust, with respect to turbojet engine type certification:** The approved jet thrust that is developed statically under standard sea level conditions, without fluid injection and without the burning of fuel in a separate combustion chamber, within the engine operating limitations established as per the applicable regulation and limited in use to periods of not over 5 minutes for takeoff operation.

**Rated thrust:** For engine emissions purposes, the maximum take-off thrust approved by the certificating authority for use under normal operating conditions at ISA sea level static conditions, and without the use of water injection. Thrust is expressed in kilonewtons.

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

**Required communication performance (RCP) specification.** A set of requirements for air traffic service provision and associated ground equipment, aircraft capability, and operations needed to support performance-based communication.

**Required surveillance performance (RSP) specification.** A set of requirements for air traffic service provision and associated ground equipment, aircraft capability, and operations needed to support performance-based surveillance.

**Reactive :** The reactive method responds to the events that already happened, such as incidents and accidents.

**Readback:** A procedure whereby the receiving station repeats a received message or an appropriate part thereof back to the transmitting station so as to obtain confirmation of correct reception.

**Receiving unit/controller:** Air traffic services unit/air traffic controller to which a message is sent

Note: See definition of “sending unit/controller”.

**Re-certification:** Certification of an aircraft with or without a revision to its certification noise levels, to a Standard different to that to which it was originally certificated.

**Reed-Solomon code.** An error correction code capable of correcting symbol errors. Since symbol errors are collections of bits, these codes provide good burst error correction capabilities.

**Reference landing speed:** The speed of the airplane, in the specified landing configuration, at the point where it descends through the 50 foot height in the determination of the landing distance.

**Reference pressure ratio:** The ratio of the mean total pressure at the last compressor discharge plane of the compressor to the mean total pressure at the compressor entry plane when the engine is developing take-off thrust rating in ISA sea level static conditions.

**Regional air navigation agreement:** Agreement approved by the Council of ICAO normally on the advice of a regional air navigation meeting.

**Regular station:** A station selected from those forming an enroute air-ground radiotelephony network to communicate with or to intercept communications from aircraft in normal conditions.

**Reliable link service (RLS).** A data communications service provided by the subnetwork which automatically provides for error control over its link through error detection and requested retransmission of signal units found to be in error.

**Relief:** The inequalities in elevation of the surface of the Earth represented on aeronautical charts by contours, hypsometric tints, shading or spot elevations.

**Remote pilot station:** The component of the remotely piloted aircraft system containing the equipment used to pilot the remotely piloted aircraft.

**Remote pilot:** A person charged by the operator with duties essential to the operation of a remotely piloted aircraft and who manipulates the flight controls, as appropriate, during flight time.

**Remotely piloted aircraft:** An unmanned aircraft which is piloted from a remote pilot station.

**Remotely piloted aircraft system:** A remotely piloted aircraft, its associated remote pilot stations, the required command and control links and any other components as specified in the type design.

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

**Rendering a certificate of airworthiness valid :** The action taken by, as an alternative to issuing its own certificate of airworthiness, in accepting certificate of airworthiness issued by any other Contracting State as the equivalent of its own certificate of airworthiness.

**Renewal of e.g. a rating or approval:** The administrative action taken after a rating or approval has lapsed that renews the privileges of the rating or approval for a further specified period consequent upon the fulfillment of specified requirements.

**Repair:** The restoration of an aeronautical product to an airworthy condition to ensure that the aircraft continues to comply with the design aspects of the appropriate airworthiness requirements used for the issuance of the Type Certificate for the respective aircraft type, after it has been damaged or subjected to wear.

**Repetitive flight plan:** A flight plan related to a series of frequently recurring, regularly operated individual flights with identical basic features, submitted by an operator for retention and repetitive use by ATS units.

**Reply efficiency.** The ratio of replies transmitted by the transponder to the total of received valid interrogations.

**Reporting point:** A specified named geographical location in relation to which the position of an aircraft can be reported.

Note: There are three categories of reporting points: ground-based navigation aid, intersection and waypoint. In the context of this definition, intersection is a significant point expressed as radials, bearings and/or distances from ground-based navigation aids. A reporting point can be indicated as “on request” or as “compulsory”.

**Required Communication Performance (RCP).** A statement of the performance requirements for operational communication in support of specific ATM functions

**Required communication performance type:** A label e.g. RCP 240 that represents the values assigned to RCP parameters for communication transaction time, continuity, availability and integrity.

**Required navigation performance specification.** A navigation specification based on area navigation that includes the requirement for performance monitoring and alerting, designated by the prefix RNP, e.g. RNP 4, RNP APCH.

**Required navigation performance.** A statement of the navigation performance necessary for operation within a defined airspace.

Note: Navigation performance and requirements are defined for a particular RNP type and/or application.

**Required rate.** For the standard pilot model, the required rate is that closest to the original rate consistent with the RA.

**Requirement.** Need or expectation that is stated, generally implied or obligatory .

Note 1: “Generally implied” means that it is custom or common practice for the organization, its customers and other interested parties, that the need or expectation under consideration is implied.

Note 2: A qualifier can be used to denote a specific type of requirement, e.g. product requirement, quality management requirement, customer requirement.

Note 3: A specified requirement is one which is stated, for example, in a document

Note 4: Requirements can be generated by different interested parties.

**Rescue coordination centre:** A unit responsible for promoting efficient organization of search and rescue services and for coordinating the conduct of search and rescue operations within a search and rescue region.

**Rescue sub centre:** A unit subordinate to a rescue coordination centre, established to complement the latter according to particular provisions of the responsible authorities.

**Rescue unit:** A unit composed of trained personnel and provided with equipment suitable for the expeditious conduct of search and rescue.

**Rescue:** An operation to retrieve persons in distress, provide for their initial medical or other needs, and deliver them to a place of safety.

**Reserve parachute:** An approved parachute worn for emergency use to be activated only upon failure of the main parachute or in any other emergency where use of the main parachute is impractical or use of the main parachute would increase risk.

**Residual error rate.** The ratio of incorrect, lost and duplicate subnetwork service data units (SNSDUs) to the total number of SNSDUs that were sent.

**Resolution:** A number of units or digits to which a measured or calculated value is expressed and used.

**Resolution Advisory (RA).** An indication given to the flight crew recommending: a) a manoeuvre intended to provide separation from all threats; or b) a manoeuvre restriction intended to maintain existing separation.

**Resolution Advisory Complement (RAC).** Information provided by one ACAS to another via a Mode S interrogation in order to ensure complementary manoeuvres by restricting the choice of manoeuvres available to the ACAS receiving the RAC.

**Resolution Advisory Complements Record (RAC record).** A composite of all currently active vertical RACs (VRCs) and horizontal RACs (HRCs) that have been received by ACAS. This information is provided by one ACAS to another ACAS or to a Mode S ground station via a Mode S reply.

**Resolution advisory strength.** The magnitude of the manoeuvre indicated by the RA. An RA may take on several successive strengths before being cancelled. Once a new RA strength is issued, the previous one automatically becomes void.

**Resolution message.** The message containing the resolution advisory complement (RAC).

**Rest period.** A continuous and defined period of time, subsequent to and/or prior to duty, during which flight or cabin crew members are free of all duties.

**Restricted area.** An airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is restricted in accordance with certain specified conditions.

**Restriction affecting flight procedures:** Any requirement, limitation, or other action affecting the operation of aircraft, in the air or on the ground.

**Revalidation of e.g. a rating or approval:** The administrative action taken within the period of validity of a rating or approval that allows the holder to continue to exercise the privileges of a rating or approval for a further specified period consequent upon the fulfillment of specified requirements.

**Reversal procedure:** A procedure designed to enable aircraft to reverse direction during the initial approach segment of an instrument approach procedure. The sequence may include procedure turns or base turns.

**Revocation:** To annul a valid certificate or license or authorization issued by CARC due to the breach of the holder of the certificate or license or authorization for noncompliance/ violation with JCARs. In this case the holder of a revoked certificate or license or authorization shall not apply for recertification, until at least one year has elapsed from the date of revocation.

