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Remarks

The content of this document is arranged as follows: the Articles of the Implementing Rule (IR) appear first, then the IR, followed by the related Acceptable Means of Compliance (AMC) and Guidance Material (GM).

All elements (i.e., IRs, AMC, and GM) are color-coded and can be identified according to the illustration below.

IR (Implementing Rule)

‘Implementing Rule’, also called ‘hard law’. The term ‘shall’ is used to describe these rules, IRs are binding and must be enforced.

AMC (Acceptable Means of Compliance)

‘Acceptable means of compliance (AMC)’ or ‘soft law’ means non-binding standards adopted by the CAA.IRI to illustrate means to establish compliance with ‘IR’ Regulation. If an operator would not be able to enforce an AMC, so they suggest another means of compliance to CAA.IRI. If CAA.IRI accept this means of compliance, the operator can execute its alternative implementation method.

AMC can be changed by alternative method.

GM (Guidance Material)

‘Guidance material (GM)’ describes elaboration of ‘IR’, ‘AMC’ or both, it means non-binding material developed by the CAA.IRI that helps to illustrate the meaning of a requirement or specification and is used to support the interpretation of this Regulation and AMC.

Articles

Article 1- Definitions

For the purpose of this Regulation the following definitions shall apply:

1. 'accuracy' means a degree of conformance between the estimated or measured value and the true value;
3. 'advisory airspace' means an airspace of defined dimensions, or designated route, within which air traffic advisory service is available;
4. 'advisory route' means a designated route along which air traffic advisory service is available;
5. 'aerobatic flight' means maneuvers intentionally performed by an aircraft involving an abrupt change in its attitude, an abnormal attitude, or an abnormal variation in speed, not necessary for normal flight or for instruction for licenses or ratings other than aerobatic rating;
6. 'aerodrome' means a defined area (including any buildings, installations and equipment) on land or water intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft;
7. 'aerodrome control service' means air traffic control service for aerodrome traffic;
8. 'aerodrome control tower' means a unit established to provide air traffic control service to aerodrome traffic;
9. 'aerodrome traffic' means all traffic on the manoeuvring area of an aerodrome and all aircraft flying in the vicinity of an aerodrome. An aircraft operating in the vicinity of an aerodrome includes but is not limited to aircraft entering or leaving an aerodrome traffic circuit;
10. 'aerodrome traffic circuit' means the specified path to be flown by aircraft operating in the vicinity of an aerodrome;
11. 'aerodrome traffic zone' means an airspace of defined dimensions established around an aerodrome for the protection of aerodrome traffic;
12. 'aerial work' means 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.;
- 12a. 'Aeronautical Fixed Telecommunication Network (AFTN)' means 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.
13. 'Aeronautical Information Publication (AIP)' means a publication issued by or with the authority of a State and containing aeronautical information of a lasting character essential to air navigation;
14. 'aeronautical mobile service' means 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;

15. 'aeronautical station' means 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;

16. 'aeroplane' means 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;

17. 'airborne collision avoidance system (ACAS)' means an aircraft system based on secondary surveillance radar (SSR) 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;

18. 'aircraft' means 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;

19. 'aircraft address' means a unique combination of 24 bits available for assignment to an aircraft for the purpose of air-ground communications, navigation and surveillance;

20. 'aircraft observation' means the evaluation of one or more meteorological elements made from an aircraft in flight;

21. 'AIRMET information' means 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;

21a. 'Airship' means a power-driven lighter-than-air aircraft;

22. 'air-ground communication' means two-way communication between aircraft and stations or locations on the surface of the earth;

23. 'air-ground control radio station' means an aeronautical telecommunication station having primary responsibility for handling communications pertaining to the operation and control of aircraft in a given area;

24. 'air-report' means a report from an aircraft in flight prepared in conformity with requirements for position, and operational and/or meteorological reporting;

25. 'air-taxiing' means movement of a helicopter/vertical take-off and landing (VTOL) above the surface of an aerodrome, normally in ground effect and at a ground speed normally less than 37 km/h (20 kts);

26. 'air traffic' means all aircraft in flight or operating on the manoeuvring area of an aerodrome;

27. 'air traffic advisory service' means a service provided within advisory airspace to ensure separation, in so far as practical, between aircraft which are operating on instrument flight rules (IFR) flight plans;

28. 'air traffic control (ATC) clearance' means authorization for an aircraft to proceed under conditions specified by an air traffic control unit;

29. 'air traffic control instruction' means directives issued by air traffic control for the purpose of requiring a pilot to take a specific action;
30. 'air traffic control service' means a service provided for the purpose of:
- (a) preventing collisions:
 - (1) between aircraft; and
 - (2) on the manoeuvring area between aircraft and obstructions; and - (b) expediting and maintaining an orderly flow of air traffic;
31. 'air traffic control unit' means a generic term meaning variously, area control centre, approach control unit or aerodrome control tower;
32. 'air traffic service (ATS)' means 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);
33. 'air traffic services (ATS) airspaces' mean 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;
34. 'air traffic services (ATS) reporting office (ARO)' means a unit established for the purpose of receiving reports concerning air traffic services and flight plans submitted before departure;
- 34a. 'air traffic services (ATS) surveillance service' means a service provided directly by means of an ATS surveillance system;
35. 'air traffic services (ATS) unit' means a generic term meaning, variously, air traffic control unit, flight information centre, aerodrome flight information service unit or air traffic services reporting office;
36. 'airway' means a control area or portion thereof established in the form of a corridor;
37. 'alerting service' means a service provided to notify appropriate organisations regarding aircraft in need of search and rescue aid, and assist such organisations as required;
38. 'alternate aerodrome' means 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;
39. 'altitude' means the vertical distance of a level, a point or an object considered as a point, measured from mean sea level (MSL);
40. 'approach control service' means air traffic control service for arriving or departing controlled flights;

41. ‘approach control unit’ means a unit established to provide air traffic control service to controlled flights arriving at, or departing from, one or more aerodromes;
42. ‘apron’ means a defined area, intended to accommodate aircraft for purposes of loading or unloading passengers, mail or cargo, fuelling, parking or maintenance;
43. ‘area control centre (ACC)’ means a unit established to provide air traffic control service to controlled flights in control areas under its jurisdiction;
44. ‘area control service’ means air traffic control service for controlled flights in control areas;
45. ‘area navigation (RNAV)’ means a method of navigation which permits aircraft operation on any desired flight path within the coverage of ground- or space-based navigation aids or within the limits of the capability of self-contained aids, or a combination of these;
46. ‘ATS route’ means a specified route designed for channelling the flow of traffic as necessary for the provision of air traffic services;
47. ‘automatic dependent surveillance — broadcast (ADS-B)’ means 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;
48. ‘automatic dependent surveillance — contract (ADS-C)’ means 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;
- 48a. ‘automatic dependent surveillance — contract (ADS-C) agreement’ means 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);
49. ‘automatic terminal information service (ATIS)’ means 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 (D-ATIS)’ means the provision of ATIS via data link;
- (b) ‘Voice-automatic terminal information service (Voice-ATIS)’ means the provision of ATIS by means of continuous and repetitive voice broadcasts;
- 49a. ‘CAA.IRI.’ means Civil Aviation Authority of Islamic Republic of Iran;
- 49b. ‘caution area’ means an airspace of defined dimensions within which uncontrolled and manoeuvring aircraft may be encountered, so it is necessary for the pilots “to use caution” when entering such airspace for avoidance of probable danger. Pilots of participating aircraft as well as pilots transiting the area are responsible for collision avoidance and pilots transiting Caution areas should coordinate with ATS units prior entering such areas;
50. ‘ceiling’ means the height above the ground or water of the base of the lowest layer of cloud below 6 000 m (20 000 ft) covering more than half the sky;
51. ‘change-over point’ means the point at which an aircraft navigating on an ATS route segment defined by reference to very high frequency omnidirectional radio ranges is expected to transfer

its primary navigational reference from the facility behind the aircraft to the next facility ahead of the aircraft;

52. 'clearance limit' means the point to which an aircraft is granted an air traffic control clearance;

53. 'cloud of operational significance' means 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;

54. 'code (SSR)' means the number assigned to a particular multiple pulse reply signal transmitted by a transponder in Mode A or Mode C;

56. 'control area' means a controlled airspace extending upwards from a specified limit above the earth;

57. 'controlled aerodrome' means an aerodrome at which air traffic control service is provided to aerodrome traffic regardless whether or not a control zone exists;

58. 'controlled airspace' means an airspace of defined dimensions within which air traffic control service is provided in accordance with the airspace classification;

59. 'controlled flight' means any flight which is subject to an air traffic control clearance;

60. 'controller-pilot data link communications (CPDLC)' mean a means of communication between controller and pilot, using data link for ATC communications;

61. 'control zone' means a controlled airspace extending upwards from the surface of the earth to a specified upper limit;

62. 'cruise climb' means an aeroplane cruising technique resulting in a net increase in altitude as the aeroplane mass decreases;

63. 'cruising level' means a level maintained during a significant portion of a flight;

64. 'current flight plan (CPL)' means the flight plan, including changes, if any, brought about by subsequent clearances;

65. 'danger area' means an airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times;

66. 'data link communications' mean a form of communication intended for the exchange of messages via a data link;

67. 'datum' means any quantity or set of quantities that may serve as a reference or basis for the calculation of other quantities;

69. 'estimated elapsed time' means the estimated time required to proceed from one significant point to another;

70. 'estimated off-block time' means the estimated time at which the aircraft will commence movement associated with departure;

71. 'estimated time of arrival (ETA)' means 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 visual flight rules (VFR) flights, the time at which it is estimated that the aircraft will arrive over the aerodrome;
72. 'expected approach time' means the time at which ATC expects that an arriving aircraft, following a delay, will leave the holding fix to complete its approach for a landing. The actual time of leaving the holding fix will depend upon the approach clearance;
73. 'filed flight plan (FPL)' means the flight plan as filed with an ATS unit by the pilot or a designated representative, without any subsequent changes;
74. 'flight crew member' means a licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period;
75. 'flight information centre' means a unit established to provide flight information service and alerting service;
76. 'flight information region' means an airspace of defined dimensions within which flight information service and alerting service are provided;
77. 'flight information service' means a service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights;
78. 'flight level (FL)' means a surface of constant atmospheric pressure which is related to a specific pressure datum, 1013.2 hectopascals (hPa), and is separated from other such surfaces by specific pressure intervals;
79. 'flight plan' means specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft;
80. 'flight visibility' means the visibility forward from the cockpit of an aircraft in flight;
81. 'forecast' means a statement of expected meteorological conditions for a specified time or period, and for a specified area or portion of airspace;
- 81a. 'General Air Traffic (GAT)' means all flights which are conducted in accordance with the rules and procedures of ICAO and/or the national civil aviation regulations and legislations;
- 81b. 'Glider' means 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;
82. 'ground visibility' means the visibility at an aerodrome, as reported by an accredited observer or by automatic systems;
83. 'heading' means the direction in which the longitudinal axis of an aircraft is pointed, usually expressed in degrees from North (true, magnetic, compass or grid);
84. 'height' means the vertical distance of a level, a point or an object considered as a point, measured from a specified datum;

85. 'helicopter' means 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;
86. 'high seas airspace' means airspace beyond land territory and territorial seas, as specified in the United Nations Convention on the Law of the Sea (Montego Bay, 1982);
87. 'IFR' means the symbol used to designate the instrument flight rules;
88. 'IFR flight' means a flight conducted in accordance with the instrument flight rules;
89. 'IMC' means the symbol used to designate instrument meteorological conditions;
- 89a. 'instrument approach operation' means 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;
90. 'instrument approach procedure (IAP)' means 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 designed for 2D instrument approach operations Type A;
 - (b) approach procedure with vertical guidance (APV). A performance-based navigation (PBN) instrument approach procedure designed for 3D instrument approach operations Type A;
 - (c) precision approach (PA) procedure. An instrument approach procedure based on navigation systems (ILS, MLS, GLS and SBAS Cat I) designed for 3D instrument approach operations Type A or B;
91. 'instrument meteorological conditions (IMC)' mean meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorological conditions;
92. 'landing area' means that part of a movement area intended for the landing or take-off of aircraft;
93. 'level' means a generic term relating to the vertical position of an aircraft in flight and meaning variously, height, altitude or flight level;
94. 'manoeuvring area' means that part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons;
- 94a. 'minimum fuel' means a 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;
95. 'mode (SSR)' means the conventional identifier related to specific functions of the interrogation signals transmitted by an SSR interrogator. There are four modes specified in ICAO Annex 10: A, C, S and intermode;

95a. ‘model aircraft’ means an unmanned aircraft, other than toy aircraft, having an operating mass not exceeding limits prescribed by CAA.IRI, that is capable of sustained flight in the atmosphere and that is used exclusively for display or recreational activities;

95b. ‘mountainous area’ means an area of changing terrain profile where the changes of terrain elevation exceed 900 m (3 000 ft) within a distance of 18.5 km (10.0 NM);

96. ‘movement area’ means that part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the manoeuvring area and the apron(s);

97. ‘night’ means the hours between the end of evening civil twilight and the beginning of morning civil twilight. 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;

98. ‘obstacle’ means 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;

99. ‘operating site’ means a site selected by the operator or pilot-in-command for landing, take-off and/or hoist operations;

99a. ‘Operational Air Traffic (OAT)’ means all flights which do not comply with the provisions stated for GAT and for which rules and procedures have been specified by appropriate national authorities.

100. ‘pilot-in-command’ means 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;

101. ‘pressure-altitude’ means an atmospheric pressure expressed in terms of altitude which corresponds to that pressure in the Standard Atmosphere;

102. ‘problematic use of substances’ means 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;

103. ‘prohibited area’ means an airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is prohibited;

104. ‘psychoactive substance’ means alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens, and volatile solvents, whereas caffeine and tobacco are excluded;

105. ‘radar’ means a radio detection device which provides information on range, azimuth and/or elevation of objects;

107. ‘radio navigation service’ means a service providing guidance information or position data for the efficient and safe operation of aircraft supported by one or more radio navigation aids;

108. 'radiotelephony' means a form of radiocommunication primarily intended for the exchange of information in the form of speech;

109. 'repetitive flight plan' means 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;

110. 'reporting point' means a specified geographical location in relation to which the position of an aircraft can be reported;

111. 'restricted area' means 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;

112. 'route segment' means a route or portion of route usually flown without an intermediate stop;

113. 'runway' means a defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft;

114. 'runway-holding position' means a designated position intended to protect a runway, an obstacle limitation surface, or an instrument landing system (ILS)/microwave landing system (MLS) critical/sensitive area at which taxiing aircraft and vehicles are to stop and hold, unless otherwise authorized by the aerodrome control tower;

115. 'runway visual range (RVR)' means 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;

116. 'safety-sensitive personnel' means persons who might endanger aviation safety if they perform their duties and functions improperly, including crew members, aircraft maintenance personnel, aerodrome operations personnel, rescue, fire-fighting and maintenance personnel, personnel allowed unescorted access to the movement area and air traffic controllers;

117. 'sailplane' means a heavier-than-air aircraft which 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, including also hang gliders, paragliders and other comparable craft;

118. 'secondary surveillance radar (SSR)' means a surveillance radar system which uses transmitters/receivers (interrogators) and transponders;

119. 'SIGMET information' means 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;

120. 'signal area' means an area on an aerodrome used for the display of ground signals;

121. 'significant point' means a specified geographical location used in defining an ATS route or the flight path of an aircraft and for other navigation and ATS purposes;

122. 'special VFR flight' means a VFR flight cleared by air traffic control to operate within a control zone in meteorological conditions below VMC;

123. 'strayed aircraft' means an aircraft which has deviated significantly from its intended track or which reports that it is lost;

124. 'surveillance radar' means radar equipment used to determine the position of an aircraft in range and azimuth;

125. 'taxiing' means movement of an aircraft on the surface of an aerodrome or an operating site under its own power, excluding take-off and landing;

126. 'taxiway' means 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 means a portion of an apron designated as a taxiway and intended to provide access to aircraft stands only.

(b) Apron taxiway means 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 means 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;

127. 'territory' means the land areas and territorial waters adjacent thereto under the sovereignty, suzerainty, protection or mandate of a State;

128. 'threshold' means the beginning of that portion of the runway usable for landing;

129. 'total estimated elapsed time' means:

(a) 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;

(b) for VFR flights, the estimated time required from take-off to arrive over the destination aerodrome;

129a. 'toy aircraft' means an unmanned aircraft designed or intended for use, whether or not exclusively, in play by children under 14 years of age;

130. 'track' means 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);

131. 'traffic avoidance advice' means an advice provided by an air traffic services unit specifying maneuvers to assist a pilot to avoid a collision;

132. 'traffic information' means 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;

133. 'transfer of control point' means 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;

134. 'transition altitude' means the altitude at or below which the vertical position of an aircraft is controlled by reference to altitudes;

135. 'transition level' means the lowest flight level available for use above the transition altitude;

137. 'unidentified aircraft' means an aircraft which has been observed or reported to be operating in a given area but whose identity has not been established;

138. 'unmanned free balloon' means a non-power-driven, unmanned, lighter-than-air aircraft in free flight;

139. 'VFR' means the symbol used to designate the visual flight rules;

140. 'VFR flight' means a flight conducted in accordance with the visual flight rules;

141. 'visibility' means visibility for aeronautical purposes which 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;

142. 'visual meteorological conditions' mean meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, equal to or better than specified minima;

143. 'VMC' means the symbol used to designate visual meteorological conditions.

GM1 Definitions (25) Air-taxiing

The actual height during air-taxiing 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.

GM1 Definitions (27) Air Traffic Advisory Service

a) Air traffic advisory service does not afford the degree of safety and cannot assume the same responsibilities as air traffic control (ATC) service in respect of the avoidance of collisions, since the information regarding the disposition of traffic in the area concerned available to the unit providing air traffic advisory service may be incomplete.

b) Aircraft wishing to conduct IFR flights within advisory airspace, but not electing to use the air traffic advisory service, are nevertheless to submit a flight plan, and notify changes made thereto to the unit providing that service.

c) ATS units providing air traffic advisory service:

1) *advise* the aircraft to depart at the time specified and to cruise at the levels indicated in the flight plan if it does not foresee any conflict with other known traffic;

2) *suggest* to aircraft a course of action by which a potential hazard may be avoided, giving priority to an aircraft already in advisory airspace over other aircraft desiring to enter such advisory airspace; and

3) *pass* to aircraft traffic information comprising the same information as that prescribed for area control service.

GM1 Definitions (28) Air traffic control clearance

a) For convenience, the term 'air traffic control clearance' is frequently abbreviated to 'clearance' when used in appropriate contexts.

b) 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.

GM1 Definitions (34) Air traffic services reporting office

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.

GM1 Definitions (38) Alternate aerodrome

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

GM1 Definitions (39) Altitude

A pressure type altimeter calibrated in accordance with the Standard Atmosphere when set to a QNH altimeter setting will indicate altitude (above the mean sea level).

The term ‘altitude’ indicates altimetry rather than geometric altitude.

GM1 Definitions (41) Approach control unit

The purpose of the definition is to describe the specific services associated to approach control unit. This does not preclude the possibility for an approach control unit to provide air traffic control services to flights other than those arriving or departing.

GM1 Definitions (45) Area navigation (RNAV)

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

GM1 Definitions (46) ATS route

The term ‘ATS route’ is used to mean variously airway, advisory route, controlled or uncontrolled route, arrival or departure route, etc.

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 the lowest safe altitude.

GM1 Definitions (48) Automatic dependent surveillance — contract (ADS-C)

The abbreviated term ‘ADS-C’ is commonly used to refer to ADS event contract, ADS demand contract, ADS periodic contract, or an emergency mode.

GM1 Definitions (48a) ADS-C agreement

The terms of the ADS-C agreement, which establishes the conditions of the ADS-C data reporting, will be exchanged between the ground system and the aircraft by means of a contract, or a series of contracts.

GM1 Definitions (51) Change-over point

Change-over points are established to provide the optimum balance in respect of signal strength and quality between ground 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.

GM1 Definitions (58) Controlled airspace

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

GM1 Definitions (78) Flight level

A pressure type altimeter calibrated in accordance with the Standard Atmosphere, when set to a pressure of 1 013.2 hPa, may be used to indicate flight level.

GM1 Definitions (84) Height

- a) A pressure type altimeter calibrated in accordance with the Standard Atmosphere, when set to a QFE altimeter setting, will indicate height (above the QFE reference datum).
- b) The term 'height' indicates altimetry rather than geometric height.

GM1 Definitions (89a) Instrument approach operation

Lateral and vertical guidance utilized in an instrument approach procedure refers to the guidance provided either by:

- a) a ground-based navigation aid; or
- b) Computer-generated navigation data from ground-based, space-based, self-contained navigation aids or a combination of these.

GM1 Definitions (90) Instrument approach procedure

Instrument approach operations are classified based on the designed lowest operating minima below which an approach operation should only be continued with the required visual reference as follows:

- a) Type A: a minimum descent height or decision height (DH) at or above 75 m (250 ft); and
- b) Type B: a DH below 75 m (250 ft). Type B instrument approach operations are categorized as:
 - 1) Category I (CAT I): a DH not lower than 60 m (200 ft) and with either a visibility not less than 800 m or a runway visual range (RVR) not less than 550 m;

2) Category II (CAT II): a DH lower than 60 m (200 ft) but not lower than 30 m (100 ft) and an RVR not less than 300 m;

3) Category III (CAT III): a decision height lower than 30 m (100 ft) or no decision height and a runway visual range less than 300 m or no runway visual range limitations.

Where decision height (DH) and runway visual range (RVR) fall into different categories of operation, the instrument approach 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 III but with an RVR in the range of CAT III would be considered a CAT III 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). This does not apply if the RVR and/or DH has been approved as operational credits.

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 operation, the required visual reference is the runway.

GM1 Definitions (97) Night

To enable practical application of the definition of night, evening and morning civil twilight may be promulgated pertinent to the date and position. (See AIP GEN 2.7)

GM1 Definitions (114) Runway-holding position

In radiotelephony phraseology, the term ‘holding point’ is used to designate the runway holding position.

GM2 Definitions (114) Runway-holding position

Runway-holding positions also exist at aerodromes with no ATC. In such circumstance's authorization from an aerodrome control tower is not possible.

GM1 Definitions (121) Significant point

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.

GM1 Definitions (138) Unmanned free balloons

Unmanned free balloons are classified as heavy, medium or light in accordance with the specifications contained in Appendix 2 to this Regulation.

GM1 Definitions (141) Visibility

The two distances which may be defined by a given visibility have different values in the air of a given extinction coefficient. Visibility based on seeing and recognizing an object is represented by the meteorological optical range (MOR) (Definitions (141) (a)). Visibility based on seeing and identifying lights varies with the background illumination (Definitions (141) (b)).

The definition of visibility 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.

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Article 2- Subject matter

The objective of this Regulation is to establish the rules of the air and operational provisions regarding services and procedures in air navigation that shall be applicable to general air traffic within the scope in the airspace of the Islamic Republic of Iran (Tehran FIR).

Article 3- Scope

This Regulation shall apply in particular to:

- a) all airspace users;
- b) all aircraft engaged in general air traffic:
 - 1) Operating within Tehran FIR;
 - 2) Bearing the nationality and registration marks of I.R. of Iran, or registered in another country and used by an operator for which I.R. of Iran exercises oversight of operations; and operating in any airspace, to the extent that this regulation does not conflict with the rules published by the State having jurisdiction over the territory overflowed; and
- c) Air Navigation Service Providers (ANSP), aerodrome operators, and the relevant personnel engaged in aircraft operations.

Article 4- Toy and Model aircraft

Toy and Model aircraft are not covered by this regulation. However, the rules for their operations shall be established by CAA.IRI. to ensure that potential risks to the safety of the civil aviation, other aircraft, persons, and assets are properly identified and minimized through the proper control actions.

Article 5- Exemptions for special operations

CAA.IRI. may, either on their own initiative or based on applications by the entities concerned, grant exemptions to individual entities or to categories of entities from any of the requirements of this Regulation for the following activities of public interest and for the training necessary to carry out those activities safely:

- a) Scramble and military Special Missions,
- b) Police and custom missions,
- c) Environmental control missions,
- d) Search and Rescue,
- e) Medical and ambulance flights,
- f) Evacuation of medical facilities, medicines, and injured,
- g) Fire fighting,
- h) Flight Check,
- i) Exemptions required to ensure the security of flights by heads of States.

Note1: Any violation or deviation from these laws or differences in performance with any rules of this document, shall be raised, before any executive action by institutions, bodies or legal entities, with CAA.IRI, and after holding joint meetings, expert review will be carried out. Permission to have deviation(s) from these rules will be valid only after the requesting entity receive the written agreement from CAA.IRI.

Note2: Exemptions required to ensure the security of heads of states, military and government officials, as well as Iranian senior officials, if not achieved through the flexibility of the provisions of this regulation, changed according to operational conditions and will be notified to the relevant departments. Therefore, any operational exemptions and deviations from compliance with these laws or its conditions, shall be approved by CAA.IRI. in advance.

Note3: The president of CAA.IRI. may, on special occasions and at their discretion, within the framework of the relevant laws and regulations, issue a decree or executive document, or, in accordance with the relevant instructions, grant exemptions from the provisions of the instructions to aircraft operators and airspace users.

Article 6- Coordination between military units and air traffic service providers

Coordination between civil and military is affected in accordance with the rules of CAA.IRI. in order to comply with ICAO Standards and Recommended Practices (SARPs). Any military activities potentially hazardous for the operation of civil aircraft shall be coordinated by the relevant military unit with the Air Traffic Service Provider at a certain time before the operation, in accordance with the rules of CAA.IRI.

Article 7- Differences

Further to the entry into force of this Regulation and at the latest by the date of its applicability, CAA.IRI. shall formally notify ICAO all differences with respect to ICAO Standards and Recommended Practices (SARPs) that are covered by this Regulation, with the exception of those relating to essential security and defense policy interests of I.R. of Iran.

Article 8- Monitoring of the amendments

CAA.IRI, after the entry into force of this regulation, shall establish a permanent procedure for the coherence of legal rules, to comply with legal regulations, so that:

- a) Ensure that appropriate monitoring and analysis will be carried out to any changes and amendments which accepted within the framework of the Chicago Convention and is necessary in terms of the scope of this document, and changes will be applied, if required;
- b) Provide amendment suggestions to this regulation in accordance with operational conditions and issues;
- c) The rules resulting from this regulation are reviewed, updated and amended in accordance with the procedure developed by CAA.IRI. These amendments fall into two main areas, which include changes resulting from amendments of ICAO annexes and documents, or any changes in provisions of this regulation by CAA.IRI;

Article 9- Transitional and additional measures

CAA.IRI. is the legislative authority for the provision of regulations on the use of airspace and air navigation services in I.R. of Iran under the ICAO Standards and Recommended Practices (SARPs). Until the approval and entry into force of this regulation, all documents and annexes of Chicago Convention will be used as valid regulations. These regulations and technical requirements, developed by CAA.IRI, will replace all previous documents and annexes at the time of implementation.

Article 10- Air navigation facilities and standard systems

In order to facilitate international air navigation, CAA.IRI. establishes requirements, standards, and technical regulations, including the use of airspace and the provision of air navigation services, in accordance with the standards and recommended practices of Chicago Convention in Tehran FIR, in a uniform manner. These facilities consist of, but are not limited, the following:

- a) Construction and operation of the airports, including:
 - 1. Air navigation and handling facilities, that include air traffic services, rescue and firefighting services, snow removal, ground equipment, and ground handling services;
 - 2. Runway and movement area conditions, such as lighting, markings, and visual aids;
 - 3. Communication, navigation aids, and surveillance services;
 - 4. Meteorological services;
 - 5. Communication procedures, codes, signals, and radio services;
- b) Issuance of certificate to air navigation service and airport ground handling centres (headquarters and operational departments)
- c) Collaborate in international measures to ensure the content and publication of:
 - 1. Aeronautical charts and maps, and NOTAMs;
 - 2. Process of providing and distributing Aeronautical Information Publications (AIP).
- d) Carrying out continuous monitoring and inspections, with the objective of measuring the degree of compliance with and effective implementation of the relative rules and regulations, as well as maintaining the desirable personnel requirement and equipment conditions.

Note1: In order to comply with d) CAA.IRI. may delegate its monitoring powers and duties to its competent inspectors at its discretion within the framework of laws and regulations. In order to comply with Article 5 of the Iran Civil Aviation Law, inspectors will access, without any restrictions or conditions, to the aircraft, equipment and facilities, as well as the relevant documents, in order to monitor and measure the safety.

Article 11- Flight over high seas

- a) For flight over the high seas, the rules specified in Annex 2 to the Chicago Convention shall apply without exception. For the purposes of continuity and seamless operation of air traffic services in particular within Functional Airspace Blocks, the provisions of Annex 11 to the Chicago Convention applies in airspace over high seas in a manner that is consistent with how those provisions are applied over the territory of Islamic Republic of Iran airspace. This shall be without prejudice to the operations of State Aircraft under Article 3 of the Chicago Convention.
- b) Pursuant to ICAO regional air navigation agreement, for those parts of the high seas where I.R. of Iran has accepted the responsibility of providing air traffic services, CAA.IRI. shall designate the ATS provider for providing those services.

Article 12- Designation of appropriate authorities

- a) CAA.IRI. has been designated as the appropriate authority in charge for legislation, supervision, policy-making, imposing restrictions, issuance of certificate, programming and planning, and issuance of relevant instructions on air navigation services, civil aviation regulations and the governance, on behalf of the government of I.R. of Iran.
- b) CAA.IRI. shall designate Air Navigation Services provider. CAA.IRI. is also responsible for issuance of certificate for ANSPs.

Article 13- Enforcement

Violations of this regulation will be investigated in accordance with Article 16 of the Iran Civil Aviation Act approved in 1949 and in accordance with the executive method specified by CAA.IRI.

Article 14- National committee for airspace organization and management

In order to coordinate the airspace organization and management, construction of aerodromes and establishment of airways, a committee will be established called 'national committee for airspace organization and management'. CAA.IRI, in coordination with the Ministry of Defense and the General Staff of the Armed Forces of I.R. of Iran, will submit the regulations of the committee to the Supreme National Security Council for approval.

Article 15- Delegation the authorities of article 10 of Iran civil aviation Act

The authority of Article 10 of the Iran Civil Aviation Act is delegated to CAA.IRI.

Note1: CAA.IRI. shall develop the relevant procedures in cooperation with the General Staff of the Armed Forces of I.R. of Iran and air navigation service provider.

Article 16- Aircraft in distress

Pursuant to Article 25 of Chicago Convention, I.R. of Iran as a contracting state has responsible to provide measures of assistance and carry out search and rescue operations in respect of aircraft in distress in its territory. Therefore, under the supervision of the relevant government and military officials, as far as practicable, the owners of the aircraft or authorities of the State in which the aircraft is registered and other authorized legal stakeholders will be allowed to take appropriate measures to assist CAA.IRI. in search and rescue operations for lost or in distress aircraft. In search and rescue operations, CAA.IRI. as the scene commander, will lead the operation. Other relief, military and crisis management organizations are required to cooperate with CAA.IRI. in this regard.

Note1: Search and rescue aircraft of neighboring countries, if an agreement has been developed with CAA.IRI, will be allowed to operate solely over high seas of Tehran FIR by prior coordination with CAA.IRI. and notifying Tehran Area Control Centre to participate in search and rescue operation.

Article 17- Entry into force

This Regulation shall enter into force on 15th May 2022.

RULES OF THE AIR

SECTION 1

FLIGHT OVER THE HIGH SEAS

SIRA.1001 General

a) For flight over the high seas, the rules specified in Annex 2 to the Chicago Convention shall apply without exception. For the purposes of continuity and seamless operation of air traffic services in particular within Functional Airspace Blocks, the provisions of Annex 11 to the Chicago Convention applies in airspace over high seas in a manner that is consistent with how those provisions are applied over the territory of Islamic Republic of Iran airspace. This shall be without prejudice to the operations of State Aircraft under Article 3 of the Chicago Convention.

b) In accordance with [Article 11 b\)](#) Iran Airports and Air Navigation Company is designated for providing Air Traffic Control service, Alerting service, and Flight Information service for those parts of the high seas where located over Tehran FIR according to AIP ENR 6-1.

SECTION 2

APPLICABILITY AND COMPLIANCE

SIRA.2001 Subject

Without prejudice to [SIRA.1001](#) above, in accordance with [Article 3](#), in particular airspace users and aircraft engaged in general air traffic:

- a) Operating within Tehran FIR;
- b) Bearing the nationality and registration marks of I.R. of Iran, or registered in another country and used by an operator for which I.R. of Iran exercises oversight of operations; and operating in any airspace, to the extent that this regulation does not conflict with the rules published by the State having jurisdiction over the territory overflown; and
- c) Air Navigation Service Providers (ANSP), aerodrome operators, and the relevant personnel engaged in aircraft operations.

SIRA.2005 Compliance with the rules of the air

The operation of an aircraft either in flight, on the movement area of an aerodrome or at an operating site shall be in compliance with the general rules, the applicable local provisions and, in addition, when in flight, either with:

- a) the visual flight rules; or
- b) the instrument flight rules.

GM1 SIRA.2005(b) Compliance with the rules of the air

GENERAL

When determining whether to operate in accordance with the visual flight rules or the instrument flight rules, a pilot may elect to fly in accordance with instrument flight rules in visual meteorological conditions, or may be required to do so by the CAA.IRI.

SIRA.2010 Responsibilities

a) Responsibility of the pilot-in-command

Pilot-in-command of an aircraft shall, whether manipulating the controls or not, be responsible for the operation of the aircraft in accordance with this Regulation, except that the pilot-in-command may depart from these rules in circumstances that render such departure absolutely necessary in the interests of safety.

b) Pre-flight action

Before beginning a flight, the pilot-in-command of an aircraft shall become familiar with all available information appropriate to the intended operation. Pre-flight action for flights away from the vicinity of an aerodrome, and for all IFR flights, shall include a careful study of available current weather reports and forecasts, taking into consideration fuel requirements and

an alternative course of action if the flight cannot be completed as planned.

SIRA.2015 Authority of pilot-in-command of an aircraft

The pilot-in-command of an aircraft shall have final authority as to the disposition of the aircraft while in command.

SIRA.2020 Problematic use of psychoactive substances

No person whose function is critical to the safety of aviation (safety-sensitive personnel) shall undertake that function while under the influence of any psychoactive substance, by reason of which human performance is impaired. No such person shall engage in any kind of problematic use of substances.

This document is uncontrolled when printed or downloaded. (CAA-IRI)

SECTION 3

GENERAL RULES AND COLLISION AVOIDANCE

CHAPTER 1 PROTECTION OF PERSONS AND PROPERTY

SIRA.3101 Negligent or reckless operation of aircraft

An aircraft shall not be operated in a negligent or reckless manner so as to endanger life or property of others.