**Risk:** The chance of a loss or injury, measured in terms of severity and probability. The chance that something is going to happen, and the consequences if it does

**Required navigation performance type:** A containment value expressed as a distance in nautical miles from the intended position within which flights would be for at least 95 per cent of the total flying time.

Example: RNP 4 represents a navigation accuracy of plus or minus 7.4 km 4 NM on a 95 per cent containment basis.

**Road:** An established surface route on the movement area meant for the exclusive use of vehicles.

**Road-holding position:** A designated position at which vehicles may be required to hold.

**Rocket:** An aircraft propelled by ejected expanding gases generated in the engine from self-contained propellants and not dependent on the intake of outside substances. It includes any part which becomes separated during the operation.

**Rotorcraft:** A power- driven heavier-than-air supported in flight on the lift generated by one or more rotors.

**Rotorcraft-load combination:** The combination of a rotorcraft and an external-load, including the external-load attaching means. Rotorcraft-load combinations are designated as Class A, Class B, Class C, and Class D, as follows:

- (1) **Class -A rotorcraft-load combination:** One in which the external load cannot move freely, cannot be jettisoned, and does not extend below the landing gear.
- (2) **Class -B rotorcraft-load combination:** One in which the external load is jettisonable and is lifted free of land or water during the rotorcraft operation.
- (3) **Class -C rotorcraft-load combination:** One in which the external load is jettisonable and remains in contact with land or water during the rotorcraft operation.
- (4) **Class- D rotorcraft-load combination:** One in which the external-load is other than a Class A, B, or C and has been specifically approved by Chief Commissioner for that operation.

**Route sector:** A flight comprising take-off, departure, cruise of not less than 15 minutes, arrival, approach and landing phases.

**Route segment:** A route or portion of route usually flown without an intermediate stop.

**Route segment:** A part of a route. Each end of that part is identified by:

- a) a continental or insular geographical location; or

b) a point at which a definite radio fix can be established.

**Route stage:** A route or portion of a route flown without an intermediate landing.

**Routing Directory:** A list in a communication centre indicating for each addressee the outgoing circuit to be used.

**RPA observer:** A trained and competent person designated by the operator who, by visual observation of the remotely piloted aircraft, assists the remote pilot in the safe conduct of the flight.

**Runway end safety area:** An area symmetrical about the extended runway centre line and adjacent to the end of the strip primarily intended to reduce the risk of damage to an aeroplane undershooting or overrunning the runway.

**Runway guard lights:** A light system intended to caution pilots or vehicle drivers that they are about to enter an active runway.

**Runway incursion:** Any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take-off of aircraft.

**Runway strip:** A defined area including the runway and stopway, if provided, intended:

a) to reduce the risk of damage to aircraft running off a runway; and

b) to protect aircraft flying over it during take-off or landing operations.

**Runway turn pad:** A defined area on a land aerodrome adjacent to a runway for the purpose of completing a 180-degree turn on a runway.

**Runway visual range:** The range over which the pilot of an aircraft on the centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line.

**Runway:** A defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft.

**Runway-holding position:** A designated position intended to protect a runway, an obstacle limitation surface, or an ILS/MLS critical/sensitive area at which taxiing aircraft and vehicles shall stop and hold, unless otherwise authorized by the aerodrome control tower.

Note: In radiotelephony phraseologies, the expression “holding point” is used to designate the runway-holding position.

## Subpart-S

**Safe forced landing:** Unavoidable landing or ditching with a reasonable expectancy of no injuries to persons in the aircraft or on the surface.

**Safety area:** a designated area abutting the edges of a runway or taxiway intended to reduce the risk of damage to an aircraft inadvertently leaving the runway or taxiway.

**Safety management system :** A systematic approach to managing safety, including the necessary organizational structures, accountabilities, policies and procedures.

**Safety oversight:** A function were the CARC insure effective implementation of safety related standards contained in the CARC regulations.

**Safety performance indicator:** Short and medium term of a state safety program, or operator / service provider SMS.

**Safety performance monitoring:** Activities being implemented by operators under SMS requirements.

**Safety performance target:** Long term of a state safety program, or operator/ service provider SMS.

**Safety programme:** An integrated set of regulations and activities aimed at improving safety.

**Safety recommendation:** A proposal of an accident investigation authority based on information derived from an investigation, made with the intention of preventing accidents or incidents and which in no case has the purpose of creating a presumption of blame or liability for an accident or incident. In addition to safety recommendations arising from accident and incident investigations, safety recommendations may result from diverse sources, including safety studies.

**Safety:** is state in which the risk of harm to persons or property damage is reduced to, and maintained at or below, an acceptable level through a continuing process of hazard identification and risk management.

**Safety-sensitive personnel:** Persons who might endanger aviation safety if they perform their duties and functions improperly including, but not limited to, crew members, aircraft maintenance personnel and air traffic controllers.

**Sailplane:** A heavier than air aircraft that is supported in flight by the dynamic reaction of the air against its fixed lifting surfaces, the free flight of which does not depend on an engine.

**Satellite-Based Augmentation System (SBAS).** A wide coverage augmentation system in which the user receives augmentation information from a satellite-based transmitter.

**Satisfactory evidence:** A set of documents or activities that a Contracting State accepts as sufficient to show compliance with an airworthiness requirement

**Sea level engine:** A reciprocating aircraft engine having a rated takeoff power that is producible only at sea level.

**Search:** An operation normally coordinated by a rescue coordination centre or rescue subcentre using available personnel and facilities to locate persons in distress

**Search in DME :** The condition which exists when the DME interrogator is attempting to acquire and lock onto the response to its own interrogations from the selected transponder.

**Search and rescue aircraft:** An aircraft provided with specialized equipment suitable for the efficient conduct of search and rescue missions.

**Search and rescue facility:** Any mobile resource, including designated search and rescue units, used to conduct search and rescue operations.

**Search and rescue region:** An area of defined dimensions, associated with a rescue coordination centre, within which search and rescue services are provided.

**Search and rescue service:** The performance of distress monitoring, communication, coordination and search and rescue functions, initial medical assistance or medical evacuation, through the use of public and private resources, including cooperating aircraft, vessels and other craft and installations.

**Search and rescue services unit:** A generic term meaning, as the case may be, rescue coordination centre, rescue subcentre or alerting post.

**Search and rescue unit:** A mobile resource composed of trained personnel and provided with equipment suitable for the expeditious conduct of search and rescue operations.

**Second s:** The duration of 9 192 631 770 periods of the radiation corresponding to the transition between the two hyperfine levels of the ground state of the caesium-133 atom.

**Second in command:** A pilot who is designated to be second in command of an aircraft during flight time.

**Secondary frequency:** The radiotelephony frequency assigned to an aircraft as a second choice for air-ground communication in a radiotelephony network.

**Secondary radar:** A radar system wherein a radio signal transmitted from the radar station initiates the transmission of a radio signal from another station.

**Secondary surveillance radar:** A surveillance radar system which uses transmitters/receivers interrogators and transponders.

**Segment.** A portion of a message that can be accommodated within a single MA/MB field in the case of a standard length message, or MC/MD field in the case of an extended length message. This term is also applied to the Mode S transmissions containing these fields

**Segregated parallel operations:** Simultaneous operations on parallel or near-parallel instrument runways in which one runway is used exclusively for approaches and the other runway is used exclusively for departures.

**Self-handler:** An air operating certificate AOC holder who engages in self-handling.

**Self-handling:** A situation in which an air operating certificate holder directly provides for itself one or more categories of ground handling services and concludes no contract with any ground handling company.

**Self-organizing Time Division Multiple Access (STDMA).** A multiple access scheme based on time-shared use of a radio frequency (RF) channel employing: (1) discrete contiguous time slots as the fundamental shared resource; and (2) a set of operating protocols that allows users to mediate access to these time slots without reliance on a master control station.