SIRA.3105 Minimum heights

except when necessary for take-off or landing, or except by permission from CAA.IRI, aircraft shall not be flown over the congested areas of cities, towns or settlements or over an open - air assembly of persons, unless at such a height as will permit, in the event of an emergency arising, a landing to be made without undue hazard to persons or property on the surface. The minimum heights for VFR flights shall be those specified in [SIRA.5005](#) and minimum levels for IFR flights shall be those specified in [SIRA.5015 \(b\)](#).

SIRA.3110 Cruising levels

The cruising levels at which a flight or a portion of a flight is to be conducted shall be in terms of:

- a) flight levels, for flights at or above the lowest usable flight level or, where applicable, above the transition altitude;
- b) altitudes, for flights below the lowest usable flight level or, where applicable, at or below the transition altitude.

SIRA.3115 Dropping or spraying

Nothing shall be dropped or sprayed from an aircraft in flight except under conditions prescribed by the appropriate authority and as indicated by relevant information, advice and/or clearance from the appropriate air traffic services unit.

SIRA.3120 Towing

No aircraft or other object shall be towed by an aircraft, except in accordance with requirements prescribed by the appropriate authority and as indicated by relevant information, advice and/or clearance from the appropriate air traffic services unit.

SIRA.3125 Parachute descents

Parachute descents, other than emergency descents, shall not be made except under conditions prescribed by the appropriate authority and as indicated by relevant information, advice and/or clearance from the appropriate air traffic services unit.

SIRA.3130 Aerobatic flight

No aircraft shall be flown acrobatically except under conditions prescribed by the appropriate authority and as indicated by relevant information, advice and/or clearance from the appropriate air traffic services unit.

SIRA.3135 Formation flights

Aircraft shall not be flown in formation except by pre-arrangement among the pilots-in-command of the aircraft taking part in the flight and, for formation flight in controlled airspace, in accordance with the following conditions:

- a) one of the pilots-in-command shall be designated as the flight leader;
- b) the formation operates as a single aircraft with regard to navigation and position reporting;
- c) separation between aircraft in the flight shall be the responsibility of the flight leader and the pilots-in-command of the other aircraft in the flight and shall include periods of transition when aircraft are manoeuvring to attain their own separation within the formation and during join-up and breakaway; and
- d) a distance not exceeding 1 km (0.5 nm) laterally and longitudinally and 30 m (100 ft) vertically from the flight leader shall be maintained by each aircraft.

SIRA.3140 Unmanned free balloons

An unmanned free balloon shall be operated in such a manner as to minimize hazards to persons, property or other aircraft and in accordance with the conditions specified in [appendix 2](#).

SIRA.3145 Prohibited areas and restricted areas

Aircraft shall not be flown in a prohibited area, or in a restricted area, the particulars of which have been duly published in accordance with AIP ENR 5.

CHAPTER 2 AVOIDANCE OF COLLISION

SIRA.3201 General

Nothing in this Regulation shall relieve the pilot -in-command of an aircraft from the responsibility of taking such action, including collision avoidance manoeuvres based on resolution advisories provided by ACAS equipment, as will best avert collision.

GM1 SIRA.3201 General

VIGILANCE ON BOARD AN AIRCRAFT

Regardless of the type of flight or the class of airspace in which the aircraft is operating, it is important that vigilance for the purpose of detecting potential collisions be exercised on board an aircraft. This vigilance is important at all times including while operating on the movement area of an aerodrome.

SIRA.3205 Proximity

An aircraft shall not be operated in such proximity to other aircraft as to create a collision hazard.

SIRA.3210 Right-of-way

- a) The aircraft that has the right-of-way shall maintain its heading and speed.
- b) An aircraft that is aware that the manoeuvrability of another aircraft is impaired shall give way to that aircraft.
- c) An aircraft that is obliged by the following rules to keep out of the way of another shall avoid passing over, under or in front of the other, unless it passes well clear and takes into account the effect of aircraft wake turbulence.
 - 1) *Approaching head-on.* When two aircraft are approaching head-on or approximately so and there is danger of collision, each shall alter its heading to the right.
 - 2) *Converging.* When two aircraft are converging at approximately the same level, the aircraft that has the other on its right shall give way, except as follows:
 - i. power-driven heavier-than-air aircraft shall give way to airships, sailplanes and balloons;
 - ii. airships shall give way to sailplanes and balloons;
 - iii. sailplanes shall give way to balloons;
 - iv. power-driven aircraft shall give way to aircraft which are seen to be towing other aircraft or objects.
 - 3) *Overtaking.* An overtaking aircraft is an aircraft that approaches another from the rear on a line forming an angle of less than 70 degrees with the plane of symmetry of the latter, i.e. is in such a position with reference to the other aircraft that at night it should be unable to see either of the aircraft's left (port) or right (starboard) navigation lights. An aircraft that is being overtaken has the right-of-way and the overtaking aircraft, whether climbing, descending or in horizontal flight, shall keep out of the way of the other aircraft by altering its heading to the right, and no subsequent change in the relative positions of the two aircraft shall absolve the overtaking aircraft from this obligation until it is entirely past and clear.

i. *Sailplanes overtaking.* A sailplane overtaking another sailplane may alter its course to the right or to the left.

4) *Landing.* An aircraft in flight, or operating on the ground or water, shall give way to aircraft landing or in the final stages of an approach to land.

i. When two or more heavier-than-air aircraft are approaching an aerodrome or an operating site for the purpose of landing, aircraft at the higher level shall give way to aircraft at the lower level, but the latter shall not take advantage of this rule to cut in front of another which is in the final stages of an approach to land, or to overtake that aircraft. Nevertheless, power-driven heavier-than-air aircraft shall give way to sailplanes.

ii. *Emergency landing.* An aircraft that is aware that another is compelled to land shall give way to that aircraft.

5) *Taking off.* An aircraft taxiing on the manoeuvring area of an aerodrome shall give way to aircraft taking off or about to take off.

d) Surface movement of aircraft, persons and vehicles.

1) In case of danger of collision between two aircraft taxiing on the movement area of an aerodrome or equivalent part of an operating site, the following shall apply:

i. when two aircraft are approaching head on, or approximately so, each shall stop or where practicable alter its course to the right so as to keep well clear;

ii. when two aircraft are on a converging course, the one which has the other on its right shall give way;

iii. an aircraft which is being overtaken by another aircraft shall have the right-of-way and the overtaking aircraft shall keep well clear of the other aircraft.

2) At a controlled aerodrome an aircraft taxiing on the manoeuvring area shall stop and hold at all runway-holding positions unless an explicit clearance to enter or cross the runway has been issued by the aerodrome control tower.

3) An aircraft taxiing on the manoeuvring area shall stop and hold at all lighted stop bars and may proceed further in accordance with (2) when the lights are switched off.

4) Movement of persons and vehicles at aerodromes:

i. The movement of persons or vehicles, including towed aircraft, on the manoeuvring area of an aerodrome shall be controlled by the aerodrome control tower as necessary to avoid hazard to them or to aircraft landing, taxiing or taking off.

ii. In conditions where low visibility procedures are in operation:

A) persons and vehicles operating on the manoeuvring area of an aerodrome shall be restricted to the essential minimum and particular regard shall be given to the requirements to protect the critical and sensitive area(s) of radio navigation aids;

B) subject to the provisions of point (iii), the minimum separation between vehicles and taxiing aircraft shall be as specified by the air navigation service provider (ANSP) and approved by the CAA.IRI taking into account the aids available;

C) when mixed ILS and MLS Category II or Category III precision instrument operations are taking place to the same runway continuously, the more restrictive ILS or MLS critical and sensitive areas shall be protected.

iii. Emergency vehicles proceeding to the assistance of an aircraft in distress shall be afforded priority over all other surface movement traffic.

iv. Subject to the provisions in (iii), vehicles on the manoeuvring area shall be required to comply with the following rules:

A) vehicles and vehicles towing aircraft shall give way to aircraft which are landing, taking-off or taxiing;

B) vehicles shall give way to other vehicles towing aircraft;

C) vehicles shall give way to other vehicles in accordance with air traffic services unit instructions;

D) notwithstanding the provisions of (A), (B) and (C), vehicles and vehicles towing aircraft shall comply with instructions issued by the aerodrome control tower.

GM1 SIRA.3210(d)(3) Right-of-way

USE OF STOP BARS — CONTINGENCY MEASURES

When considering contingency arrangements for situations where the stop bars cannot be turned off because of a technical problem, the air traffic service provider should take into account that such contingency arrangements should significantly differ from normal operations and should not undermine the principle that a lit stop bar must not be crossed. The service provider may consider, inter alia, the following:

(a) physically disconnecting the respective lit stop bar from its power supply;

(b) physically obscuring the lights of the lit stop bar; or

(c) providing for a marshaller or a follow-me vehicle to lead the aircraft to cross the lit stop bar.

GM1 SIRA.3210(d)(4)(ii)(B) Right-of-way

CONTROL OF PERSONS AND VEHICLES AT AERODROMES

In prescribing the minimum separation between vehicles and taxiing aircraft, the availability of lighting, markings, signals and signage should normally be taken into account.

GM1 SIRA.3210(d)(4)(iv)(A) Right-of-way

Tow means push backward or pull forward the aircraft.

SIRA.3215 Lights to be displayed by aircraft

a) Except as provided by (e), at night all aircraft in flight shall display:

1) anti-collision lights intended to attract attention to the aircraft; and

2) except for balloons, navigation lights intended to indicate the relative path of the aircraft to an observer. Other lights shall not be displayed if they are likely to be mistaken for these lights.

b) Except as provided by (e), at night:

- 1) all aircraft moving on the movement area of an aerodrome shall display navigation lights intended to indicate the relative path of the aircraft to an observer and other lights shall not be displayed if they are likely to be mistaken for these lights;
- 2) unless stationary and otherwise adequately illuminated, all aircraft on the movement area of an aerodrome shall display lights intended to indicate the extremities of their structure, as far as practicable;
- 3) all aircraft taxiing or being towed on the movement area of an aerodrome shall display lights intended to attract attention to the aircraft; and
- 4) all aircraft on the movement area of an aerodrome whose engines are running shall display lights which indicate that fact.

c) Except as provided by (e), all aircraft in flight and fitted with anti-collision lights to meet the requirement of (a)(1) shall display such lights also during day.

d) Except as provided by (e), all aircraft:

- 1) taxiing or being towed on the movement area of an aerodrome and fitted with anti-collision lights, to meet the requirement of (b)(3); or
- 2) on the movement area of an aerodrome and fitted with lights to meet the requirement of (b)(4);

e) A pilot shall be permitted to switch off or reduce the intensity of any flashing lights fitted to meet the requirements of (a), (b), (c) and (d) if they do or are likely to:

- 1) adversely affect the satisfactory performance of duties; or
- 2) subject an outside observer to harmful dazzle.

GM1 SIRA.3215(a);(b) Lights to be displayed by aircraft

GENERAL

Lights fitted for other purposes, such as landing lights and airframe floodlights, may be used in addition to the anti-collision lights to enhance aircraft conspicuity.

SIRA.3220 Simulated instrument flights

a) An aircraft shall not be flown under simulated instrument flight conditions unless:

- 1) fully functioning dual controls are installed in the aircraft; and
- 2) an additional qualified pilot (in this rule called a safety pilot) occupies a control seat to act as safety pilot for the person who is flying under simulated instrument conditions. The safety pilot shall have adequate vision forward and to each side of the aircraft, or a competent observer in communication with the safety pilot shall occupy a position in the aircraft from which the observer's field of vision adequately supplements that of the safety pilot.

b) a VFR flight may be cleared to fly under simulated instrument flight conditions for practice approaches when it is requested by the pilot and the related navigation aids are operational under the following conditions:

- 1) Controller shall ensure that a VFR flight simulating instrument approaches does not disrupt the flow of other arriving and departing IFR or VFR flights and shall withhold authorization, withdrawal of authorization, or refusal to authorize simulated instrument

approaches until the time it is ensured that traffic conditions requirements will be met. Normally, approaches in progress should not be terminated.

2) Air traffic controller is responsible to provide standard separation between IFR and VFR aircraft simulating instrument approaches according to airspace classification.

3) VFR aircraft are not automatically authorized to execute the missed approach procedure. This authorization must be specifically requested by the pilot and approved by the controller.

4) ATCO shall consider an aircraft cleared for a touch-and-go, low approach, or simulated instrument approach as an arriving aircraft until that aircraft touches down or crosses the landing threshold; thereafter, consider the aircraft as a departing aircraft. Before the aircraft begins its final descent, issue the appropriate departure instructions the pilot is to follow upon completion of the approach. Climb-out instructions must include a specific heading or a route of flight and altitude, except when the aircraft will remain in traffic pattern.

AMC1 SIRA.3220 Simulated instrument flights

IFR flights shall not be flown under simulated instrument flight conditions or execute simulated instrument approach procedure based on a navigation aid when its flight check reported to be expired, or it is unserviceable, inoperative, or off the air.

GM1 SIRA.3220(a)(2) Simulated instrument flights

SAFETY PILOT

a) For the purposes of this rule a safety pilot is a pilot who holds a license which entitles him/her to act as pilot-in-command of the aircraft and is able and prepared to take control of the aircraft at any time during the flight. The safety pilot will maintain lookout, or a competent observer in case the safety pilot does not have full vision of each side of the aircraft, and avoid collisions on behalf of the person flying under simulated instrument conditions.

b) A control seat is a seat which affords the person sitting in it sufficient access to the flying controls so as to enable him/her to fly the aircraft unimpeded.

SIRA.3225 Operation on and in the vicinity of an aerodrome

An aircraft operated on or in the vicinity of an aerodrome shall:

- a) observe other aerodrome traffic for the purpose of avoiding collision;
- b) conform with or avoid the pattern of traffic formed by other aircraft in operation;
- c) except for balloons, make all turns to the left, when approaching for a landing and after taking off, unless otherwise indicated, or instructed by ATC;
- d) except for balloons, land and take off into the wind unless safety, the runway configuration, or air traffic considerations determine that a different direction is preferable.

SIRA.3230 Water operations

a) When two aircraft or an aircraft and a vessel are approaching one another and there is a risk of collision, the aircraft shall proceed with careful regard to existing circumstances and conditions including the limitations of the respective craft.

- 1) *Converging.* An aircraft which has another aircraft or a vessel on its right shall give way so as to keep well clear.

- 2) *Approaching head-on.* An aircraft approaching another aircraft or a vessel head-on, or approximately so, shall alter its heading to the right to keep well clear.
- 3) *Overtaking.* The aircraft or vessel which is being overtaken has the right of way, and the one overtaking shall alter its heading to keep well clear.
- 4) *Landing and taking off.* Aircraft landing on or taking off from the water shall, in so far as practicable, keep well clear of all vessels and avoid impeding their navigation.
- b) *Lights to be displayed by aircraft on the water.* At night or during any other period prescribed by the competent authority, all aircraft on the water shall display lights as required by the Convention on the International Regulations for Preventing Collisions at Sea, 1972, unless it is impractical for them to do so, in which case they shall display lights as closely similar as possible in characteristics and position to those required by the International Regulations.

GM1 SIRA.3230 Water operations

INTERNATIONAL REGULATIONS FOR PREVENTING COLLISIONS AT SEA

In addition to the provisions of [SIRA.3230](#), rules set forth in the International Regulations for Preventing Collisions at Sea, developed by the International Conference on Revision of the International Regulations for Preventing Collisions at Sea (London, 1972), and may be applicable in certain cases.

CHAPTER 3 SIGNALS

SIRA.3301 General

- a) Upon observing or receiving any of the signals given in [Appendix 1](#), aircraft shall take such action as may be required by the interpretation of the signal given in that Appendix.
- b) The signals of [Appendix 1](#) shall, when used, have the meaning indicated therein. They shall be used only for the purpose indicated and no other signals likely to be confused with them shall be used.
- c) A signalman/marshaller shall be responsible for providing standard marshalling signals to aircraft in a clear and precise manner using the signals shown in [Appendix 1](#).
- d) Only persons trained, qualified and approved as required by CAA.IRI shall carry out the functions of a signalman/marshaller.
- e) The signalman/marshaller shall wear a distinctive fluorescent identification vest to allow the flight crew to identify that he or she is the person responsible for the marshalling operation.
- f) Daylight-fluorescent wands, table-tennis bats or gloves shall be used for all signalling by all participating ground staff during daylight hours. Illuminated wands shall be used at night or in low visibility.

CHAPTER 4 TIME

SIRA.3401 General

- a) Coordinated Universal Time (UTC) shall be used and shall be expressed in hours and minutes and, when required, seconds of the 24-hour day beginning at midnight.
- b) A time check shall be obtained prior to operating a controlled flight and at such other times during the flight as may be necessary.
- c) Wherever time is utilized in the application of data link communications, it shall be accurate to within 1 second of UTC.
- d) Time in air traffic services
 - 1) Aerodrome control towers shall, prior to an aircraft taxiing for take-off, provide the pilot with the correct time, unless arrangements have been made for the pilot to obtain it from other sources. Air traffic services units shall, in addition, provide aircraft with the correct time on request. Time checks shall be given to the nearest half minute.

GM1 SIRA.3401 (d) General

TIME IN AIR TRAFFIC SERVICES

In most cases the correct time is obtained through alternative arrangements. The existence of such arrangements should be indicated in IRAN Aeronautical Information Publication (AIP).

SECTION 4

FLIGHT PLANS

SIRA.4001 Submission of a flight plan

- a) Information relative to an intended flight, to be provided to air traffic services units, shall be in the form of a flight plan.
- b) There are two categories of FPL:
 - 1) Flight Plans - the information filed on the FPL form;
 - 2) Repetitive Flight Plans
- c) For all flights within the Tehran FIR, a flight plan (FPL) shall be submitted before departure, to an air traffic services reporting office, appropriate air traffic services unit or air-ground control radio station, unless arrangements have been made for the submission of repetitive flight plans (RPL).
- d) A flight plan shall be filed on the ground at least 60 minutes and not more than 120 hours before EOBT of a flight. The 'Estimated Off Block Time' (EOBT) is used as the planned departure time in flight planning, not the planned airborne time. If a flight plan is filed more than 24 hours in advance of the estimated off block time of the flight to which it refers, date of flight (DOF) shall be inserted in item 18 of the flight plan.