**Self-sustaining powered sailplane:** A powered aeroplane with available engine power which allows it to maintain level flight but not to take off under its own power.

**Semi-automatic relay installation:** A teletypewriter installation where interpretation of the relaying responsibility in respect of an incoming message and the resultant setting up of the connections required to effect the appropriate retransmissions require the intervention of an operator but where all other normal operations of relay are carried out automatically.

**Sending unit/controller:** Air traffic services unit/air traffic controller transmitting a message.

Note: See definition of “receiving unit/controller”.

**Serious incident:** An incident involving circumstances indicating that there was a high probability of an accident and associated with the operation of an aircraft which,

in the case of a manned aircraft, takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, or in the case of an unmanned aircraft, takes place between the time the aircraft is ready to move with the purpose of flight until such time as it comes to rest at the end of the flight and the primary propulsion system is shut down.

Note 1. The difference between an accident and a serious incident lies only in the result.

Note 2. Examples of serious incidents can be found in Attachment C.

**Serious injury:** An injury which is sustained by a person in an accident and which:

- a) requires hospitalization for more than 48 hours, commencing within seven days from the date the injury was received; or
- b) results in a fracture of any bone except simple fractures of fingers, toes or nose; or
- c) involves lacerations which cause severe haemorrhage, nerve, muscle or tendon damage; or
- d) involves injury to any internal organ; or
- e) involves second or third degree burns, or any burns affecting more than 5 per cent of the body surface; or
- f) involves verified exposure to infectious substances or injurious radiation.

**Series of flights.** Series of flights are consecutive flights that:

- a) begin and end within a period of 24 hours; and
- b) are all conducted by the same pilot-in-command.

**Service volume.** A part of the facility coverage where the facility provides a particular service in accordance with relevant SARPs and within which the facility is afforded frequency protection

**Severity:** The possible consequences of a situation of danger, taking as reference the worst foreseeable situation

**Shoreline:** A line following the general contour of the shore, except that in cases of inlets or bays less than 30 nautical miles in width, the line shall pass directly across the inlet or bay to intersect the general contour on the opposite side.

**Shoulder.:** An area adjacent to the edge of a pavement so prepared as to provide a transition between the pavement and the adjacent surface.

**Show unless the context otherwise requires:** To show to the satisfaction of the Chief Commissioner.

**Siemens:** The electric conductance of a conductor in which a current of 1 ampere is produced by an electric potential difference of 1 volt.

**Sievert Sv:** The unit of radiation dose equivalent corresponding to 1 joule per kilogram.

**SIGMET information:** Information issued by a meteorological watch office concerning the occurrence or expected occurrence of specified en-route weather phenomena which may affect the safety of aircraft operations.

**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 Part 145.

**Sign:**

a) fixed message sign. A sign presenting only one message.

b) variable message sign. A sign capable of presenting several predetermined messages or no message, as applicable.

**Signal area:** An area on an aerodrome used for the display of ground signals.

**Significant:** to a degree or of a nature that is likely to jeopardize flight safety.

**Significant point:** A specified geographical location used in defining an ATS route or the flight path of an aircraft and for other navigation and ATS purposes.

Note: There are three categories of significant points: ground-based navigation aid, intersection and waypoint. In the context of this definition, intersection is a significant point expressed as radials, bearings and/or distances from ground-based navigation aids.

**Simplex:** A method in which telecommunication between two stations takes place in one direction at a time.

Note: In application to the aeronautical mobile service, this method may be subdivided as follows:

- a) single channel simplex;
- b) double channel simplex;
- c) offset frequency simplex.

**Single channel simplex:** Simplex using the same frequency channel in each direction.

**Single-harness: dual parachute system:** The combination of a main parachute, approved reserve parachute, and approved single person harness and dual-parachute container. This parachute system may have an operational automatic activation device installed.

**Single-pilot airplanes:** Airplanes certificated for operation by one pilot.

**Situation display:** An electronic display depicting the position and movement of aircraft and other information as required.

**Skill tests :** Skill tests are demonstrations of skill for license or rating issue, including such oral examination as the examiner may require.

**Slot.** One of a series of consecutive time intervals of equal duration. Each burst transmission starts at the beginning of a slot

**Slotted aloha:** A random access strategy whereby multiple users access the same communications channel independently, but each communication must be confined to a fixed time slot. The same timing slot structure is known to all users, but there

**Slush :**Water-saturated snow which with a heel-and-toe slap-down motion against the ground will be displaced with a splatter; specific gravity: 0.5 up to 0.8.

Note: Combinations of ice, snow and/or standing water may, especially when rain, rain and snow, or snow is falling, produce substances with specific gravities in excess of 0.8. These substances, due to their high water/ice content, will have a transparent rather than a cloudy appearance and, at the higher specific gravities, will be readily distinguishable from slush.

**Small aeroplane:** An aeroplane of a maximum certificated take-off mass of 5700 kg or less.

**Smoke:** The carbonaceous materials in exhaust emissions which obscure the transmission of light.

**Smoke Number:** The dimensionless term quantifying smoke emissions.

**Snow on the ground:**

a) Dry snow. Snow which can be blown if loose or, if compacted by hand, will fall apart upon release; specific gravity: up to but not including 0.35.

b) Wet snow. Snow which, if compacted by hand, will stick together and tend to or form a snowball; specific gravity: 0.35 up to but not including 0.5.

c )Compacted snow. Snow which has been compressed into a solid mass that resists further compression and will hold together or break up into lumps if picked up; specific gravity: 0.5 and over.

**SNOWTAM:** † A special series NOTAM notifying the presence or removal of hazardous conditions due to snow, ice, slush or standing water associated with snow, slush and ice on the movement area, by means of a specific format.

Note: applicable until 4 November 2020

**SNOWTAM.** †† A special series NOTAM given in a standard format providing a surface condition report notifying the presence or cessation of hazardous conditions due to snow, ice, slush, frost, standing water or water associated with snow, slush, ice, or frost on the movement area.

Note: applicable as of 5 November 2020

**Space weather centre (SWXC).** A centre designated to monitor and provide advisory information on space weather phenomena expected to affect high-frequency radio communications, communications via satellite, GNSS-based navigation and surveillance systems and/or pose a radiation risk to aircraft occupants.

Note. – A space weather centre is designated as global and/or regional.

**Spot beam.** Satellite antenna directivity whose main lobe encompasses significantly less than the earth's surface that is within line-of-sight view of the satellite. May be designed so as to improve system resource efficiency with respect to geographical distribution of user earth stations

**Solid Waste:** has the same meaning as “solid waste” defined in Regulation No. 27 of 2005: Management of Solid Waste Regulations, issued by virtue of sub-paragraph 7 of Paragraph A of Article 23 of the Environmental Protection Law, No. 52 of 2006.

**Solo flight time:** Flight time during which a student pilot is the sole occupant of an aircraft.

**Sound exposure level:** The level, in decibels, of the time integral of squared A-weighted sound pressure during a specified period or event, with reference to the square of the standard reference sound pressure of 20 Micro-Pascal and a duration of one second.

**Special VFR conditions:** Meteorological conditions that are less than those required for basic VFR flight in controlled airspace and in which some aircraft are permitted flight under visual flight rules.

**Special VFR flight:** A VFR flight cleared by air traffic control to operate within a control zone in meteorological conditions below VMC.

**Special VFR operations:** Aircraft operating in accordance with clearances within controlled airspace in meteorological conditions less than the basic VFR weather minima. Such operations must be requested by the pilot and approved by ATC.

**Sponsor:** Owner or owner's representative through the concerned authority, or any official authority.

**Squitter Protocol Data Unit (SPDU).** Data packet which is broadcast every 32 seconds by an HF DL ground station on each of its operating frequencies, and which contains link management information

**SSR response:** The visual indication, in non-symbolic form, on a situation display, of a response from an SSR transponder in reply to an interrogation.

**Standard atmosphere:** The atmosphere defined in ICAO Document 7488-Manual of the ICAO Standard Atmosphere, as amended.