AMC1 SIRA.4001 Submission of a flight plan

The format, content, and procedures for submission of the FPL and RPL shall be as per the MATS, Chapter 4, Section 4, and AIP ENR 1-10.

AMC2 SIRA.4001 Submission of a flight plan

'GHOST' AND DUPLICATE FLIGHT PLANS

- a) 'Ghost' is the term used to refer to the flight plans of flights which do not take place i.e. flight plans that were not cancelled by the originators.
- b) Only one Flight Plan shall exist at any given time for the same flight.
- c) It is absolutely essential that flight plan originators:
 - 1) cancel a flight plan as soon as they know that the flight is not going to take place;
 - 2) cancel an existing flight plan before filing a replacement flight plan for the same flight.
- d) The existence of ghost or multiple flight plans is to be condemned as they will:
 - 1) present ATC with false information;
 - 2) impair the efficiency of the ATC automation;
 - 3) cause additional possible delays to regulated flights;
 - 4) lead to an underutilization of ATC capacity.

GM1 SIRA.4001 Submission of a flight plan

GENERAL

The term 'submit a flight plan' refers to the action by the pilot or the operator to provide ATS with flight plan information. The term 'filed flight plan' refers to the flight plan as received and accepted by ATS.

GM2 SIRA.4001 Submission of a flight plan

The term “flight plan” is used to mean full information on all items comprised in the flight plan description, covering the whole route of a flight.

GM3 SIRA.4001 Submission of a flight plan

Repetitive flight plan

Repetitive Flight Plans (RPL) should be used for all domestic scheduled IFR flights operated regularly on the same day(s) of consecutive weeks and on at least ten occasions or every day over a period of at least ten consecutive days. The elements of each flight plan shall have a high degree of stability. RPLs shall be submitted in the form of listings containing the required flight plan data using an RPL listing form.

GM1 SIRA.4001(c) Submission of a flight plan

- a) IFR flights on airports subject to ATFM, may be filed a minimum of 3 hours before EOBT.
- b) All operators shall meet flight plan criteria and procedures which have been promulgated by other states or organizations.

GM1 to AMC2 SIRA.4001 Submission of a flight plan

before an FPL becomes ATS activated, the relevant aircraft operator shall ensure that no other active ATS FPL with the same aircraft identification exists.

AMC1 SIRA.4001(d) Submission of a flight plan

SUBMITTING AN FPL THROUGH THE DEPARTURE AERODROME ATS UNIT

A written flight plan shall be submitted on the flight plan form before departure to an air traffic services reporting office (ARO) at the departure aerodrome. If no such unit exists at the departure aerodrome, the flight plan shall be submitted to the ATS unit performing the functions of such an office. The local ATS unit, if required, assist in completing FPLs and checking them. However, the ultimate responsibility for filing an accurate FPL rests with the pilot or aircraft operator.

AMC2 SIRA.4001(d) Submission of a flight plan

AUTHORIZATION FOR SPECIAL FLIGHTS

- a) Flights of a specific character, such as firefighting flights, search and rescue flights, etc., may be exempted from some ATS requirements.
- b) Submission of flight plans for the following flights with STS/RMK in item 18 of flight plan will be exempted from time restriction:
 - 1) STS/HOSP
 - 2) STS/HEAD
 - 3) STS/SAR
 - 4) STS/MEDEVAC
 - 5) STS/FFR

- 6) STS/FLTCK
- 7) STS/HAZMAT
- 8) RMK/MILITARY HEL
- 9) RMK/LOCAL FLIGHT (For a flight operating in the vicinity of an aerodrome and subject to pre-arrangement with relevant ATS unit)
- 10) RMK/SM (For a flight operating on a special mission e.g. Scramble flight)
- 11) RMK/RESCUE (For a flight engaged in a rescue mission e.g. mountain or road rescue with helicopter)

GM1 to (b)(4) of AMC2 SIRA.4001(d) Submission of a flight plan

MEDEVAC is evacuation of injured persons from the scene of an accident or a low level care facility to a better equipped facility or hospital using medically equipped helicopter or aeroplane (Aeromedical Service).

GM1 to AMC1 SIRA.4001(d) Submission of a flight plan

If there is no ATS unit at the departure aerodrome, or the ATS unit is not connected to the AFTN, the FPL shall be passed to the Iran IFPS for onward transmission.

SIRA.4005 Contents of a flight plan

a) A flight plan shall comprise information regarding of the following items:

- 1) Aircraft identification
- 2) Flight rules and type of flight
- 3) Number and type(s) of aircraft and wake turbulence category
- 4) Equipment
- 5) Departure aerodrome
- 6) Estimated off-block time
- 7) Cruising speed(s)
- 8) Cruising level(s)
- 9) Route to be followed
- 10) Destination aerodrome or operating site and total estimated elapsed time
- 11) Alternate aerodrome(s) or operating site(s)
- 12) Fuel endurance
- 13) Total number of persons on board
- 14) Emergency and survival equipment
- 15) Other information.

b) An RPL listing form shall comprise information regarding the following items:

- 1) Validity period of the flight plan
- 2) Days of operation
- 3) Aircraft identification
- 4) Aircraft type and wake turbulence category
- 5) Departure aerodrome and EOBT
- 6) Cruising speed and cruising level
- 7) Route to be followed without SID and STAR
- 8) Destination aerodrome and total estimated elapsed time

9) Remarks, including alternate aerodrome(s), RNAV5 capability indication (R) and RVSM capability indication (W)

10) Name of the office from which the supplementary flight plan data (information normally provided under Item 19 of the ICAO flight plan form) may be obtained immediately upon request by ATS units.

AMC1 SIRA.4005 (a)(9) and (b)(7) Contents of a flight plan

ADHERENCE TO AIRSPACE UTILIZATION RULES AND AVAILABILITY

a) No IFR flight plan originator can freely plan a route between two published or unpublished significant point/waypoint in OIIX FIR without reference to the Iran ATS route network.

b) No IFR flight plan shall be filed via OIIX FIR deviating from the restrictions defined within Traffic Orientation Scheme (TOS). This reference document contains all airspace utilization rules and availability for OIIX FIR and any reference to them shall be made via published supplements to Iran AIP.

GM1 SIRA.4005 Contents of a flight plan

The term “aerodrome” where used in the flight plan is intended to cover also sites other than aerodromes which may be used by certain types of aircraft, e.g. helicopters or balloons.

GM1 SIRA.4005 (a) Contents of a flight plan

INFORMATION ABOUT THE OPERATOR IN THE FLIGHT PLAN IN CASE OF PROVIDING ALERTING SERVICE

According to ICAO Annex 11, an ATS unit shall, when practicable, inform the aircraft operator when an alerting service is provided to an aircraft. In order to facilitate quick and effective coordination, it is advisable to provide in the flight plan (item 18 ‘other information’) information sufficient to enable the ATS unit to contact the on-duty staff of the aircraft operator if such information has not been provided to the ATS unit by other means.

GM1 to AMC1 SIRA.4005 (a)(9) and (b)(7) Contents of a flight plan

Specific approval to conduct direct routes or to deviate from TOS, can be obtained from as detailed in Iran AIP GEN 3.3-1.

SIRA.4010 Completion of a flight plan

The flight plan shall be completed in full information on all items comprised in the flight plan form, including basic and supplementary information, and covering the whole route of the flight.

AMC1 SIRA.4010 Completion of a flight plan

The procedures for completion of the FPL shall be as per the MATS, Chapter 4, Section 4, and AIP ENR 1-10.

GM1 SIRA.4010 Completion of a flight plan

Item numbers on the form are not consecutive, as they correspond to Field Type numbers in ATS messages.

GM2 SIRA.4010 Completion of a flight plan

Air traffic services data systems may impose communications or processing constraints on information in filed flight plans. Possible constraints may, for example, be limits with regard to item length, number of elements in the route item or total flight plan length. Significant constraints are documented in the relevant Aeronautical Information Publication (AIP).

GM3 SIRA.4010 Completion of a flight plan

The term “aerodrome” where used in the flight plan is intended to cover also sites other than aerodromes which may be used by certain types of aircraft, e.g. helicopters or balloons.

SIRA.4015 Changes to a flight plan

Subject to the provisions of [SIRA.8020 \(b\)](#) all changes to a flight plan submitted for an IFR flight or a VFR flight, shall be reported as soon as possible to the appropriate ATS unit.

AMC1 SIRA.4015 Changes to a flight plan

- a) In the case of a change to aircraft type and/or aircraft registration (if not identical to aircraft call sign), a modification (CHG) message can be sent.
- b) In the event of a delay of 30 minutes in excess of the estimated off-block time for an IFR flight or a delay of one hour for a VFR flight for which a flight plan has been submitted, a delay (DLA) message must be sent or the old flight plan cancelled and a new flight plan submitted, whichever is applicable.
- c) Time limits for flight plan originators to remain eligible to send revision message (DLA/CHG) is maximum 30 minutes and 60 minutes after EOBT for IFR and VFR flights, respectively provided that FPL is not ATS activated i.e. prior to start up request. The number of revisions can be accepted, shall not exceed one revision message per flight plan.

AMC2 SIRA.4015 Changes to a flight plan

Any changes to a flight plan such as change to aircraft call sign, equipment, point of departure and/or destination, route of flight, alternate aerodrome and etc. will require the original flight plan to be cancelled and a new flight plan submitted.

GM1 SIRA.4015 Changes to a flight plan

Information submitted prior to departure regarding fuel endurance or total number of persons carried on board, if incorrect at time of departure, must be reported to ATS unit serving aerodrome of departure.

SIRA.4020 Closing a flight plan

- a) A report of arrival shall be made at the earliest possible moment after landing to the ATS unit of the arrival aerodrome by all flight except when the arrival has been acknowledged by the local ATS unit.
- b) In the absence of an ATS unit at the destination aerodrome, the pilot is responsible for passing the arrival report to the nearest ATS unit by the most expeditious means.
- c) After landing at an aerodrome which is not the destination aerodrome (diversionary landing) the local ATS unit shall be specifically informed accordingly.
- d) In the absence of a local ATS unit at the aerodrome of diversionary landing the pilot is responsible for passing the arrival report to the destination aerodrome by the most expeditious means.
- e) Arrival reports shall contain the following elements of information:
 - 1) Aircraft identification
 - 2) Departure aerodrome
 - 3) Destination aerodrome (only in the case of diversionary landing)
 - 4) Arrival aerodrome
 - 5) Time of arrival

GM1 SIRA.4020 closing a flight plan

ARRIVAL REPORTS

Whenever an arrival report is required, failure to comply with the provisions of [SIRA.4020](#) may cause serious disruption in the air traffic services and incur great expenses in carrying out unnecessary search and rescue operations.

SECTION 5

VISUAL METEOROLOGICAL CONDITIONS, VISUAL FLIGHT RULES, SPECIAL VFR AND INSTRUMENT FLIGHT RULES

SIRA.5001 VMC visibility and distance from cloud minima

VMC visibility and distance from cloud minima are contained in Table S5-1 for fixed Wings Aircraft and Table S5-2 for helicopters.

Altitude band*	Airspace class	Flight visibility	Distance from cloud
At and above 10000FT AMSL	A**,B,C,D,E,F G	8 km	1500M horizontally 1000FT vertically
Below 10000FT AMSL and above 3000FT AMSL, or above 1000FT above terrain, whichever is the higher.	A**,B,C,D,E,F G	5 km	1500M horizontally 1000FT vertically
At and below 3000FT AMSL, or 1000FT above terrain, whichever is the higher.	A**,B,C,D,E	5 km	1500M horizontally 1000FT vertically
	F,G	5 km	Clear of cloud and with the surface in sight

Table S5-1: Fixed Wings Aircraft

(*) When the height of the transition altitude is lower than 3 050 m (10 000 ft) AMSL, FL 100 shall be used in lieu of 10 000 ft.

(**) The VMC minima in Class A airspace are included for guidance to pilots and do not imply acceptance of VFR flights in Class A airspace.

Altitude band*	Airspace class	Flight visibility	Distance from cloud
At and above 10000FT AMSL	A**,B,C,D,E,F G	8 km	1500M horizontally 1000FT vertically
Below 10000FT AMSL and above 3000FT AMSL, or above 1000FT above terrain, whichever is the higher.	A**,B,C,D,E,F G	5 km	1500M horizontally 1000FT vertically
At and below 3000FT AMSL, or 1000FT above terrain, whichever is the higher.	A**,B,C,D,E	3000 m*** in daylight	1500M horizontally 1000FT vertically
		5 km at night	
	F,G	1500 m*** in daylight	Clear of cloud and with the surface in sight
		5 km at night	

Table S5-2: Helicopters operation

(*) When the height of the transition altitude is lower than 3 050 m (10 000 ft) AMSL, FL 100 shall be used in lieu of 10 000 ft.

(**) The VMC minima in Class A airspace are included for guidance to pilots and do not imply acceptance of VFR flights in Class A airspace.

(***) Helicopters may be permitted for operating in flight visibility reduced to not less than 3000m in classes B, C, D, E and 1500m in classes F and G:

- (1) at speeds of 140 kts IAS or less to give adequate opportunity to observe other traffic or any obstacles in time to avoid collision; or
- (2) in circumstances in which the probability of encounters with other traffic would normally be low, e.g. in areas of low volume traffic and for aerial work at low levels.

SIRA.5005 Visual flight rules

a) For Fixed Wing Aircraft:

- 1) Except when operating as a special VFR flight, VFR flights shall be conducted so that the aircraft is flown in conditions of visibility and distance from clouds equal to or greater than those specified in Table S5-1.
- 2) Except when a special VFR clearance is obtained from an air traffic control unit, VFR flights shall not take off or land at an aerodrome within a control zone, or enter the aerodrome traffic zone or aerodrome traffic circuit when the reported meteorological conditions at that aerodrome are below the following minima:
 - i. the ceiling is less than 450 m (1 500 ft); or
 - ii. the ground visibility is less than 5 km.
- 3) In controlled aerodromes with only ATZ, fixed wing VFR flights shall not take off or land, enter the aerodrome traffic zone or aerodrome traffic circuit when the reported meteorological conditions at that aerodrome are below the following minima:
 - i. the ceiling is less than 450 m (1 500 ft); or
 - ii. the ground visibility is less than 5 km.
- 4) VFR flights shall not be operated at night. VFR flights may be authorized to operate during night subject to prior coordination with the CAA.IRI.
- 5) Unless authorized by CAA.IRI, VFR flights shall not be operated:
 - i. Above FL 200;
 - ii. At transonic and supersonic speeds.
- 6) VFR flights shall not operate into RVSM airspace.
- 7) Except when necessary for take-off or landing, or except by permission from the CAA.IRI, a VFR flight during daylight shall not be flown:
 - i. Over the congested areas of cities, towns or settlements or over an open-air assembly of persons at a height less than 300m (1000 FT) above the highest obstacle within a radius of 600 M from the aircraft;
 - ii. Elsewhere than as specified above at a height less than 150m (500 FT) above the ground or water, or 150m (500 FT) above the highest obstacle within a radius of 150m from the aircraft.
- 8) Except when necessary for take-off or landing, or except by permission from CAA.IRI, a VFR flight at night shall not be flown:
 - i. over high terrain or in mountainous areas, at a level which is at least 600 m (2 000 FT) above the highest obstacle located within 8 km of the estimated position of the aircraft;
 - ii. elsewhere than as specified in i), at a level which is at least 300 m (1 000 FT) above the highest obstacle located within 8 km of the estimated position of the aircraft.

9) Except where otherwise indicated in air traffic control clearances or specified by the ANSP VFR flights in level cruising flight when operated above 3000 FT from the ground or water shall be conducted at a flight level appropriate to the track as specified in the tables of cruising levels as specified in [appendix 3](#).

10) VFR flights shall comply with the provisions of air traffic control service:

- i. When operated within Classes B, C and D airspace;
- ii. when forming part of aerodrome traffic at controlled aerodromes; or
- iii. when operated as special VFR flights.

11) An aircraft operated in accordance with the visual flight rules which wish to change to compliance with the instrument flight rules shall communicate the necessary changes to be effected to its current flight plan for the approval.

12) Ground visibility is not considered within classes F, G airspaces.

b) For Helicopters:

1) Except when operating as a special VFR flight, VFR flights shall be conducted so that the aircraft is flown in conditions of visibility and distance from clouds equal to or greater than those specified in Table S5-2.

2) Except when a special VFR clearance is obtained from an air traffic control unit, helicopter VFR flights shall not take off or land at an aerodrome within a control zone, or enter the aerodrome traffic zone or aerodrome traffic circuit when the reported meteorological conditions at that aerodrome are below the following minima:

- i. the ceiling is less than 450 m (1 500 FT); or
- ii. the ground visibility is less than 3000m during daylight and 5 km at night.

3) In controlled aerodromes with only ATZ, helicopter VFR flights shall not take off or land, enter the aerodrome traffic zone or aerodrome traffic circuit when the reported meteorological conditions at that aerodrome are below the following minima:

- i. The ceiling is less than 450 m (1 500 FT); or
- ii. The ground visibility is less than 3000m during daylight and 5 km at night.

4) Helicopters are not required to effect prior coordination with CAA.IRI. for VFR operations at night.