**Standard instrument arrival STAR:** A designated instrument flight rule IFR arrival route linking a significant point, normally on an ATS route, with a point from which a published instrument approach procedure can be commenced.

**Standard instrument departure:** A designated instrument flight rule IFR departure route linking the aerodrome or a specified runway of the aerodrome with a specified significant point, normally on a designated ATS route, at which the en-route phase of a flight commences.

**Standard isobaric surface:** An isobaric surface used on a worldwide basis for representing and analyzing the conditions in the atmosphere.

**Standard Length Message (SLM).** An exchange of digital data using selectively addressed Comm-A interrogations and/or Comm-B replies (see "Comm-A" and "Comm-B").

**Standard UAT receiver.** A general purpose UAT receiver satisfying the minimum rejection requirements of interference from adjacent frequency distance measuring equipment (DME) (see 12.3.2.2 for further details).

**State of design:** The State having jurisdiction over the organization responsible for the type design.

**State of destination:** The State in the territory of which the consignment is finally to be unloaded from an aircraft.

**State of manufacture:** The State having jurisdiction over the organization responsible for the final assembly of the aircraft.

**State of occurrence:** The State in the territory of which an accident or incident occurs.

**State of origin:** The State in the territory of which the consignment is first to be loaded on an aircraft.

**State of registry:** The State on whose register the aircraft is entered.

Note: In the case of the registration of aircraft of an international operating agency on other than a national basis, the States constituting the agency are jointly and severally bound to assume the obligations.

**State of the operator:** The State in which the operator's principal place of business is located or, if there is no such place of business, the operator's permanent residence.

**State safety programme:** An integrated set of regulations and activities aimed at improving safety.

**Station declination:** An alignment variation between the zero degree radial of a VOR and true north, determined at the time the VOR station is calibrated.

**Standard Atmosphere:** An atmosphere defined as follows:

a) the air is a perfect dry gas;

b) the physical constants are:

— Sea level mean molar mass:

$$M_0 = 28.964\ 420 \times 10^{-3} \text{ kg mol}^{-1}$$

— Sea level atmospheric pressure:

$$P_0 = 1\ 013.250 \text{ hPa}$$

— Sea level temperature:

$$t_0 = 15^\circ\text{C}$$

$$T_0 = 288.15 \text{ K}$$

— Sea level atmospheric density:

$$\rho_0 = 1.225\ 0 \text{ kg m}^{-3}$$

— Temperature of the ice point:

$$T_i = 273.15 \text{ K}$$

— Universal gas constant:

$$R^* = 8.314 \text{ 32 JK}^{-1}\text{mol}^{-1}$$

c the temperature gradients are:

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Geopotential altitude

<u>km</u>		Temperature gradient
<u>From</u>	<u>To</u>	Kelvin per standard <u>geopotential kilometre</u>
–5.0	11.0	–6.5
11.0	20.0	0.0
20.0	32.0	+1.0
32.0	47.0	+2.8
47.0	51.0	0.0
51.0	71.0	–2.8
71.0	80.0	–2.0

**Steradian sr:** The solid angle which, having its vertex in the centre of a sphere, cuts off an area of the surface of the sphere equal to that of a square with sides of length equal to the radius of the sphere.

**Stopway:** An area beyond the takeoff runway, no less wide than the runway and centered upon the extended centerline of the runway, able to support the airplane during an aborted takeoff, without causing structural damage to the airplane, and designated by the airport authorities for use in decelerating the airplane during an aborted takeoff.

**Subnetwork connection.** A long-term association between an aircraft DTE and a ground DTE using successive virtual calls to maintain context across link handoff.

**Subnetwork Dependent Convergence Function (SNDCF).** A function that matches the characteristics and services of a particular subnetwork to those characteristics and services required by the internetwork facility.

**Subnetwork entity.** In this document, the phrase “ground DCE” will be used for the subnetwork entity in a ground station communicating with an aircraft; the phrase “ground DTE” will be used for the subnetwork entity in a ground router communicating with an aircraft station; and, the phrase “aircraft DTE” will be used for the subnetwork entity in an aircraft communicating with the station. A subnetwork entity is a packet layer entity as defined in ISO 8208

**Subnetwork layer.** The layer that establishes, manages and terminates connections across a subnetwork.

**SubNetwork Management Entity (SNME).** An entity resident within a GDLP that performs subnetwork management and communicates with peer entities in intermediate or end-systems

**SubNetwork Service Data Unit (SNSDU).** An amount of subnetwork user data, the identity of which is preserved from one end of a subnetwork connection to the other.

**Subnetwork.** An actual implementation of a data network that employs a homogeneous protocol and addressing plan, and is under the control of a single authority.

**Student pilot-in-command SPIC:** Flight time during which the flight instructor will only observe the student acting as pilot-in-command and shall not influence or control the flight of the aircraft.

**Subsonic aeroplane:** An aeroplane incapable of sustaining level flight at speeds exceeding flight Mach number of 1

**Successful Message Reception (SMR).** The function within the UAT receiver for declaring a received message as valid for passing to an application that uses received UAT messages.

**Surveillance radar:** Radar equipment used to determine the position of an aircraft in range and azimuth.

**Survival ELT ELTS:** An ELT which is removable from an aircraft, stowed so as to facilitate its ready use in an emergency, and manually activated by survivors.

**Suspension :** To stop a valid certificate or license or authorization issued by CARC for a specific period of time but not exceeding the validity or until the holder of the certificate or license or authorization is in compliance with CARC requirements

**Switch-over time light:** The time required for the actual intensity of a light measured in a given direction to fall from 50 per cent and recover to 50 per cent during a power supply changeover, when the light is being operated at intensities of 25 per cent or above.

**Synchronous operation.** Operation in which the time interval between code units is a constant.

**System.** A VDL-capable entity. A system comprises one or more stations and the associated VDL management entity. A system may either be an aircraft system or a ground system.

**Synthetic flight trainer.** Any one of the following three types of apparatus in which flight

conditions are simulated on the ground:

- 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;
- 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;
- 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.

## Subpart-T

**Take-off and initial climb phase.** That part of the flight from the start of take-off to 300 m (1 000 ft) above the elevation of the FATO, if the flight is planned to exceed this height, or to the end of the climb in the other cases.

**Take-off decision point (TDP).** The point used in determining take-off performance from which, an engine failure occurring at this point, either a rejected take-off may be made or a take-off safely continued.

Note.— TDP applies only to helicopters operating in performance Class 1.

**Take off phase:** The operating phase defined by the time during which the engine is operated at the rated thrust.

**Takeoff power:**

a) With respect to reciprocating engines, means the brake horsepower that is developed under standard sea level conditions, and under the maximum conditions of crankshaft rotational speed and engine manifold pressure approved for the normal takeoff, and limited in continuous use to the period of time shown in the approved engine specification; and

b) With respect to turbine engines, means the brake horsepower that is developed under static conditions at a specified altitude and atmospheric temperature, and under the maximum conditions of rotor shaft rotational speed and gas temperature approved for the normal takeoff, and limited in continuous use to the period of time shown in the approved engine specification.

**Take-off runway:** A runway intended for take-off only.

**Takeoff safety speed:** A referenced airspeed obtained after lift-off at which the required one-engine-inoperative climb performance can be achieved.

**Takeoff surface:** That part of the surface of an aerodrome which the aerodrome authority has declared available for the normal ground or water run of aircraft taking off in a particular direction.

**Takeoff thrust, with respect to turbine engines:** The jet thrust that is developed under static conditions at a specific altitude and atmospheric temperature under the maximum conditions of rotorshaft rotational speed and gas temperature approved for the normal takeoff, and limited in continuous use to the period of time shown in the approved engine specification.

**Tandem wing configuration:** A configuration having two wings of similar span, mounted in tandem.

**Target level of safety:** A generic term representing the level of risk which is considered acceptable in particular circumstances.

**Taxi/ground idle:** The operating phases involving taxi and idle between the initial starting of the propulsion engine(s) and the initiation of the take-off roll and between the time of runway turn-off and final shutdown of all propulsion engine(s).

**Taxiing:** Movement of an aircraft on the surface of an aerodrome under its own power, excluding take-off and landing.

**Taxi-route:** A defined path established for the movement of helicopters from one part of a heliport to another. A taxi-route includes a helicopter air or ground taxiway which is centered on the taxi-route.

**Taxiway:** A defined path on a land aerodrome established for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another, including:

a )Aircraft stand taxilane. A portion of an apron designated as a taxiway and intended to provide access to aircraft stands only.

b )Apron taxiway. A portion of a taxiway system located on an apron and intended to provide a through taxi-route across the apron.

c) Rapid exit taxiway. A taxiway connected to a runway at an acute angle and designed to allow landing aeroplanes to turn off at higher speeds than are achieved on other exit taxiways thereby minimizing runway occupancy times.

**Taxiway intersection:** A junction of two or more taxiways.

**Taxiway strip:** An area including a taxiway intended to protect an aircraft operating on the taxiway and to reduce the risk of damage to an aircraft accidentally running off the taxiway.

**Traffic alert and collision avoidance system I:** A TCAS that utilizes interrogations of, and replies from, airborne radar beacon transponders and provides traffic advisories to the pilot.

**Traffic alert and collision avoidance system II:** A TCAS that utilizes interrogations of, and replies from airborne radar beacon transponders and provides traffic advisories and resolution advisories in the vertical plane.

**Traffic alert and collision avoidance system III:** A TCAS that utilizes interrogation of, and replies from, airborne radar beacon transponders and provides traffic advisories and resolution advisories in the vertical and horizontal planes to the pilot.

**Technical Instructions:** The Technical Instructions for the Safe Transport of Dangerous Goods by Air Doc 9284, approved and issued periodically in accordance with the procedure established by the ICAO Council.

**Telecommunication RR S1.3:** Any transmission, emission, or reception of signs, signals, writing, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems.

**Teletypewriter tape.** A tape on which signals are recorded in the 5-unit Start-Stop code by completely severed perforations Chad Type or by partially severed perforations Chadless Type for transmission over teletypewriter circuits.

**Tenant:** any organization – other than the relevant airport operator – who carries out any form of activities at the airport under a contract with the airport operator.

**Terminal arrival altitude:** The lowest altitude that will provide a minimum clearance of 300 m 1 000 ft above all objects located in an arc of a circle defined by a 46 km 25 NM radius centred on the initial approach fix IAF, or where there is no IAF on the intermediate approach fix IF, delimited by straight lines joining the extremity of the arc to the IF. The combined TAAs associated with an approach procedure shall account for an area of 360 degrees around the IF.

**Terminal control area:** A control area normally established at the confluence of ATS routes in the vicinity of one or more major aerodromes.

**Terrain:** The surface of the earth containing naturally occurring features such as mountains, hills, ridges, valleys, bodies of water, permanent ice and snow, and excluding obstacles.

**Tesla:** The magnetic flux density given by a magnetic flux of 1 weber per square metre.

**Tethered balloon:** A manned balloon which is tethered to the surface.

**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.

**Threat management:** 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.

**Threshold:** The beginning of that portion of the runway usable for landing.

**Threshold Time:** The range, expressed in time, established by the State of the operator to an en-route alternate aerodrome, where by any time beyond requires an EDTO approval from the State of the operator.

**Time difference of arrival:** The difference in relative time that a transponder signal from the same aircraft or ground vehicle is received at different receivers.

**Time division multiple access:** A multiple access scheme based on time-shared use of an RF channel employing:

- a) discrete contiguous time slots as the fundamental shared resource; and
- b) a set of operating protocols that allows users to interact with a master control station to mediate access to the channel.

**Time division multiplex:** A channel sharing strategy in which packets of information from the same source but with different destinations are sequenced in time on the same channel.

**Time in service, with respect to maintenance time records:** The time from the moment an aircraft leaves the surface of the earth until it touches it at the next point of landing.

**Timeout.** The cancellation of a transaction after one of the participating entities has failed to provide a required response within a pre-defined period of time.

**Torn-tape relay installation:** A teletypewriter installation where messages are received and relayed in teletypewriter tape form and where all operations of relay are performed as the result of operator intervention.

**Total estimated elapsed time:** For IFR flights, the estimated time required from take-off to arrive over that designated point, defined by reference to navigation aids, from which it is intended that an instrument approach procedure will be commenced, or, if no navigation aid is associated with the destination aerodrome, to arrive over the destination aerodrome. For VFR flights, the estimated time required from take-off to arrive over the destination aerodrome.

**Total vertical error:** The vertical geometric difference between the actual pressure altitude flown by an aircraft and its assigned pressure altitude flight level.

**Total voice transfer delay.** The elapsed time commencing at the instant that speech is presented to the AES or GES and concluding at the instant that the speech enters the interconnecting network of the counterpart GES or AES. This delay includes vocoder processing time, physical layer delay, RF propagation delay and any other delays within an AMS(R)S subnetwork

**Touchdown and lift-off area:** A load bearing area on which a helicopter may touchdown or lift off.

**Touchdown.** The point where the nominal glide path intercepts the runway.

Note: “Touchdown” as defined above is only a datum and is not necessarily the actual point at which the aircraft will touch the runway

**Touchdown zone:** The portion of a runway, beyond the threshold, where it is intended landing aeroplanes first contact the runway.

**Touring Motor Glider TMG:** A motor glider having a certificate of airworthiness issued or accepted by CARC having an integrally mounted, non-retractable engine and a non-retractable propeller plus those listed in Appendix 1 to JCAR-FCL 1.215. It shall be capable of taking off and climbing under its own power according to its flight manual.

**Traceability:** Ability to trace the history, application or location of that which is under consideration

Note: When considering product, raceability can relate to:

- a) the origin of materials and parts;
- b) the processing history; and
- c) the distribution and location of the product after delivery.

**Track:** The projection on the earth’s surface of the path of an aircraft, the direction of which path at any point is usually expressed in degrees from North true, magnetic or grid.

**Track in DME .** The condition which exists when the DME interrogator has locked onto replies in response to its own interrogations, and is continuously providing a distance measurement.

**Traffic Advisory (TA).** An indication given to the flight crew that a certain intruder is a potential threat.

**Traffic avoidance advice:** Advice provided by an air traffic services unit specifying manoeuvres to assist a pilot to avoid a collision.

**Traffic information service – broadcast TIS-B IN:** A surveillance function that receives and processes surveillance data from TIS-B OUT data sources.

**Traffic information service – broadcast OUT:** A function on the ground that periodically broadcasts the surveillance information made available by ground sensors in a format suitable for TIS-B IN capable receivers.

**Traffic information:** Information issued by an air traffic services unit to alert a pilot to other known or observed air traffic which may be in proximity to the position or intended route of flight and to help the pilot avoid a collision.

**Traffic pattern:** The traffic flow that is prescribed for aircraft landing at, taxiing on, or taking off from, an airport.

**Transfer of control point:** A defined point located along the flight path of an aircraft, at which the responsibility for providing air traffic control service to the aircraft is transferred from one control unit or control position to the next.

**Transferring unit:** Air traffic control unit in the process of transferring the responsibility for providing air traffic control service to an aircraft to the next air traffic control unit along the route of flight.

**Transferring unit/controller:** Air traffic control unit/air traffic controller in the process of transferring the responsibility for providing air traffic control service to an aircraft to the next air traffic control unit/air traffic controller along the route of flight.,

Note: See definition of “accepting unit/controller.

**Transit delay:** In packet data systems, the elapsed time between a request to transmit an assembled data packet and an indication at the receiving end that the corresponding packet has been received and is ready to be used or forwarded.

**Transition altitude:** The altitude at or below which the vertical position of an aircraft is controlled by reference to altitudes.

**Transition layer:** The airspace between the transition altitude and the transition level.

**Transition level:** The lowest flight level available for use above the transition altitude.

**Transitioning aircraft:** An aircraft having an average vertical rate with a magnitude exceeding 400 feet per minute (ft/min), measured over some period of interest.