5) Except when necessary for take-off or landing, or except by permission from the CAA.IRI, a VFR flight in daylight shall not be flown:

- i. Over the congested areas of cities, towns or settlements or over an open-air assembly of persons at a height less than 300m (1000 FT) above the highest obstacle within a radius of 600 M from the aircraft;
- ii. Over the historical buildings and ancient monuments at a height less than 2000 FT above the highest obstacle within a radius of 600 M from the aircraft;

- iii. Elsewhere than as specified above at a height less than 150m (500 FT) above the ground or water, or 150m (500 ft) above the highest obstacle within a radius of 150m from the aircraft.
- 6) Except when necessary for take-off or landing, or except by permission from the CAA.IRI, a VFR flight at night shall not be flown:
- i. over high terrain or in mountainous areas, at a level which is at least 600 m (2 000 FT) above the highest obstacle located within 8 km of the estimated position of the aircraft;
 - ii. over the historical buildings and ancient monuments at a height less than 2000 FT above the highest obstacle within a radius of 600 M from the aircraft;
 - iii. elsewhere than as specified above, at a level which is at least 300 m (1 000 ft) above the highest obstacle located within 8 km of the estimated position of the aircraft.
- 7) All requirements in CAOIRI.ADR and CAD 4314 regarding heliport lighting system for night VFR operations shall be met.
- 8) Except where otherwise indicated in air traffic control clearances or specified by the ANSP, VFR flights in level cruising flight when operated above 3000 FT from the ground or water shall be conducted at a flight level appropriate to the track as specified in the tables of cruising levels as specified in [appendix 3](#).
- 9) VFR flights shall comply with the provisions of air traffic control service:
- i. when operated within Classes B, C and D airspace;
 - ii. when forming part of aerodrome traffic at controlled aerodromes; or
 - iii. when operated as special VFR flights.
- 10) Helicopters operated in accordance with the visual flight rules which wish to change to compliance with the instrument flight rules shall communicate the necessary changes to be effected to its current flight plan for the approval.
- 11) All helicopter operations shall be subject to rules and procedures approved by Iran Civil Aviation Authority including CAD 4314, CAOIRI AIROPS.
- 12) Helicopter operators are required to provide individual flight plan or flight schedule for all operations, taking into account procedures contained in Iran AIP ENR 1.10.
- 13) Ground visibility is not considered within classes F, G airspaces.

GM1 SIRA.5005(a), (b) Visual flight rules

NIGHT VFR ON TOP

When flying in airspace classes B, C, D, E, F, or G, more than 900 m (3 000 ft) above mean sea level (MSL) or 300 m (1 000 ft) above terrain, whichever is higher, the pilot may elect to fly above a cloud layer (VFR on top). When making the decision on whether to fly above or below a cloud at night, consideration should be given at least but not limited to the following:

- a) The likelihood of weather at destination allowing a descent in visual conditions;
- b) Lighting conditions below and above the cloud layer;
- c) The likelihood of the cloud base descending, if flight below cloud is chosen, thus resulting in terrain clearance being lost;
- d) The possibility of flight above the cloud leading to flight between converging cloud layers;
- e) The possibility of successfully turning back and returning to an area where continuous sight of surface can be maintained; and
- f) The possibilities for the pilot to establish their location at any point of the route to be flown, taking into consideration also the terrain elevation and geographical and man-made obstacles.

GM2 SIRA.5005 (a), (b) Visual flight rules

VFR MINIMUM HEIGHTS — PERMISSION FROM CAA.IRI.

Subject to an appropriate safety assessment, permission from the CAA.IRI. may also be granted for cases like:

- a) aircraft operating in accordance with the procedure promulgated for the notified route being flown;
- b) helicopters operating at a height that will permit, in the event of an emergency arising, a landing to be made without undue hazard to persons or property on the surface;
- c) aircraft picking up or dropping tow ropes, banners or similar articles at an aerodrome;
- d) any other flights not specified above, where specific exemption is required to accomplish a specific task.

AMC1 SIRA.5005(a)(4) Visual flight rules

VFR flights wish to operate at night shall send their request for each flight at least 48 hours before EOBT to CAA.IRI. and specify:

- a) the operator
- b) number of flight(s)
- c) Call sign,
- d) Register(s),
- e) Type of aircraft,
- f) Date(s) of operation,
- g) Duration of operation,
- h) Departure and Destination aerodrome,
- i) area of operation.

AMC1 SIRA.5005(b)(4) Visual flight rules

Operator/pilot shall use "RMK/ Night VFR" for Night VFR flight in —ITEM 18: OTHER INFORMATION" of flight plan.

SIRA.5010 Special VFR in control zones

a) In aerodrome which is located within CTR, special VFR flights may be authorized to enter a control zone for the purpose of landing, take off and depart from a control zone, cross a control zone or operate locally within a control zone the following provisions:

- 1) during daylight;
- 2) ground visibility, in intended direction of flight is not less than 1500 meters;
- 3) the ceiling is not less than 180 m (600 ft);
- 4) requested individually by the Pilot;
- 5) traffic conditions permit;
- 6) approved by unit providing approach control service.
- 7) fly at a speed of 140 kts IAS or less to give adequate opportunity to observe other traffic and any obstacles in time to avoid a collision; and
- 8) the flight visibility is not less than 1 500 m or, for helicopters, not less than 800 m.

b) The pilots of VFR flights, when operating on a special clearance, shall comply with ATC instructions and remain at all times in flight conditions, which enable the pilot to determine his flight path and to keep clear of obstacles and cloud with the surface in sight.

c) A special VFR clearance within a control zone does not absolve the pilot from the responsibility for avoiding an aerodrome traffic zone unless prior permission to penetrate the ATZ has been obtained from the relevant ATC unit.

d) No special VFR operation shall be authorized to remain in any aerodrome traffic circuit.

e) Except when permitted by the CAA.IRI for helicopters in special cases such as, but not limited to, police, medical, search and rescue operations and fire-fighting flights are exempted from conditions prescribed in a).

GM1 SIRA.5010 Special VFR in control zones

flight outside ATZ which is reported entering VMC will continue according to VFR.

GM2 SIRA.5010 Special VFR in control zones

When requesting or approving special VFR operation, the pilot and air traffic controller should take weather forecasts, if any, into consideration.

GM1 SIRA.5010(a) Special VFR in control zones

When the reported ground visibility at the aerodrome is less than 1 500 m, ATC may issue a special VFR clearance for a flight crossing the control zone and not intending to take off or land at an aerodrome within a control zone, or enter the aerodrome traffic zone or aerodrome traffic circuit

when the flight visibility reported by the pilot is not less than 1500 m, or, for helicopters, not less than 800 m.

AMC1 SIRA.5010(a)(7) Special VFR in control zones

SPEED LIMIT TO BE APPLIED BY HELICOPTER PILOTS

The 140 kt-speed should not be used by helicopters operating at a visibility below 1 500 m. In such case, a lower speed appropriate to the actual conditions should be applied by the pilot.

GM1 SIRA.5010(a)(7) Special VFR in control zone

SPEED LIMIT TO BE APPLIED BY HELICOPTER PILOTS

The 140 kt speed is to be considered as an absolute maximum acceptable speed in order to maintain an acceptable level of safety when the visibility is 1 500 m or more. Lower speeds should be applied according to elements such as local conditions, number and experience of pilots on board, using the guidance of the table below:

Visibility (m)	Advisory speed (kt)
800	50
1500	100
2000	120

GM1 SIRA.5010(a)(7) Special VFR in control zones

Military operations are exempted from speed limitation.

GM1 SIRA.5010(e) Special VFR in control zones

The list of type of operations subject to permit by the CAA.IRI. to deviate from the requirements for special visual flight rules (VFR) flights is not exhaustive. The CAA.IRI. may grant a permit for other kind of helicopter operations such as power line inspections, helicopter hoist operations, etc.

SIRA.5015 Instrument flight rules (IFR) — Rules applicable to all IFR

a) Aircraft equipment

Aircraft shall be equipped with suitable instruments and with navigation equipment appropriate to the route to be flown and in accordance with the applicable air operations legislation.

b) Minimum levels

Except when necessary for take-off or landing or when specifically authorized by the appropriate authority, an IFR flight shall be flown at a level that is not below the minimum flight level establish by the State whose territory is overflown, or, where no such minimum flight level has been established at a level which is at least 2500 FT above the highest obstacle located within 8 km of the estimated position of the aircraft.

c) Change from IFR flight to VFR flight

- 1) An aircraft electing to change the conduct of its flight from compliance with the instrument flight rules to compliance with the visual flight rules shall notify the appropriate air traffic

services unit specifically that the IFR flight is cancelled and communicate thereto the changes to be made to its current flight plan.

2) When an aircraft operating under the instrument flight rules is flown in or encounters visual meteorological conditions it shall not cancel its IFR flight unless it is anticipated, and intended, that the flight will be continued for a reasonable period of time in uninterrupted visual meteorological conditions.

3) Change from IFR flight to VFR flight shall only be acceptable when a message initiated by the pilot-in-command containing the specific expression ‘CANCELLING MY IFR FLIGHT’, together with the changes, if any, to be made to the current flight plan, is received by an ATS unit. No invitation to change from IFR flight to VFR flight shall be made by ATS either directly or by inference.

d) Following the introduction of area navigation requirements (RNAV), aircraft wishing to operate within the specified airspace shall be appropriately equipped. If the aircraft is unable to comply with the RNAV requirements, then the pilot will advise the ATSU on initial contact using the phrase “NEGATIVE UNABLE RNAV”.

AMC1 SIRA.5015 Instrument flight rules – rules applicable to all IFR

IFR flights should disregard any navigation indication of a navigation aid and are not authorized to use that navigation aid when its flight check reported to be expired, or it is unserviceable or inoperative.

GM1 SIRA.5015(b) Instrument flight rules (IFR) — Rules applicable to all IFR flights

MINIMUM LEVELS

When determining which are the highest obstacles within 8 km of the estimated position of the aircraft, the estimate will take account of the navigational accuracy which can be achieved on the relevant route segment, having regard to the navigational facilities available on the ground and in the aircraft.

GM1 SIRA.5015(c)(3) Instrument flight rules (IFR) — Rules applicable to all IFR flights

No reply, other than the acknowledgment ‘IFR FLIGHT CANCELLED AT ... (time)’, should normally be made by an ATS unit.

SIRA.5020 IFR — Rules applicable to IFR flights within controlled airspace

a) IFR flights shall comply with the provisions of [Section 8](#) when operated in controlled airspace.

b) An IFR flight operating in cruising flight in controlled airspace shall be flown at a cruising level, selected from the table of cruising levels in [Appendix 3](#), except that the correlation of levels to track prescribed therein shall not apply whenever otherwise indicated in air traffic control clearances or specified by CAA.IRI. in aeronautical information publications.

c) Cruise climb is not permitted in Tehran FIR.

GM1 SIRA5020(b) IFR — Rules applicable to IFR flights within controlled airspace

When the air traffic control clearances for cruising level does not apply the correlation of levels to track, the phrase " Non-Standard" shall be used before the cleared level (e.g. CIMB TO NON-STANDARD FLIGHT LEVEL ONE NINE ZERO)

SIRA.5025 IFR — Rules applicable to IFR flights outside controlled airspace

a) Cruising levels

An IFR flight operating in level cruising flight outside of controlled airspace shall be flown at a cruising level appropriate to its track as specified in the table of cruising levels in [Appendix 3](#).

b) Communications

An IFR flight operating outside controlled airspace but within or into areas, or along routes, shall maintain a listening watch on the appropriate radio frequency and establish two-way communication, as necessary, with the air traffic services unit providing flight information service.

c) Position reports

An IFR flight operating outside controlled airspace shall maintain a listening watch on the appropriate radio frequency and establish two-way communication, as necessary, with the air traffic services unit providing flight information service and report position as specified in [SIRA.8025](#) for controlled flights.

GM1 SIRA.5025(c) IFR — Rules applicable to IFR flights outside controlled airspace

POSITION REPORTS

Aircraft electing to use the air traffic advisory service whilst operating under IFR within specified advisory airspace are expected to comply with the provisions of [Section 8](#) — 'Air traffic Control Service', except that the flight plan and changes thereto are not subject to clearances and that two-way communication will be maintained with the unit providing the air traffic advisory service.

SECTION 6

AIRSPACE CLASSIFICATION

SIRA.6001 Classification of airspace

a) ATS airspaces shall be classified and designated by CAA.IRI. in accordance with the following and in accordance with [Appendix 4](#):

1) *Class A.* IFR flights only are permitted. All flights are provided with air traffic control service and are separated from each other. Continuous air - ground voice communications are required for all flights. All flights shall be subject to ATC clearance.

2) *Class B.* IFR and VFR flights are permitted. All flights are provided with air traffic control service and are separated from each other. Continuous air - ground voice communications are required for all flights. All flights shall be subject to ATC clearance.

3) *Class C.* IFR and VFR flights are permitted. All flights are provided with air traffic control service and IFR flights are separated from other IFR flights and from VFR flights. VFR flights are separated from IFR flights and receive traffic information in respect of other VFR flights and traffic avoidance advice on request. Continuous air-ground voice communications are required for all flights. For VFR flights a speed limitation of 250 kts indicated airspeed (IAS) applies below 3 050 m (10 000 ft) AMSL, except where approved by the CAA.IRI. For aircraft types, which for technical or safety reasons, cannot maintain this speed. All flights shall be subject to ATC clearance.

4) *Class D.* IFR and VFR flights are permitted and all flights are provided with air traffic control service. IFR flights are separated from other IFR flights, receive traffic information in respect of VFR flights and traffic avoidance advice on request. VFR flights receive traffic information in respect of all other flights and traffic avoidance advice on request. Continuous air-ground voice communications are required for all flights and a speed limitation of 250 kts IAS applies to all flights below 3 050 m (10 000 ft) AMSL, except where approved by the CAA.IRI. For aircraft types, which for technical or safety reasons, cannot maintain this speed. All flights shall be subject to ATC clearance.

5) *Class E.* IFR and VFR flights are permitted. IFR flights are provided with air traffic control service and are separated from other IFR flights. All flights receive traffic information, as far as is practical. Continuous air-ground voice communications are required for all flights. A speed limitation of 250 kts IAS applies to all flights below 3 050 m (10 000 ft) AMSL, except where approved by the CAA.IRI. For aircraft types, which for technical or safety reasons cannot maintain this speed. All IFR flights shall be subject to ATC clearance. Class E shall not be used for control zones.

6) *Class F.* IFR and VFR flights are permitted. All participating IFR flights receive an air traffic advisory service and all flights receive flight information service if requested. Continuous air-ground voice communications are required for all flights. A speed limitation of 250 kts IAS applies to all flights below 3 050 m (10 000 ft) AMSL, except where approved by the CAA.IRI for aircraft types, which for technical or safety reasons cannot maintain this speed. ATC clearance is not required.

7) *Class G.* IFR and VFR flights are permitted and receive flight information service if requested. Continuous air-ground voice communications are required for all flights. A speed limitation of 250 kts IAS applies to all flights below 3 050 m (10 000 ft) AMSL, except where

approved by the CAA.IRI. For aircraft types, which for technical or safety reasons cannot maintain this speed. ATC clearance is not required.

b) Implementation of Class F shall be considered as a temporary measure until such time as it can be replaced by an alternative classification.

AMC1 SIRA.6001 Classification of airspaces

GENERAL

Where ATS airspaces adjoin vertically, i.e. one above the other, flights at a common level should comply with the requirements of, and be given services applicable to, the less restrictive class of airspace.

GM1 SIRA.6001 Classification of airspaces

GENERAL

- a) Class B airspace is considered less restrictive than Class A airspace; Class C airspace less restrictive than Class B airspace, etc.
- b) The speed limitation of 250 kt for VFR flights in airspace Classes C, D, E, F, G and for IFR flights in airspace Classes D, E, F, G is intended to facilitate visual acquisition of flights which are not separated.
- c) Wherever there is a need to accommodate within a given airspace class operations compatible with a less restrictive class, the following may be used:
 - 1) reclassification of the airspace concerned;
 - 2) redesigning the volume of airspace concerned by defining airspace restrictions or reservations, or subvolumes of less restrictive classes of airspace (e.g. corridors).

GM2 SIRA.6001 Classification of airspaces

MILITARY TRAFFIC ZONE

- a) Some ATZs are Military.
- b) Military Traffic Zone (MTZ) is classified as “G-military” airspace.
- c) Military Traffic Zone (MTZ) is an airspace of defined dimensions around a military aerodrome within which responsibility assigned to military ATS unit for the purpose of air traffic service to military and authorized civil traffic.
- d) The responsibility of operation of civil aircraft in Military Traffic Zone remains with the aircraft operator.

AMC1 SIRA.6001(a)(4) ;(5) ;(6) ;(7) Classification of airspaces

SPEED LIMITATION

Military flights are exempted from speed limitations.

AMC1 SIRA.6001(b) Classification of airspaces

GENERAL

Class F airspace should only be implemented where the air traffic services are inadequate for the provision of air traffic control, and the limited advice on collision hazards otherwise provided by flight information service will not be adequate. Where air traffic advisory service is implemented, this should be considered as a temporary measure only until such time as it can be replaced by air traffic control service or, in cases where the traffic situation changes such that advisory service is no longer required, replaced by flight information service.

GM1 SIRA.6001(b) Classification of airspaces

DURATION OF TEMPORARY MEASURE

- a) When establishing Class F airspace, its intended temporary duration after which it should be replaced by an alternative classification should be specified in the I.R.I. of IRAN AIP.
- b) The intended temporary duration of Class F airspace should not be longer than 3 years.

EXAMPLE

- c) Certain CTR airspace may change its classification on a daily basis (e.g. from 06:00 to 20:00 the airspace is classified as Class A, and from 20:00 until 23:59 and from 00:00 until 05:59 is classified as Class F). In this case, the duration of these arrangements should not exceed 3 years.