**Transmission rate.** The average number of pulse pairs transmitted from the transponder per second.

**Tributary station:** An aeronautical fixed station that may receive or transmit messages and/or digital data but which intelligence of any nature by wire, radio, optical or other electromagnetic systems.

**Tropical cyclone advisory centre:** A meteorological centre designated by regional air navigation agreement to provide advisory information to meteorological watch offices, world area forecast centres and international OPMET databanks regarding the position, forecast direction and speed of movement, central pressure and maximum surface wind of tropical cyclones.

**Tropical cyclone:** Generic term for a non-frontal synoptic-scale cyclone originating over tropical or sub-tropical waters with organized convection and definite cyclonic surface wind circulation.

**True airspeed:** The airspeed of an aircraft relative to undisturbed air. True airspeed is equal to equivalent airspeed multiplied by  $\rho_0/\rho$  <sup>1/2</sup>.

**Type:**

a) As used with respect to the certification, ratings, privileges, and limitations of airmen, means a specific make and basic model of aircraft, including modifications thereto that do not change its handling or flight characteristics. Examples include: B727,737;and

b) As used with respect to the certification of aircraft, means those aircraft which are similar in design. Examples include: A320 and A340.3 As used with respect to the certification of aircraft engines means those engines which are similar in design. For example, JT8D and JT8D-7 are engines of the same type, and JT9D-3A and JT9D-7 are engines of the same type.

**Type Certificate:** That document issued by an ICAO Contracting State to define the design of an aircraft type and to certify that this design meets the appropriate airworthiness requirements of that State.

**Type of aircraft:** All aircraft of the same basic design, including all modifications except those modifications which result in a change of handling, flight characteristics or flight crew complement.

**Type rating Balloon:** An envelope capacity;

a) Group A not exceeding 3000 cubic meters volume.

b) Group B exceeding 3000 cubic meters but not exceeding 9000 cubic meters.

c) Group C exceeding 9000 cubic meters.

**Turn extent.** A heading difference defined as an aircraft's ground heading at the end of a turn minus its ground heading at the beginning of the turn.

**Two-frequency glide path system.** An ILS glide path in which coverage is achieved by the use of two independent radiation field patterns spaced on separate carrier frequencies within the particular glide path channel.

**Two-frequency localizer system.** A localizer system in which coverage is achieved by the use of two independent radiation field patterns spaced on separate carrier frequencies within the particular localizer VHF channel.

## Subpart-U

**UAT ground uplink message.** A message broadcasted by ground stations, within the ground segment of the UAT frame, to convey flight information such as text and graphical weather data, advisories, and other aeronautical information, to aircraft that are in the service volume of the ground station (see 12.4.4.2 for further details).

**Ultimate load:** The limit load multiplied by appropriate factor of safety

**UN number.** The four-digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods to identify a substance or a particular group of substances.

**Unburned hydrocarbons:** The total of hydrocarbon compounds of all classes and molecular weights contained in a gas sample, calculated as if they were in the form of methane.

**Uncertainty phase:** A situation wherein uncertainty exists as to the safety of an aircraft and its occupants.

**Unit load device.** Any type of freight container, aircraft container, aircraft pallet with a net, or aircraft pallet with a net over an igloo.

Note: An overpack is not included in this definition.

**Universal Access Transceiver (UAT) ADS-B message.** A message broadcasted once per second by each aircraft to convey state vector and other information. UAT ADS-B messages can be in one of two forms depending on the amount of information to be transmitted in a given second: the Basic UAT ADS-B Message or the Long UAT ADS-B Message (see 12.4.4.1 for definition of each). UAT ground stations can support traffic information service-broadcast (TIS-B) through transmission of individual ADS-B messages in the ADS-B segment of the UAT frame.

**Universal Access Transceiver (UAT).** A broadcast data link operating on 978 MHz, with a modulation rate of 1.041667 Mbps.

**Unmanned free balloon:** A non-power-driven, unmanned, lighter-than-air aircraft in free flight.

Note: Unmanned free balloons are classified as heavy, medium or light in accordance with specifications contained in **VFR**. The symbol used to designate the visual flight rules.

**Uplink ELM (UELM).** A term referring to extended length uplink communication by means of 112-bit Mode S Comm-C interrogations, each containing the 80-bit Comm-C message field (MC)

**Uplink.** A term referring to the transmission of data from the ground to an aircraft. Mode S ground-to-air signals are transmitted on the 1 030 MHz interrogation frequency channel.

**Upper-air chart:** A meteorological chart relating to a specified upper-air surface or layer of the atmosphere.

**Usability factor:** The percentage of time during which the use of a runway or system of runways is not restricted because of the crosswind component.

Note: Crosswind component means the surface wind component at right angles to the runway centre line.

**User group.** A group of ground and/or aircraft stations which share voice and/or data connectivity. For voice communications, all members of a user group can access all communications. For data, communications include point-to-point connectivity for air-to-ground messages, and point-to-point and broadcast connectivity for ground-to-air messages

## Subpart-V

**Validation:** Confirmation, through the provision of objective evidence, that the requirements for a specific intended use or application have been fulfilled ISO 9000\*.

**VDL management entity (VME).** A VDL-specific entity that provides the quality of service requested by the ATN-defined SN\_SME. A VME uses the LMEs (that it creates and destroys) to enquire the quality of service available from peer Systems

**VDL Mode 4 burst.** A VHF digital link (VDL) Mode 4 burst is composed of a sequence of source address, burst ID, information, slot reservation and frame check sequence (FCS) fields, bracketed by opening and closing flag sequences.

Note.— The start of a burst may occur only at quantized time intervals and this constraint allows the propagation delay between the transmission and reception to be derived.

**VDL Mode 4 DLS system.** A VDL system that implements the VDL Mode 4 DLS and subnetwork protocols to carry ATN packets or other packets.

**VDL Mode 4 specific services (VSS) sublayer.** The sublayer that resides above the MAC sublayer and provides VDL Mode 4 specific access protocols including reserved, random and fixed protocols.

**VDL station.** An aircraft-based or ground-based physical entity, capable of VDL Mode 2, 3 or 4.

Note.— In the context of this chapter, a VDL station is also referred to as a “station”.

**Vectoring:** Provision of navigational guidance to aircraft in the form of specific headings, based on the use of an ATS surveillance system.

**Verification:** Confirmation, through the provision of objective evidence, that specified requirements have been fulfilled ISO 9000\*.

Note.

The term “verified” is used to designate the corresponding status.

**Vertical Miss Distance (vmd).** Notionally, the vertical separation at closest approach. For encounters in the standard encounter model (4.4.2.6), by construction the vertical separation at the time tca.

**Vertical Speed Limit (VSL) RA.** A resolution advisory advising the pilot to avoid a given range of altitude rates. A VSL RA can be either corrective or preventive

**Very light aircraft:** Airplanes with a single engine spark or compression-ignition having not more than two seats, with a Maximum Certificated Take-off Weight of not more than 750 kg and a stalling speed in the landing configuration of not more than 83 km/h 45 knots CAS, to be approved for day-VFR only.

**VFR flight:** A flight conducted in accordance with the visual flight rules.

**VFR over-the-top, with respect to the operation of aircraft:** The operation of an aircraft over-the-top under VFR when it is not being operated on an IFR flight plan.

**VHF digital link VDL:** A constituent mobile subnetwork of the aeronautical telecommunication network ATN, operating in the aeronautical mobile VHF frequency band. In addition, the VDL may provide non-ATN functions such as, for instance, digitized voice.

**Virtual origin.** The point at which the straight line through the 30 per cent and 5 per cent amplitude points on the pulse leading edge intersects the 0 per cent amplitude axis.

**Visibility.** Visibility for aeronautical purposes is the greater of:

- a) the greatest distance at which a black object of suitable dimensions, situated near the ground, can be seen and recognized when observed against a bright background;
- b) the greatest distance at which lights in the vicinity of 1 000 candelas can be seen and identified against an unlit background.,

Note 1. The two distances have different values in air of a given extinction coefficient, and the latter b varies with the background illumination. The former a is represented by the meteorological optical range MOR.

Note 2. The definition applies to the observations of visibility in local routine and special reports, to the, observations of prevailing and minimum visibility reported in METAR and SPECI and to the observations of ground visibility.

**Visual approach:** An approach by an IFR flight when either part or all of an instrument approach procedure is not completed and the approach is executed in visual reference to terrain.

**Visual approach procedure:** A series of predetermined manoeuvres by visual reference, from the initial approach fix, or where applicable, from the beginning of a

defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, a go-around procedure can be carried out.

**Visual Flight Guide:** A guide, forming part of the AIP, that provides essential aerodrome information for pilots performing VFR operations.

**Visual line-of-sight VLOS operation:** An operation in which the remote pilot or RPA observer maintains direct unaided visual contact with the remotely piloted aircraft.

**Visual meteorological conditions VMC:** Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, equal to or better than specified minima.

**Visual runway:** See non-instrument runway.

**VMC:** The symbol used to designate visual meteorological conditions.

**Vocoder.** A low bit rate voice encoder/decoder.

**Voice unit.** A device that provides a simplex audio and signalling interface between the user and VDL.

**Volcanic ash advisory centre:** A meteorological centre designated by regional air navigation agreement to provide advisory information to meteorological watch offices, area control centres, flight information centres, world area forecast centres and international OPMET databanks regarding the lateral and vertical extent and forecast movement of volcanic ash in the atmosphere following volcanic eruptions.

**VOLMET:** Meteorological information for aircraft in flight. Data link-VOLMET D-VOLMET. Provision of current aerodrome routine meteorological reports METAR and aerodrome special meteorological reports SPECI, aerodrome forecasts TAF, SIGMET, special air-reports not covered by a SIGMET and, where available, AIRMET via data link. VOLMET broadcast. Provision, as appropriate, of current METAR, SPECI, TAF and SIGMET by means of continuous and repetitive voice broadcasts.

**Volt V:** The unit of electric potential difference and electromotive force which is the difference of electric potential between two points of a conductor carrying a constant current of 1 ampere, when the power dissipated between these points is equal to 1 watt.

**VSS user.** A user of the VDL Mode 4 specific services. The VSS user could be higher layers in the VDL Mode 4 SARPs or an external application using VDL Mode 4.

**VSS user.** A user of the VDL Mode 4 specific services. The VSS user could be higher layers in the VDL Mode 4 SARPs or an external application using VDL Mode 4.

**VTOSS .** The minimum speed at which climb shall be achieved with the critical engine inoperative, the remaining engines operating within approved operating limits.

Note.— The speed referred to above may be measured by instrument indications or achieved by a procedure specified in the flight manual.

## Subpart-W

**Watt:** The power which gives rise to the production of energy at the rate of 1 joule per second.

**Waypoint:** A specified geographical location used to define an area navigation route or the flight path of an aircraft employing area navigation. Waypoints are identified as either:

**Fly-by waypoint:** A waypoint which requires turn anticipation to allow tangential interception of the next segment of a route or procedure, or

**Flyover waypoint.** A waypoint at which a turn is initiated in order to join the next segment of a route or procedure.

**Weber:** The magnetic flux which, linking a circuit of one turn, produces in it an electromotive force of 1 volt as it is reduced to zero at a uniform rate in 1 second.

**Winching area:** An area provided for the transfer by helicopter of personnel or stores to or from a ship.

**Wildlife hazard:** A potential for a damaging aircraft collision with wildlife on or near an airport. As used in JCAR Part 139, "wildlife" includes domestic animals while out of the control of their owners.

**Winglet or tip fin:** An out-of-plane surface extending from a lifting surface. The surface may or may not have control surfaces.

**Withdrawal:** To pullout or take back or take out withdraw a certificate or license or authorization issued by CARC , due to the breach of the holder of the certificate or license or authorization of noncompliance/ violation with JCARs requirements.

In this case the holder of a withdrawal certificate or license or authorization shall not be allowed to apply for a new certification license or authorization until at least two years has elapsed from the date withdrawal.

**World area forecast centre:** A meteorological centre designated to prepare and issue significant weather forecasts and upper-air forecasts in digital form on a global basis direct to States by appropriate means as part of the aeronautical fixed service.

**World area forecast system:** A worldwide system by which world area forecast centers provide aeronautical meteorological en-route forecasts in uniform standardized formats.

**SUBPART-X  
RESERVED**

## **Subpart-Y**

**Yearly day-night average sound level:** the 365-day average, in decibels, day-night average sound level. The symbol for YDNL is also Ldn.