SIRA.6005 Requirements for communications and SSR transponder

- a) All aircraft are required to be equipped and have two-way communication with ATS units in Tehran FIR.
- b) All aircraft flying within Tehran FIR are required to be equipped with SSR transponder having a combined Mode A/3, 4096 Codes capability and a Mode C automated altitude reporting capability. The use of SSR transponder is mandatory for all aircraft flying within controlled airspaces, unless otherwise agreed by prior coordination or instructed by ATS unit.

AMC2 SIRA.6005(b) Requirements for communications and SSR transponders

Military flights are exempted from SSR capability.

SECTION 7

AIR TRAFFIC SERVICES

SIRA.7001 General — Objectives of the air traffic services

The objectives of the air traffic services shall be to:

- a) prevent collisions between aircraft;
- b) prevent collisions between aircraft on the maneuvering area and obstructions on that area;
- c) expedite and maintain an orderly flow of air traffic;
- d) provide advice and information useful for the safe and efficient conduct of flights;
- e) notify appropriate organisations regarding aircraft in need of search and rescue aid, and assist such organisations as required.

GM1 SIRA.7001 General — Objectives of the air traffic services

GENERAL

These provisions are general statements which represent high-level safety objectives to be met when providing ATS and which are the basis of all the provisions of this Part.

SIRA.7002 Collision hazard information when ATS based on surveillance are provided

When an identified controlled flight is observed to be on a conflicting path with an unknown aircraft, deemed to constitute a collision hazard, the pilot of the controlled flight shall, whenever practicable:

- 1) be informed of the unknown aircraft, and, if the pilot so requests, or if the situation so warrants in the opinion of the controller, avoiding action shall be suggested; and
- 2) be notified when the conflict no longer exists.

AMC1 SIRA.7002(a)(1) Collision hazard information when ATS based on surveillance are provided

INFORMATION REGARDING TRAFFIC ON CONFLICTING PATH

a) Information regarding traffic on a conflicting path should be given, whenever practicable, in the following form:

- 1) relative bearing of the conflicting traffic in terms of the 12-hour clock;
- 2) distance from the conflicting traffic in kilometers or nautical miles;
- 3) direction in which the conflicting traffic appears to be proceeding; and
- 4) level and type of aircraft or, if unknown, relative speed of the conflicting traffic, e.g. slow or fast.

b) Pressure-altitude-derived level information, even when unverified, should be used in the provision of collision hazard information because such information, particularly if available from an otherwise unknown aircraft (e.g. a VFR flight) and given to the pilot of a known aircraft, could facilitate the location of a collision hazard. If the level information has not been verified, the

accuracy of the information should be considered uncertain and the pilot should be informed accordingly.

GM1 to (a)(1) of AMC1 SIRA.7002(a)(1) Collision hazard information when ATS based on surveillance are provided

In cases where using the terms of the 12-hour clock is not practicable, like when the aircraft is turning, the direction of the unknown aircraft may be given by compass points, e.g. northwest, south, etc.;

GM1 to (a)(4) of AMC1 SIRA.7002(a)(1) Collision hazard information when ATS based on surveillance are provided

The level may be described either as a flight level, altitude or height, or as a relative vertical distance from the aircraft provided with traffic information (e.g. 1 000 ft above or 1 000 ft below).

GM1 SIRA.7002(a)(1) Collision hazard information when ATS based on surveillance are provided

INFORMATION REGARDING TRAFFIC ON CONFLICTING PATH OUTSIDE CONTROLLED AIRSPACE

a) When an identified IFR flight operating outside controlled airspace is observed to be on a conflicting path with another aircraft, the pilot should be:

- 1) informed of the traffic, and if so, requested by the pilot or if, in the opinion of the controller, the situation warrants, a course of avoiding action should be suggested; and
- 2) notified when the conflict no longer exists.

GM2 SIRA.7002 (a)(1) Collision hazard information when ATS based on surveillance are provided

The information presented on a situation display may be used to provide identified aircraft with information regarding any aircraft observed to be on a conflicting path with the identified aircraft, and suggestions or advice regarding avoiding action.

GM3 SIRA.7002 (a)(1) Collision hazard information when ATS based on surveillance are provided

The provision of collision hazard information does not absolve pilots of VFR flights from their responsibilities for avoiding terrain obstacles and for maintaining visual meteorological conditions.

GM4 SIRA.7002 (a)(1) Collision hazard information when ATS based on surveillance are provided

Collision hazard information should be provided where practicable. This should be done taking account of the priorities related to various tasks, such as provision of separation in accordance with the airspace classification, as well as equipment and workload limitations.

SIRA.7005 Coordination between the aircraft operator and air traffic services

a) Air traffic services units, in carry out their objectives, shall have due regard for the requirements of the aircraft operator's consequent on their obligations as specified CAOIRI AIROPS, and, if so, required by the aircraft operators, shall make available to them or their designated representatives

such information as may be available to enable them or their designated representatives to carry out their responsibilities.

b) When so requested by an aircraft operator, messages (including position reports) received by air traffic services units and relating to the operation of the aircraft for which operational control service is provided by that aircraft operator shall, so far as practicable, be made available immediately to the aircraft operator or a designated representative in accordance with locally agreed procedures.

GM1 SIRA.7005 (a) Coordination between the aircraft operator and air traffic services

GENERAL

The expression ‘due regard’ is meant to indicate that the air traffic services units, in their coordination with the aircraft operators, should take into account the obligations of the operators in accordance with the CAOIRI, AIROPS, and provide them with the information they require to operate in accordance with those rules.

SECTION 8

AIR TRAFFIC CONTROL SERVICE

SIRA.8001 Application

Air traffic control service shall be provided:

- a) to all IFR flights in airspace Classes A, B, C, D and E;
- b) to all VFR flights in airspace Classes B, C and D;
- c) to all special VFR flights;
- d) to all aerodrome traffic at controlled aerodromes.

SIRA.8005 Operation of air traffic control service

a) In order to provide air traffic control service, an air traffic control unit shall:

- 1) be provided with information on the intended movement of each aircraft, or variations therefrom, and with current information on the actual progress of each aircraft;
- 2) determine from the information received, the relative positions of known aircraft to each other;
- 3) issue clearances and information for the purpose of preventing collision between aircraft under its control and of expediting and maintaining an orderly flow of traffic;
- 4) coordinate clearances as necessary with other units:
 - i. whenever an aircraft might otherwise conflict with traffic operated under the control of such other units;
 - ii. before transferring control of an aircraft to such other units.

b) Clearances issued by air traffic control units shall provide separation:

- 1) between all flights in airspace Classes A and B;
- 2) between IFR flights in airspace Classes C, D and E;
- 3) between IFR flights and VFR flights in airspace Class C;
- 4) between IFR flights and special VFR flights;
- 5) between special VFR flights;

except that, when requested by the pilot of an aircraft and agreed by the pilot of the other aircraft for the cases listed under b) above in airspace Classes D and E, a flight may be cleared subject to maintaining own separation in respect of a specific portion of the flight below 3 050 m (10 000 ft) during climb or descent, during daylight in visual meteorological conditions.

c) Except for cases when a reduction in separation minima in the vicinity of aerodromes can be applied, separation by an air traffic control unit shall be obtained by at least one of the following:

- 1) vertical separation, obtained by assigning different levels selected from the table of cruising levels in [Appendix 3](#) to this Regulation, except that the correlation of levels to track as

prescribed therein shall not apply whenever otherwise indicated in appropriate aeronautical information publications or air traffic control clearances. The vertical separation minimum shall be a nominal 300 m (1 000 ft) up to and including FL 410 and a nominal 600 m (2 000 ft) above this level;

2) horizontal separation, obtained by providing:

- i. longitudinal separation, by maintaining an interval between aircraft operating along the same, converging or reciprocal tracks, expressed in time or distance; or
- ii. lateral separation, by maintaining aircraft on different routes or in different geographical areas.

GM1 SIRA.8005(b) Operation of air traffic control service

CLEARANCES TO MAINTAIN OWN SEPARATION

Clearances for a pilot to maintain own separation in respect of a specific portion of the flight in airspace Classes D and E below 3 050 m (10 000 ft) during climb or descent, during day in visual meteorological conditions are based on the fact that in those airspace classes a speed restriction of 250 kt is applied to all flights, allowing pilots of both aircraft to observe other flights in time to avoid collision.

SIRA.8010 Separation minima

- a) The selection of separation minima for application within a given portion of airspace shall be made by the appropriate ANSP and approved by the CAA.IRI.
- b) For traffic that will pass from one into the other of neighbouring airspaces and for routes that are closer to the common boundary of the neighbouring airspaces than the separation minima applicable in the circumstances, the selection of separation minima shall be made in consultation between the ANSPs responsible for the provision of air traffic services in neighbouring airspace.
- c) Details of the selected separation minima and of their areas of application shall be notified:
 - 1) to the air traffic services units concerned; and
 - 2) to pilots and aircraft operators through aeronautical information publications, where separation is based on the use by aircraft of a specified navigation aids or specified navigation techniques.

GM1 SIRA.8010(b) Separation minima

GENERAL

The purpose of this provision is to ensure, in the first case, compatibility on both sides of the line of transfer of traffic and, in the other case, adequate separation between aircraft operating on both sides of the common boundary.

SIRA.8012 Application of wake turbulence separation

- a) Wake turbulence separation minima shall be applied to aircraft in the approach and departure phases of flight under the following circumstances:

- 1) an aircraft is operating directly behind another aircraft at the same altitude or less than 300 m (1 000 ft) below it; or
- 2) both aircraft are using the same runway or parallel runways separated by less than 760 m (2 500 ft); or
- 3) an aircraft is crossing behind another aircraft at the same altitude or less than 300 m (1 000 ft) below it.

SIRA.8015 Air traffic control clearances

a) Air traffic control clearances shall be based solely on the following requirements for providing air traffic control service:

- 1) Clearances shall be issued solely for expediting and separating air traffic and be based on known traffic conditions which affect safety in aircraft operation. Such traffic conditions include not only aircraft in the air and on the manoeuvring area over which control is being exercised, but also any vehicular traffic or other obstructions not permanently installed on the manoeuvring area in use.
- 2) ATC units shall issue such ATC clearances as necessary to prevent collisions and to expedite and maintain an orderly flow of air traffic.
- 3) ATC clearances shall be issued early enough to ensure that they are transmitted to the aircraft in sufficient time for it to comply with them.

b) Operation subject to clearance

- 1) An air traffic control clearance shall be obtained prior to operating a controlled flight, or a portion of a flight as a controlled flight. Such clearance shall be requested through the submission of a flight plan to an air traffic control unit.
- 2) The pilot-in-command of an aircraft shall inform ATC if an air traffic control clearance is not satisfactory. In such cases, ATC will issue an amended clearance, if practicable.
- 3) Whenever an aircraft has requested a clearance involving priority, a report explaining the necessity for such priority shall be submitted, if requested by the appropriate air traffic control unit.
- 4) *Potential reclearance in flight.* If, prior to departure, it is anticipated that, depending on fuel endurance and subject to reclearance in flight, a decision may be taken to proceed to a revised destination aerodrome, the appropriate air traffic control units shall be so notified by the insertion in the flight plan of information concerning the revised route (where known) and the revised destination.
- 5) An aircraft operated on a controlled aerodrome shall not taxi on the manoeuvring area without clearance from the aerodrome control tower and shall comply with any instructions given by that unit.

c) Clearances for transonic flight

- 1) The air traffic control clearance relating to the transonic acceleration phase of the supersonic flight shall extend at least to the end of that phase.

2) The air traffic control clearance relating to the deceleration and descent of an aircraft from supersonic cruise to subsonic flight shall seek to provide for uninterrupted descent at least during the transonic phase.

d) Contents of clearances

An air traffic control clearance shall indicate:

- 1) aircraft identification as shown in the flight plan;
- 2) clearance limit;
- 3) route of flight;
 - i. the route of flight shall be detailed in each clearance when deemed necessary; and
 - ii. the phrase 'cleared via flight planned route' shall not be used when granting a re-clearance;
- 4) level(s) of flight for the entire route or part thereof and changes of levels if required;
- 5) any necessary instructions or information on other matters such as approach or departure manoeuvres, communications and the time of expiry of the clearance.

e) Read-back of clearances and safety-related information

- 1) The flight crew shall read back to the air traffic controller safety-related parts of ATC clearances and instructions which are transmitted by voice. The following items shall always be read back:
 - i. ATC route clearances;
 - ii. clearances and instructions to enter, land on, take off from, hold short of, cross, taxi and backtrack on any runway; and
 - iii. runway-in-use, altimeter settings, SSR codes, newly assigned communication channels, level instructions, heading and speed instructions; and
 - iv. transition levels, whether issued by the controller or contained in ATIS broadcasts.
- 2) Other clearances or instructions, including conditional clearances and taxi instructions, shall be read back or acknowledged in a manner to clearly indicate that they have been understood and will be complied with.
- 3) The controller shall listen to the read-back to ascertain that the clearance or instruction has been correctly acknowledged by the flight crew and shall take immediate action to correct any discrepancies revealed by the read-back.
- 4) Voice read-back of CPDLC messages shall not be required, unless otherwise specified by the ANSP.

ea) Changes in clearance regarding route or level

- 1) When issuing a clearance covering a requested change in route or level, the exact nature of the change shall be included in the clearance.
- 2) When traffic condition will not permit clearance of a requested change, the word 'UNABLE' shall be used. When warranted by circumstances, an alternative route or level shall be offered.

eb) Clearance related to altimetry

- 1) For flights in areas where a transition altitude is established, the vertical position of the aircraft shall, except as provided for in (5) below, be expressed in terms of altitudes at or below the transition altitude and in terms of flight levels at or above the transition level. While passing through the transition layer, the vertical position shall be expressed in terms of flight levels when climbing and in terms of altitudes when descending.
- 2) The flight crew shall be provided with the transition level in due time prior to reaching it during descent.
- 3) A QNH altimeter setting shall be included in the descent clearance when first cleared at an altitude below the transition level, in approach clearances or clearances to enter the traffic circuit, and in taxi clearances for departing aircraft except when it is known that the aircraft has already received the information in a directed transmission.
- 4) A QFE altimeter setting shall be provided to aircraft on request or on a regular basis in accordance with local arrangements.
- 5) When an aircraft which has been given clearance to land is completing its approach using atmospheric pressure at aerodrome elevation (QFE), the vertical position of the aircraft shall be expressed in terms of height above aerodrome elevation during that portion of its flight for which QFE may be used, except that it shall be expressed in terms of height above runway threshold elevation:
 - i. for instrument runways if the threshold is 2 m (7 ft) or more below the aerodrome elevation; and
 - ii. for precision approach runways.

ec) Conditional clearances

- 1) Air traffic controller shall not issue conditional clearances that are dependent upon the movement of an arrival aircraft on or approaching the runway or a departure aircraft established on a take-off roll. Do not say, "LINE UP AND WAIT BEHIND LANDING TRAFFIC," or "CROSS RUNWAY TWO-NINER BEHIND DEPARTING/LANDING A30B". The above requirements do not preclude issuing instructions to follow an aircraft observed to be operating on the movement area in accordance with an ATC clearance/instruction and in such a manner that the instructions to follow are not ambiguous.
- 2) Conditional phrases such as "BEHIND LANDING TRAFFIC" or "AFTER THE DEPARTING AIRCRAFT" shall not be issued.

f) Coordination of clearances

- 1) An air traffic control clearance shall be coordinated between air traffic control units to cover the entire route of an aircraft or a specified portion thereof as described in provisions (2) to (5).
- 2) An aircraft shall be cleared for the entire route to the aerodrome of first intended landing:
 - i. when it has been possible, prior to departure, to coordinate the clearance between all the units under whose control the aircraft will come; or
 - ii. when there is reasonable assurance that prior coordination will be affected between those units under whose control the aircraft will subsequently come.

3) When coordination as in (2) has not been achieved or is not anticipated, the aircraft shall be cleared only to that point where coordination is reasonably assured; prior to reaching such point, or at such point, the aircraft shall receive further clearance, holding instructions being issued as appropriate.

4) When an aircraft intends to depart from an aerodrome within a control area to enter another control area within a period of thirty minutes, or such other specific period of time as has been agreed between the area control centres concerned, coordination with the subsequent area control centre shall be affected prior to issuance of the departure clearance.

5) When an aircraft intends to leave a control area for flight outside controlled airspace, and will subsequently re-enter the same or another control area, a clearance from the point of departure to the aerodrome of first intended landing may be issued. Such clearance or revisions thereto shall apply only to those portions of the flight conducted within controlled airspace.

GM1 SIRA.8015(a) Air traffic control clearances

Clearances to VFR flights in airspace classes C and D do not imply any form of separation:

in Class C — between VFR flights; and

in Class D — between IFR and VFR flights or between VFR flights.

GM1 SIRA.8015(b)(4) Air traffic control clearances

OPERATION SUBJECT TO CLEARANCE — POTENTIAL RECLEARANCE IN FLIGHT

The intent of the provision relating to potential reclearance is to facilitate reclearance to a revised destination, normally beyond the filed destination aerodrome.

GM1 SIRA.8015(d)(5) Air traffic control clearances

CONTENT OF THE CLEARANCES — TIME OF EXPIRY

The time of expiry of the clearance indicates the time after which the clearance will be automatically cancelled if the flight has not been commenced.

GM1 SIRA.8015(e)(1) Air traffic control clearances

The nature of the change should include a description of the route and levels to the point where it joins the previously cleared route, or, if the aircraft will not re-join the previous route, to the destination.