## **Subpart-Z**

**Z marker beacon:** A type of radio beacon, the emissions of which radiate in a vertical cone-shaped pattern.

## 1.2 Abbreviations and Symbols

**A:** Ampere

**AAC:** Aeronautical Administrative Communications

**ACAS:** Airborne collision avoidance system

**ACN:** Aircraft classification number

**ADIZ:** Air defence identification zone

**ADS-B :** Automatic dependent surveillance-broadcast

**AES:** Aircraft earth station

**AFS:** Aeronautical fixed service

**AFTN:** Aeronautical fixed telecommunication network

**AGL:** Above ground level.

**AIC:** Aeronautical Information Circular

**AIM : Aeronautical information management**

**AIP:** Aeronautical Information Publication

**AIRAC:** Aeronautical information regulation and control

**AIRPROX:** The code word used in an air traffic incident report to designate aircraft proximity.

**AIS:** Aeronautical information service

**ALERFA:** The code word used to designate an alert phase

**ALS:** Approach light system.

**AMA:** Area minimum altitude

**AMDB : Aerodrome mapping database**

**AMD : Aerodrome mapping data**

**AOC:** Air operator certificate

**APU:** Auxiliary power-unit

**APV:** Approach procedure with vertical guidance

**ARNAV:** Area Navigation

**ASDA:** Accelerate-stop distance available

**ASE:** Altimetry system error.

**ASR:** Airport surveillance radar.

**ATC:** Air traffic control.

**ATFM:** Air traffic flow management

**ATIS:** Automatic terminal information service

**ATM:** Air traffic management

**ATN:** Aeronautical telecommunication network:

**ATS:** Air Traffic Service

**BAR:** Board of Airline Representatives

**BER:** Bit error rate

**Bq:** Becquerel

**C/M:** Carrier-to-multipath ratio

**C/No:** Carrier-to-noise density ratio

**C:**Coulomb

**°C:**Degree Celsius

**CARC:** Civil Aviation Regulatory Commission

**CAS:** Calibrated airspeed.

**CAT II:** Category II.

**CEO:** Chief Commissioner/Executive Officer of Jordan Civil Aviation Regulatory Commission.

**cd:** Candela

**CDL:** Configuration deviation list

**CG:** Centre of gravity

**CONSOL or CONSOLAN:** a kind of low or medium frequency long range navigational aid.

**CPDLC:** Controller pilot data link communications

**CPL:** Current flight plan

**CRC:** Cyclic redundancy check

**CVR:** Cockpit Voice Recorder

**DA:** Decision altitude or

**DEM:** Digital Elevation Model

**DH:** Decision height.

**DLFIS:** Data link flight information services

**DLIC:** Data link initiation capability

**DME:** Distance measuring equipment compatible with TACAN.

**DNL:** Day-night average sound level

**e.i.r.p:** Equivalent isotropically radiated power

**EAS:** Equivalent airspeed.

**EOBT :Estimated off-block time**

**EDTO:** Extended Diversion Time Operation

**ELT:** Emergency locator transmitter

**EOL:** Economic operating License

**EQN :Equatorial latitudes northern hemisphere**

**EQPT :Equipment**

**EQS :Equatorial latitudes southern hemisphere**

**Es/No:** Energy per symbol to noise density ratio

**EVS:** Enhanced vision system

**F:**Farad

**FATO:** Final approach and take-off area

**FDR :**Flight Data Recorder

**FEC:** Forward error correction

**FIS:** Flight information service

**FM:** Fan marker.

**FPL:** Filed flight plan

**FRMS:** Fatigue Risk Management System

**ft:** Foot

**GES:** Ground earth station

**GS:** Glide slope.

**Gy:** Gray

**H:**Henry

**HIRL:** High-intensity runway light system.

**HN :**Sunset to sunrise

**HNH :**High latitudes northern hemisphere

**HO :**Service available to meet operational requirements

**HS :**Service available during hours of scheduled operations

**HSH :**High latitudes southern hemisphere

**HUD:** Head-up display

**Hz:** Hertz

**IAS:** Indicated airspeed.

**IAVW:** International airways volcano watch

**ICAO:** International Civil Aviation Organization.

**IFR:** Instrument flight rules.

**ILS:** Instrument landing system.

**IM:** ILS inner marker.

**IMC :** Instrument meteorological conditions .

**INCERFA:** The code word used to designate an uncertainty phase.

**INT:** Intersection.

**J:**Joule

**JCAR:** Jordan civil Aviation Regulation

**K:** Kelvin

**kg:** Kilogram

**kt:** Knot

**L:** Litre

**LCFZ:** Laser-beam critical flight zone

**LDA:** Landing distance available

**LTDA:** Localizer type directional aid.

**LFFZ:** Laser-beam free flight zone

**LFR:** Low-frequency radio range.

**lm:** Lumen

**LMM:** Compass locator at middle marker.

**LOC:** ILS localizer.

**LOM:** Compass locator at outer marker.

**LRCS:** Long-range communication system

**LRNS:** Long-range navigation system

**LSA:** Light Sport Aeroplane

**LSFZ:** Laser-beam sensitive flight zone

**lx:** Lux

**M:** Mach number.

**m:**Metre

**MAA:** Maximum authorized IFR altitude.

**MALS:** Medium intensity approach light system.

**MALSR:** Medium intensity approach light system with runway alignment indicator lights.

**MAPt:** Missed approach point

**MCA:** Minimum crossing altitude.

**MDA :** Minimum descent altitude

**MDA:** Minimum descent altitude.

**MDH :**Minimum descent height

**MEA:** Minimum en route IFR altitude.

**MEL:** Minimum equipment list

**MM:** middle marker.

**MMEL:** Master minimum equipment list

**MNH :**Middle latitudes northern hemisphere

**MNM :**Minimum

**MOCA:** Minimum obstacle clearance altitude

**mol:** Mole

**MRA:** Minimum reception altitude.

**MSG :**Message

**MSH :**Middle latitudes southern hemisphere

**MSL:** Mean sea level.

**N:** Newton

**NFZ:** Normal flight zone

**NLR:** Noise level reduction

**NM:** Nautical mile

**NOF:** International NOTAM office

**NOPT:** No procedure turn required.

**NOZ:** Normal operating zone

**NTZ:** No transgression zone

**OCA:** Obstacle clearance altitude

**OCH:** Obstacle clearance height

**OEI** : One engine inoperative.

**OFZ**: Obstacle free zone

**OM**: ILS outer marker.

**Pa**: Pascal

**PA**: Precision approach

**PANS**: Procedures for air navigation service

**PAR**: Precision approach radar

**PBC** :Performance-based communication

**PBS** :Performance-based surveillance

**PBN**: Performance-based navigation

**PCN**: Pavement classification number

**PIB**: Pre-flight information bulletin

**PSR**: Primary surveillance radar

**PANS\_Ops** :Procedures for Air Navigation Services- Aircraft Operations

**rad**: Radian

**RAIL**: Runway alignment indicator light system.

**RBN**: Radio beacon.

**RCC**: Rescue coordination centre

**RCLM**: Runway centerline marking.

**RCLS**: Runway centerline light system.

**RCP** : Required communication performance

**REIL**: Runway end identification lights.

**RNP**: Required navigation performance

**RPA**: Remotely piloted aircraft

**RPAS**: Remotely piloted aircraft system

**RPL**: Repetitive flight plan

**RR**: low or medium frequency radio range station.

**RSP** :Required surveillance performance specification

**RVR**: runway visual range as measured in the touchdown zone area.

**SALS**: short approach light system.

**SID**: Standard instrument departure .

**SMS**: Safety management system.

**SPIC**: Student pilot-in-command.

**SRR**: Search and rescue region.

**SSALS**: simplified short approach light system.

**SSALSR**: simplified short approach light system with runway alignment indicator lights.

**S**: Siemens .

**SSP** :State safety programme

sr

**SSR**: Secondary surveillance radar

**STAR**: Standard instrument arrival

**Sv**: Sievert

**SWB** :South-westbound

**SWX** :Space weather

**SWXC** :Space weather centre

**t**: Tonne

**t°C** :Celsius temperature .

**TACAN**: ultra-high frequency tactical air navigational aid.

**TAS**: True airspeed.

**TCAS**: Traffic alert and collision avoidance system.

**TDZL**: Touchdown zone lights.

**TEM** : Threat and Error Management

**TIS-B IN**: Traffic information service – broadcast

**TLS**: Target level of safety.

**TMG:** Touring Motor Glider

**TVOR:** very high frequency terminal omnirange station.

**V:** Volt

**V<sub>1</sub>:** the maximum speed in the takeoff at which the pilot must take the first action e.g., apply brakes, reduce thrust, deploy speed brakes to stop the airplane within the accelerate-stop distance. V<sub>1</sub> also means the minimum speed in the takeoff, following a failure of the critical engine at VEF, at which the pilot can continue the takeoff and achieve the required height above the takeoff surface within the takeoff distance.

**V<sub>2 min</sub>:** minimum takeoff safety speed.

**V<sub>2</sub>:** takeoff safety speed.

**V<sub>A</sub>:** design maneuvering speed.

**VAAC:** Volcanic ash advisory centre

**V<sub>B</sub>:** design speed for maximum gust intensity.

**V<sub>C</sub>:** design cruising speed.

**V<sub>D</sub>:** design diving speed.

**V<sub>DF/MDF</sub>:** demonstrated flight diving speed.

**V<sub>EF</sub>:** the speed at which the critical engine is assumed to fail during takeoff.

**V<sub>F</sub>:** design flap speed.

**V<sub>FC/MFC</sub>:** maximum speed for stability characteristics.

**V<sub>FE</sub>:** maximum flap extended speed.

**VFR:** visual flight rules.

**V<sub>H</sub>:** maximum speed in level flight with maximum continuous power.

**VHF:** very high frequency.

**V<sub>LE</sub>:** maximum landing gear extended speed.

**V<sub>LO</sub>:** maximum landing gear operating speed.

**V<sub>LOF</sub>:** means lift-off speed.

**VLOS:** Visual line-of-sight

**VMC :** Visual meteorological conditions

**VMC:** The symbol used to designate visual meteorological conditions

**V<sub>MC</sub>:** minimum control speed with the critical engine inoperative.

**V<sub>MO/MMO</sub>:** maximum operating limit speed.

**V<sub>MU</sub>:** minimum unstick speed.

**V<sub>NE</sub>:** never-exceed speed.

**V<sub>NO</sub>:** maximum structural cruising speed.

**VOR:** very high frequency omnirange station.

**VORTAC:** collocated VOR and TACAN.

**V<sub>R</sub>:** rotation speed.

**V<sub>S</sub>:** the stalling speed or the minimum steady flight speed at which the airplane is controllable.

**V<sub>S0</sub>:** the stalling speed or the minimum steady flight speed in the landing configuration.

**V<sub>S1</sub>:** the stalling speed or the minimum steady flight speed obtained in a specific configuration.

**V<sub>TOSS</sub>:** takeoff safety speed for Category A rotorcraft.

**V<sub>X</sub>:** speed for best angle of climb.

**V<sub>Y</sub>:** speed for best rate of climb.

**Ω:** Ohm

**-END-**