GM1 SIRA.8015(e)(4) Air traffic control clearances

READ-BACK OF CPDLC MESSAGES

When so indicated by local safety assessments, ANSP may require that the receipt of some of the CPDLC message types (in particular those addressing trajectory changes) be acknowledged by voice.

GM1 SIRA.8015(f)(2) Air traffic control clearances

PROVISIONS FOR CLEARANCES AND INSTRUCTIONS — ALTIMETRY

The provision of transition level may be accomplished by voice communications, ATIS broadcast or data link.

SIRA.8020 Adherence to flight plan

a) Except as provided for in (b) and (d) an aircraft shall adhere to the current flight plan unless a request for a change has been made and clearance obtained from the appropriate air traffic control unit, or unless an emergency situation arises which necessitates immediate action by the aircraft, in which event as soon as circumstances permit, after such emergency authority is exercised, the appropriate air traffic services unit shall be notified of the action taken and that this action has been taken under emergency authority.

1) Unless otherwise authorized by CAA.IRI. or directed by the appropriate air traffic control unit, controlled flights shall, in so far as practicable:

- i. when on an established ATS route, operate along the defined centre line of that route; or
- ii. when on any other route, operate directly between the navigation facilities and/or points defining that route.

2) Unless otherwise authorized by CAA.IRI., or directed by the appropriate air traffic control unit, an aircraft operating along an ATS route segment defined by reference to very high frequency omnidirectional radio ranges shall change over for its primary navigation guidance from the facility behind the aircraft to that ahead of it at, or as close as operationally feasible to, the changeover point, where established.

3) Deviation from the requirements in point (1) shall be notified to the appropriate ATS unit.

b) *inadvertent changes*. In the event that a controlled flight inadvertently deviates from its current flight plan, the following action shall be taken:

1) Deviation from track: if the aircraft is off track, action shall be taken forthwith to adjust the heading of the aircraft to regain track as soon as practicable.

2) Deviation from ATC assigned Mach number/indicated airspeed: the appropriate air traffic services unit shall be informed immediately.

3) Deviation from Mach number/true airspeed: if the sustained Mach number/true airspeed at cruising level varies by plus or minus Mach 0.02 or more, or plus or minus 19 km/h (10 kt) true airspeed or more from the current flight plan, the appropriate air traffic services unit shall be so informed.

4) Change in time estimate: except where ADS-C is activated and serviceable in airspace where ADS-C services are provided, if the time estimate for the next applicable reporting point, flight information region boundary or destination aerodrome, whichever comes first, changes in excess of 2 minutes from that previously notified to air traffic services, a revised estimated time shall be notified as soon as possible to the appropriate ATS unit.

5) Additionally, When ADS-C services are provided and ADS-C is activated, the air traffic services unit shall be informed automatically via data link whenever changes occur beyond the threshold values stipulated by the ADS event contract..

c) *Intended changes.* Requests for flight plan changes shall include information as indicated hereunder:

- 1) Change of cruising level: aircraft identification; requested new cruising level and cruising speed at this level, revised time estimates (when applicable) at subsequent flight information region boundaries.
- 2) Change of Mach number/true airspeed: aircraft identification; requested Mach number/true airspeed.
- 3) Change of route:
 - i. *Destination unchanged:* aircraft identification; flight rules; description of new route of flight including related flight plan data beginning with the position from which requested change of route is to commence; revised time estimates; any other pertinent information.
 - ii. *Destination changed:* aircraft identification; flight rules; description of revised route of flight to revised destination aerodrome including related flight plan data, beginning with the position from which requested change of route is to commence; revised time estimates; alternate aerodrome(s); any other pertinent information.

d) *Weather deterioration below the VMC.* When it becomes evident that flight in VMC in accordance with its current flight plan will not be practicable, a VFR flight operated as a controlled flight shall:

- 1) request an amended clearance enabling the aircraft to continue in VMC to destination or to an alternative aerodrome, or to leave the airspace within which an ATC clearance is required; or
- 2) if no clearance in accordance with a) can be obtained, continue to operate in VMC and notify the appropriate ATC unit of the action being taken either to leave the airspace concerned or to land at the nearest suitable aerodrome; or
- 3) if operated within a control zone, request authorisation to operate as a special VFR flight; or
- 4) request clearance to operate in accordance with the instrument flight rules.

SIRA.8025 Position reports

a) Unless exempted by the ANSP or by the appropriate air traffic services unit under conditions specified by that authority, a controlled flight shall report to the appropriate air traffic services unit, as soon as possible, the time and level of passing each designated compulsory reporting point, together with any other required information. Position reports shall similarly be made in relation to additional points when requested by the appropriate air traffic services unit. In the absence of designated reporting points, position reports shall be made at intervals prescribed by the ANSP or specified by the appropriate air traffic services unit.

- 1) Controlled flights providing position information to the appropriate air traffic services unit via data link communications shall only provide voice position reports when requested.
- 2) When a controlled flight has been exempted from the requirement to report at compulsory reporting points, pilots shall, unless automated position reporting is in effect, resume voice or CPDLC position reporting:

- i. when so instructed;
- ii. when advised that the ATS surveillance service has been terminated; or
- iii. when advised that the ATS surveillance identification is lost.

3) The format of position reports shall be in accordance with [Appendix 5](#), Point A.

GM1 SIRA.8025(a)(2) Position reports

RESUMPTION OF CPDLC POSITION REPORTING

The resumption of controller–pilot data link communications (CPDLC) position reporting can be achieved through automatic dependent surveillance — contract (ADS-C).

SIRA.8030 Termination of control

A controlled flight shall, except when landing at a controlled aerodrome, advise the appropriate ATC unit as soon as it ceases to be subject to air traffic control service.

SIRA.8035 Communications

a) All aircraft operating within Tehran FIR shall maintain continuous air-ground voice communication watch on the appropriate communication channel of, and establish two-way communication with the appropriate air traffic service unit.

1) The requirement for an aircraft to maintain an air-ground voice communication watch shall remain in effect when CPDLC has been established.

b) If a communication failure precludes compliance with a), a controlled flight shall comply with such of the following procedures as are appropriate. The aircraft shall attempt to establish communications with the appropriate air traffic control unit using all other available means. In addition, the aircraft, when forming part of the aerodrome traffic at a controlled aerodrome, shall keep a watch for such instructions as may be issued by visual signals.

1) If in visual meteorological conditions, the aircraft shall:

- i. continue to fly in visual meteorological conditions; land at the nearest suitable aerodrome; and report its arrival by the most expeditious means to the appropriate air traffic control unit; or

2) if in instrument meteorological conditions or when conditions are such that it does not appear feasible to likely that the pilot will complete the flight in accordance with 1):

- i. in airspace where procedural separation is being applied, maintain the last assigned speed and level, or minimum flight altitude if higher, for a period of 20 minutes following the aircraft's failure to report its position over a compulsory reporting point and thereafter adjust level and speed in accordance with the filed flight plan; or,

- ii. in airspace where an ATS surveillance system is used in the provision of air traffic control, maintain the last assigned speed and level, or minimum flight altitude if higher, for a period of 7 minutes following:

A) the time the last assigned level or minimum flight altitude is reached; or

- B) the time the transponder is set to Code 7600 to indicate the loss of air-ground communications; or
- C) the aircraft's failure to report its position over a compulsory point; whichever is later and thereafter adjust level and speed in accordance with the filed flight plan;
- iii. when being vectored or having been directed by ATC to proceed offset using RNAV without a specified limit, proceed in the most direct manner possible to rejoin the current flight plan route not later than the next significant point, taking into consideration the applicable minimum safe level as;
- iv. proceed according to the current flight plan route to the appropriate designated navigation aid or fix serving the destination aerodrome and, when required to ensure compliance with 'v', hold over this aid or fix until commencement of descent;
- v. commence descent from the navigation aid or fix specified in 'iv' at, or as close as possible to, the expected approach time last received and acknowledged; or, if no expected approach time has been received and acknowledged, at, or as close as possible to, the estimated time of arrival resulting from the current flight plan;
- vi. complete a normal instrument approach procedure as specified for the designated navigation aid or fix; and
- vii. land, if possible, within 30 minutes after the estimated time of arrival specified in 'v' or the last acknowledged expected approach time, whichever is later.

GM1 SIRA.8035 Communications

For air traffic control service procedure in RCF situation, see MATS, Chapter 12, 12.1.5; and for AFIS procedure see MATS, Chapter 11, 11.2.7.2. See also relevant pages of AIP AD 2.22 for RCF procedure in each aerodrome.

GM1 SIRA.8035(a) Communications

GENERAL

- a) In a HF environment, SELCAL or similar automatic signaling devices satisfy the requirement to maintain an air-ground voice communication watch.
- b) An aircraft may be permitted to communicate temporarily with a control unit other than the unit controlling the aircraft.

GM1 SIRA.8035(b)(2)(iii) Communications

For minimum levels see [SIRA.5015\(b\)](#) and AIP ENR 3.

AMC1 SIRA.8035 Communications

ESTABLISHMENT OF PILOT-CONTROLLER COMMUNICATIONS

Direct pilot-controller communications should be established prior to the provision of ATS surveillance services unless special circumstances, such as emergencies, dictate otherwise.

AMC2 SIRA.8035 Communications

ACKNOWLEDGEMENT OF MESSAGES

- a) When a CPDLC emergency message is received, the controller shall acknowledge receipt of the message by the most efficient means available.
- b) Except as provided by (a), when a controller or pilot communicates via CPDLC, the response should be via CPDLC. When a controller or pilot communicates via voice, the response should be via voice.

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SECTION 9

FLIGHT INFORMATION SERVICE

SIRA.9001 Application

- a) Flight information service shall be provided by the appropriate air traffic services units to all aircraft which are likely to be affected by the information and which are:
- i. provided with air traffic control service; or
 - ii. otherwise known to the relevant air traffic services units.
- b) Flight information service does not relieve the pilot-in-command of an aircraft of any responsibilities and the pilot-in-command has to make the final decision regarding any suggested alteration of flight plan
- c) Where air traffic services units provide both flight information service and air traffic control service, the provision of air traffic control service shall have precedence over the provision of flight information service whenever the provision of air traffic control service so requires.

SIRA.9005 Scope of flight information service

- a) Flight information service shall include the provision of pertinent:
- 1) weather conditions reported or forecast at departure, destination and as appropriate, alternate aerodromes such as “METAR”, “SPECI”, “AIRMET” “SIGMET”, “AREA FORCAST”, “TAF”, etc.;
 - 2) information on changes in the serviceability of navigation aids;
 - 3) information on changes in condition of aerodromes and associated facilities, including information on the state of the aerodrome movement areas when they are affected by snow, ice or significant depth of water;
 - 4) information on unmanned free balloons;
 - 5) information concerning pre-eruption volcanic activity, volcanic eruptions and volcanic ash clouds;
 - 6) information concerning the release into the atmosphere of radioactive materials or toxic chemicals;
 - 7) collision hazards, to aircraft operating in airspace Classes C, D, E, F, and G;
 - 8) any other information likely to affect safety;
 - 9) for flight over water areas, in so far as practicable and when requested by a pilot, any available information such as radio call sign, position, true track, speed, etc., of surface vessels in the area.
- b) Flight information service provided to VFR flights shall include, in addition to that outlined in (a), the provision of available information concerning traffic and weather conditions along the route of flight that are likely to make operation under the visual flight rules impracticable.

GM1 SIRA.9005(b)(1) Scope of flight information service

INFORMATION RELATED TO WEATHER CONDITIONS AT DEPARTURE, DESTINATION, AND ALTERNATE AERODROMES

Pilots normally obtain information on the weather conditions from the appropriate office before the flight. When available, outstanding or safety-relevant information is normally provided by radio communication within 60 minutes from the aerodrome of destination unless the information has been made available through other means.

GM1 SIRA.9005(b)(7) Scope of flight information service

INFORMATION RELATED TO COLLISION HAZARDS

Information relating to collision hazards in respect of unknown aircraft might constitute a collision hazard to the aircraft informed, will sometimes be incomplete and air traffic services cannot assume responsibility for its issuance at all times or for its accuracy.

SIRA.9010 Automatic terminal information service (ATIS)

a) Use of the ATIS messages in directed request/reply transmissions

- 1) When requested by the pilot, the applicable ATIS message(s) shall be transmitted by the appropriate air traffic services unit.
- 2) Whenever Voice-ATIS and/or D-ATIS is provided:
 - i. aircraft shall acknowledge receipt of the information upon establishing communication with the ATS unit providing approach control service, the aerodrome control tower or Aerodrome Flight Information Service (AFIS), as appropriate; and
 - ii. the appropriate air traffic services unit shall, when replying to an aircraft acknowledging receipt of an ATIS, provide the aircraft with the current altimeter setting.
- 3) Information contained in a current ATIS, the receipt of which has been acknowledged by the aircraft concerned, need not be included in a directed transmission to the aircraft, with the exception of the altimeter setting, which shall be provided in accordance with (2).
- 4) If an aircraft acknowledges receipt of an ATIS that is no longer current, any element of information that needs updating shall be transmitted to the aircraft without delay.

b) ATIS for arriving and departing aircraft

ATIS messages containing both arrival and departure information shall contain the following elements of information in the order listed:

- (1) name of aerodrome;
- (2) arrival and/or departure indicator;
- (3) contract type, if communication is via D-ATIS;
- (4) designator;
- (5) time of observation, if appropriate;
- (6) type of approach(es) to be expected;
- (7) the runway(s) in use; status of arresting system constituting a potential hazard, if any;
- (8) significant runway surface conditions and, if appropriate, braking action;
- (9) holding delay, if appropriate;

- (10) transition level, if applicable;
- (11) other essential operational information;
- (12) surface wind direction (in degrees magnetic) and speed, including significant variations and, if surface wind sensors related specifically to the sections of runway(s) in use are available and the information is required by aircraft operators, the indication of the runway and the section of the runway to which the information refers;
- *(13) visibility and, when applicable, RVR and, if visibility/RVR sensors related specifically to the sections of runway(s) in use are available and the information is required by operators, the indication of the runway and the section of the runway to which the information refers;
- *(14) present weather;
- *(15) cloud below 1 500 m (5 000 ft) or below the highest minimum sector altitude, whichever is greater; cumulonimbus; if the sky is obscured, vertical visibility when available;
- (16) air temperature;
- (17) dew point temperature;
- (18) altimeter setting(s);
- (19) any available information on significant meteorological phenomena in the approach and climb-out areas including wind shear, and information on recent weather of operational significance;
- (20) trend forecast, when available; and
- (21) specific ATIS instructions.

c) ATIS for arriving aircraft

ATIS messages containing arrival information only shall contain the following elements of information in the order listed:

- (1) name of aerodrome;
- (2) arrival indicator;
- (3) contract type, if communication is via D-ATIS;
- (4) designator;
- (5) time of observation, if appropriate;
- (6) type of approach(es) to be expected;
- (7) main landing runway(s); status of arresting system constituting a potential hazard, if any;
- (8) significant runway surface conditions and, if appropriate, braking action;
- (9) holding delay, if appropriate;
- (10) transition level, if applicable;
- (11) other essential operational information;
- (12) surface wind direction (in degrees magnetic) and speed, including significant variations and, if surface wind sensors related specifically to the sections of runway(s) in use are available and the information is required by aircraft operators, the indication of the runway and the section of the runway to which the information refers;
- *(13) visibility and, when applicable, RVR and, if visibility/RVR sensors related specifically to the sections of runway(s) in use are available and the information is required by operators, the indication of the runway and the section of the runway to which the information refers;
- *(14) present weather;
- *(15) cloud below 1 500 m (5 000 ft) or below the highest minimum sector altitude, whichever is greater; cumulonimbus; if the sky is obscured, vertical visibility when available;
- (16) air temperature;
- (17) dew point temperature;
- (18) altimeter setting(s);
- (19) any available information on significant meteorological phenomena in the approach area including wind shear, and information on recent weather of operational significance;
- (20) trend forecast, when available; and
- (21) specific ATIS instructions.

d) ATIS for departing aircraft

ATIS messages containing departure information only shall contain the following elements of information in the order listed:

- (1) name of aerodrome;
- (2) departure indicator;
- (3) contract type, if communication is via D-ATIS;
- (4) designator;
- (5) time of observation, if appropriate;
- (6) runway(s) to be used for take-off; status of arresting system constituting a potential hazard, if any;
- (7) significant surface conditions of runway(s) to be used for take-off and, if appropriate, braking action;
- (8) departure delay, if appropriate;
- (9) transition level, if applicable;
- (10) other essential operational information;
- (11) surface wind direction (in degrees magnetic) and speed, including significant variations and, if surface wind sensors related specifically to the sections of runway(s) in use are available and the information is required by aircraft operators, the indication of the runway and the section of the runway to which the information refers;
- * (12) visibility and, when applicable RVR and, if visibility/RVR sensors related specifically to the sections of runway(s) in use are available and the information is required by operators, the indication of the runway and the section of the runway to which the information refers;
- * (13) present weather;
- (14) cloud below 1 500 m (5 000 ft) or below the highest minimum sector altitude, whichever is greater; cumulonimbus; if the sky is obscured, vertical visibility when available;
- (15) air temperature;
- (16) dew point temperature;
- (17) altimeter setting(s);
- (18) any available information on significant meteorological phenomena in the climb-out area including wind shear;
- (19) trend forecast, when available; and
- (20) specific ATIS instructions.

* These elements are replaced by the term 'CAVOK' when the following conditions occur simultaneously at the time of observation: (a) visibility: 10 km or more, and the lowest visibility not reported; (b) no cloud of operational significance; and (c) no weather of significance to aviation.

SECTION10

ALERTING SERVICE

SIRA.10001 Application

a) Alerting service shall be provided by the air traffic services units:

- 1) for all aircraft provided with air traffic control service;
- 2) in so far as practicable, to all aircraft having filed a flight plan or otherwise known to the air traffic services; and
- 3) to any aircraft known or believed to be the subject of unlawful interference.

b) aircraft shall report during the period ten to forty minutes following the time of last contact, whatever the purpose of such contact, merely to indicate that the flight is progressing according to plan, such report to comprise identification of the aircraft and the words “OPERATIONS NORMAL” or the signal “QRU”. The ‘Operations normal’ message shall be transmitted air-ground to an appropriate ATS unit.

GM1 SIRA.10001(b) Application

The absence of an ‘operations normal’ message does not constitute a situation of urgency. In the absence of such a report, ATS should endeavour to contact the aircraft on available frequencies. A failure to contact the aircraft could lead to any type of measure including the declaration of ‘uncertainty phase’.

SIRA.10005 Information to aircraft operating in the vicinity of an aircraft in a state of emergency

a) When it has been established by an air traffic services unit that an aircraft is in a state of emergency, other aircraft known to be in the vicinity of the aircraft involved shall, except as provided in (b), be informed of the nature of the emergency as soon as practicable.

b) When an air traffic services unit knows or believes that an aircraft is being subjected to unlawful interference, no reference shall be made in ATS air -ground communications to the nature of the emergency unless it has first been referred to in communications from the aircraft involved and it is certain that such reference will not aggravate the situation.

SECTION 11

INTERFERENCE, EMERGENCY, CONTINGENCIES AND

INTERCEPTION

SIRA.11001 General

- a) In case of an aircraft known or believed to be in a state of emergency, including being subjected to unlawful interference, ATS units shall give the aircraft maximum consideration, assistance and priority over other aircraft, as may be necessitated by the circumstances.
- b) Subsequent ATC actions shall be based on the intentions of the pilot, the overall air traffic situation and the real-time dynamics of the contingency.

GM1 SIRA.11001 General

EMERGENCY DESCENT PROCEDURES

- a) When an aircraft operated as a controlled flight experiences sudden decompression or a malfunction requiring an emergency descent, the aircraft should, if able:
 - 1) navigate as deemed appropriate by the pilot;
 - 2) advise the appropriate ATC unit as soon as possible of the emergency descent;
 - 3) set transponder to Code 7700 and select the emergency mode on the automatic dependent surveillance/controller–pilot data link communications (ADS/CPDLC) system, if applicable;
 - 4) turn on aircraft exterior lights;
 - 5) watch for conflicting traffic both visually and by reference to airborne collision avoidance system (ACAS) (if equipped); and
 - 6) coordinate its further intentions with the appropriate ATC unit.
- b) The aircraft is not to descend below the lowest published minimum altitude that will provide a minimum vertical clearance of 300 m (1 000 ft) or, in designated mountainous terrain, of 600 m (2 000 ft) above all obstacles located in the area specified.
- c) Immediately upon recognizing that an emergency descent is in progress, ATC units are to acknowledge the emergency on radiotelephony.

In particular, when recognizing that an emergency descent is in progress, ATC may, as required by the situation:

- 1) suggest a heading to be flown, if able, by the aircraft carrying out the emergency descent in order to achieve separation from other aircraft concerned;
- 2) state the minimum altitude for the area of operation, only if the level-off altitude stated by the pilot is below such minimum altitude, together with the applicable QNH altimeter setting; and
- 3) as soon as possible, provide separation from conflicting traffic, or issue essential traffic information, as appropriate.

When deemed necessary, ATC will broadcast an emergency message, or cause such message to be broadcast, to other aircraft concerned to warn them of the emergency descent.

d) Unless specifically instructed by the ATC unit to clear the area or threatened by immediate danger, the pilot of the aircraft receiving emergency descent broadcast shall take the following actions:

- 1) continue according to current clearance and maintain listening watch on the frequency in use for any further instructions from the ATS unit; and
- 2) watch for conflicting traffic both visually and by reference to ACAS (if equipped).

SIRA.11005 Unlawful interference

a) An aircraft which is being subjected to unlawful interference shall endeavour to set the transponder to Code 7500 and notify the appropriate ATS unit of any significant circumstances associated therewith and any deviation from the current flight plan necessitated by the circumstances, in order to enable the ATS unit to give priority to the aircraft and to minimize conflict with other aircraft.

b) If an aircraft is subjected to unlawful interference, the pilot -in-command shall attempt to land as soon as practicable at the nearest suitable aerodrome or at a dedicated aerodrome assigned by the CAA.IRI. unless considerations aboard the aircraft dictate otherwise.

c) When an occurrence of unlawful interference with an aircraft takes place or is suspected, air traffic services units shall attend promptly to requests by the aircraft. Information pertinent to the safe conduct of the flight shall continue to be transmitted and necessary action shall be taken to expedite the conduct of all phases of the flight, especially the safe landing of the aircraft.

d) When an occurrence of unlawful interference with an aircraft takes place or is suspected, ATS units shall, in accordance with locally agreed procedures, immediately inform the appropriate authority designated by the State and exchange necessary information with the aircraft operator or its designated representative.

AMC1 SIRA.11005 Unlawful interference

a) Whenever unlawful interference with an aircraft is known or suspected or a bomb threat warning has been received, ATS units should promptly attend to requests by, or to anticipated needs of, the aircraft, including requests for relevant information relating to air navigation facilities, procedures and services along the route of flight and at any aerodrome of intended landing, and should take such action as is necessary to expedite the conduct of all phases of the flight, especially the safe landing of the aircraft.

ATS units should also:

- 1) transmit, and continue to transmit, information pertinent to the safe conduct of the flight, without expecting a reply from the aircraft;
- 2) monitor and plot the progress of the flight with the means available, and coordinate transfer of control with adjacent ATS units without requiring transmissions or other responses from the aircraft, unless communication with the aircraft remains normal;

- 3) inform, and continue to keep informed, appropriate ATS units, including those in adjacent flight information regions (FIRs), which may be concerned with the progress of the flight;
 - 4) notify:
 - i. the operator or its designated representative;
 - ii. the appropriate rescue coordination centre in accordance with appropriate alerting procedures; and
 - iii. the appropriate authority designated by the State; and
 - 5) relay appropriate messages, relating to the circumstances associated with the unlawful interference, between the aircraft and designated authorities.
- b) The following additional procedures should apply if a threat is received indicating that a bomb or other explosive device has been placed on board a known aircraft. The ATS unit receiving the threat information should:
- 1) if in direct communication with the aircraft, advise the flight crew without delay of the threat and the circumstances surrounding the threat; or
 - 2) if not in direct communication with the aircraft, advise the flight crew by the most expeditious means through other ATS units or other channels.
- c) The ATS unit in communication with the aircraft should ascertain the intentions of the flight crew and report those intentions to other ATS units which may be concerned with the flight.
- d) The aircraft should be handled in the most expeditious manner while ensuring, to the extent possible, the safety of other aircraft and that personnel and ground installations are not put at risk.
- e) Aircraft in flight should be given re-clearance to a requested new destination without delay. Any request by the flight crew to climb or descend for the purpose of equalizing or reducing the differential between the outside air pressure and the cabin air pressure should be approved as soon as possible.
- f) An aircraft on the ground should be advised to remain as far away from other aircraft and installations as possible and, if appropriate, to vacate the runway. The aircraft should be instructed to taxi to a designated or isolated parking area in accordance with local instructions. Should the flight crew disembark passengers and crew immediately, other aircraft, vehicles and personnel should be kept at a safe distance from the threatened aircraft.
- g) ATS units should not provide any advice or suggestions concerning action to be taken by the flight crew in relation to an explosive device.
- h) An aircraft known or believed to be the subject of unlawful interference or which for other reasons needs isolation from normal aerodrome activity should be cleared to the designated isolated parking position. Where such an isolated parking position has not been designated, or if the designated position is not available, the aircraft should be cleared to a position within the area or areas selected by prior agreement with the aerodrome authority. The taxi clearance should specify the taxi route to be followed to the parking position. This route should be selected with a view to minimizing any security risks to the public, other aircraft and installations at the aerodrome.

GM1 to AMC1 SIRA.11005(a)(1) Unlawful interference

Verbal reference to unlawful interference should not be made by the controller unless it is first made by the pilot in a radio communication transmission, since it might attract the attention of the hijacker (or of other aircraft) and have detrimental consequences.

GM1 SIRA.11005 Unlawful interference

The following procedures are intended as guidance for use by aircraft when unlawful interference occurs and the aircraft is unable to notify an ATS unit of this fact.

- a) If the pilot-in-command cannot proceed to an aerodrome, they should attempt to continue flying on the assigned track and at the assigned cruising level at least until able to notify an ATS unit or until within radar or ADS-B coverage.
- b) When an aircraft subjected to an act of unlawful interference must depart from its assigned track or its assigned cruising level without being able to make radiotelephony contact with ATS, the pilot-in-command should, whenever possible:
 - 1) attempt to broadcast warnings on the VHF channel in use or the VHF emergency frequency, and other appropriate channels, unless considerations aboard the aircraft dictate otherwise. Other equipment such as on-board transponders and data links should also be used when it is advantageous to do so and circumstances permit; and
 - 2) proceed in accordance with applicable special procedures for in-flight contingencies, where such procedures have been established and promulgated in the Regional Supplementary Procedures (Doc 7030); or
 - 3) if no applicable regional procedures have been established, proceed at a level which differs from the cruising levels normally used for an IFR flight by:
 - i. 150 m (500 ft) in an area where a vertical separation minimum of 300 m (1 000 ft) is applied; or
 - ii. 300 m (1 000 ft) in an area where a vertical separation minimum of 600 m (2 000 ft) is applied.

SIRA.11010 Strayed or unidentified aircraft

- a) As soon as an air traffic services unit becomes aware of a strayed aircraft it shall take all necessary steps as outlined in (1) and (3) to assist the aircraft and to safeguard its flight.
 - 1) If the aircraft's position is not known, the air traffic services unit shall:
 - i. attempt to establish two-way communication with the aircraft, unless such communication already exists;
 - ii. use all available means to determine its position;
 - iii. inform other air traffic services units into whose area the aircraft may have strayed or may stray, taking into account all the factors which may have affected the navigation of the aircraft in the circumstances;
 - iv. inform, in accordance with locally agreed procedures, appropriate military units and provide them with pertinent flight plan and other data concerning strayed aircraft;

- v. request from the units referred to in (iii) and (iv) and from other aircraft in flight every assistance in establishing communication with the aircraft and determining its position.
- 2) The requirements in (1)(iv) and (1)(v) shall apply also to air traffic services units informed in accordance with (1)(iii).
- 3) When the aircraft's position is established, the air traffic services unit shall:
- i. advise the aircraft of its position and the corrective action to be taken. This advice shall be immediately provided when the ATS unit is aware that there is a possibility of interception or other hazard to the safety of the aircraft; and
 - ii. provide, as necessary, other air traffic services units and appropriate military units with relevant information concerning the strayed aircraft and any advice given to that aircraft.
- b) As soon as an air traffic services unit becomes aware of an unidentified aircraft in its area, it shall endeavor to establish the identity of the aircraft whenever this is necessary for the provision of air traffic services or required by the appropriate military authorities in accordance with locally agreed procedures. To this end, the air traffic services unit shall take such of the following steps as are appropriate in the circumstances:
- 1) attempt to establish two-way communication with the aircraft;
 - 2) inquire of other air traffic services units within the flight information region about the flight and request their assistance in establishing two-way communication with the aircraft;
 - 3) inquire of air traffic services units serving the adjacent flight information regions about the flight and request their assistance in establishing two-way communication with the aircraft;
 - 4) attempt to obtain information from other aircraft in the area;
 - 5) the air traffic services unit shall, as necessary, inform the appropriate military unit as soon as the identity of the aircraft has been established.
- c) In the case of a strayed or unidentified aircraft, the possibility of the aircraft being subject of unlawful interference shall be taken into account. Should the air traffic services unit consider that a strayed or unidentified aircraft may be the subject of unlawful interference, the appropriate authority designated by the State shall immediately be informed, in accordance with locally agreed procedures.

GM1 SIRA.11010 Strayed or unidentified aircraft

GENERAL

- a) An aircraft may be considered, at the same time, as a 'strayed aircraft' by one unit and as an 'unidentified aircraft' by another unit. This possibility should be taken into account when complying with the provisions of [SIRA.11010\(a\)\(1\)\(iii\)](#) and [SIRA.11010\(b\)\(2\) and \(b\)\(3\)](#).
- b) Navigational assistance by an air traffic services unit is particularly important if the unit becomes aware of an aircraft straying, or about to stray, into an area where there is a risk of interception or other hazard to its safety.

SIRA. 11012 Minimum Fuel and Fuel Emergency

- a) When a pilot reports a state of minimum fuel, the controller shall inform the pilot as soon as practicable of any anticipated delays or that no delays are expected.
- b) When the level of fuel renders declaring a situation of distress necessary, the pilot, in accordance [SIRA.14095](#), shall indicate that by using the radiotelephony distress signal (MAYDAY), preferably spoken three times, followed by the nature of the distress condition (FUEL).

GM1 SIRA.11012 Minimum fuel and fuel emergency

The declaration of MINIMUM FUEL informs ATC that all planned aerodrome options have been reduced to a specific aerodrome of intended landing, and any change to the existing clearance may result in landing with less than planned final reserve fuel. This is not an emergency situation but an indication that an emergency situation is possible should any additional delay occur.

SIRA.11013 Degraded aircraft performance

- a) Whenever, as a result of failure or degradation of navigation, communications, altimetry, flight control or other systems, aircraft performance is degraded below the level required for the airspace in which it is operating, the flight crew shall advise the ATC unit concerned without delay. Where the failure or degradation affects the separation minimum currently being employed, the controller shall take action to establish another appropriate type of separation or separation minimum.

- b) Degradation or failure of the RNAV system

When an aircraft cannot meet the specifications as required by the RNAV route or procedure, as a result of a failure or degradation of the RNAV system, a revised clearance shall be requested by the pilot.

- c) Loss of vertical navigation performance required for reduced vertical separation minima (RVSM) airspace

- 1) The pilot shall inform ATC as soon as possible of any circumstances where the vertical navigation performance requirements for RVSM airspace cannot be maintained. In such cases, the pilot shall obtain a revised ATC clearance prior to initiating any deviation from the cleared route and/or flight level, whenever possible. When a revised ATC clearance cannot be obtained prior to such a deviation, the pilot shall obtain a revised clearance as soon as possible thereafter.

- 2) During operations in, or vertical Transit through, RVSM airspace with aircraft not approved for RVSM operations, pilots shall report non-approved status as follows:

- i. at initial call on any channel within RVSM airspace;
 - ii. in all requests for level changes; and
 - iii. in all read-backs of level clearances.

- 3) Air traffic controllers shall explicitly acknowledge receipt of messages from aircraft reporting RVSM non-approved status.

- 4) Degradation of aircraft equipment — pilot-reported:

- i. When informed by the pilot of an RVSM-approved aircraft operating in RVSM airspace that the aircraft's equipment no longer meets the RVSM requirements, ATC shall consider the aircraft as non-RVSM-approved.
- ii. ATC shall take action immediately to provide a minimum vertical separation of 600 m (2 000 ft) or an appropriate horizontal separation from all other aircraft concerned that are operating in RVSM airspace. An aircraft rendered non-RVSM- approved shall normally be cleared out of RVSM airspace by ATC when it is possible to do so.
- iii. Pilots shall inform ATC, as soon as practicable, of any restoration of the proper functioning of equipment required to meet the RVSM requirements.
- iv. The first ACC to become aware of a change in an aircraft's RVSM status shall coordinate with adjacent ACCs, as appropriate.

5) Severe turbulence — not forecast:

- i. When an aircraft operating in RVSM airspace encounters severe turbulence due to weather or wake vortex that the pilot believes will impact the aircraft's capability to maintain its cleared flight level, the pilot shall inform ATC. ATC shall establish either an appropriate horizontal separation or an increased minimum vertical separation.
- ii. ATC shall, to the extent possible, accommodate pilot requests for flight level and/or route changes and shall pass on traffic information, as required.
- iii. ATC shall solicit reports from other aircraft to determine whether RVSM should be suspended entirely or within a specific flight level band and/or area.
- iv. The ACC suspending RVSM shall coordinate with adjacent ACCs such suspension(s) and any required adjustments to sector capacities, as appropriate, to ensure an orderly progression of the transfer of traffic.

6) Severe turbulence — forecast:

- i. When a meteorological forecast is predicting severe turbulence within RVSM airspace, ATC shall determine whether RVSM should be suspended and, if so, for how long and for which specific flight level(s) and/or area.
- ii. In cases where RVSM will be suspended, the ACC suspending RVSM shall coordinate with adjacent ACCs with regard to the flight levels appropriate for the transfer of traffic, unless a contingency flight Level allocation scheme has been determined by letter of agreement. The ACC suspending RVSM shall also coordinator applicable sector capacities with adjacent ACCs, as appropriate.

GM1 SIRA.11013(b) Degraded aircraft performance

DEGRADATION OR FAILURE OF THE RNAV SYSTEM

a) If an aircraft cannot meet the requirements due to a failure or degradation of the RNAV system that is detected before departure from an aerodrome where it is not practicable to affect a repair, the aircraft concerned should be permitted to proceed to the nearest suitable aerodrome where the repair can be made. When granting clearance to such aircraft, ATC should take into consideration the existing or anticipated traffic situation and may have to modify the time of departure, flight level or route of the intended flight. Subsequent adjustments may become necessary during the course of the flight.

With respect to the degradation/failure in flight of an RNAV system, while the aircraft is operating on an ATS route requiring the use of RNAV 5:

- 1) aircraft should be routed via VOR/DME-defined ATS routes; or
- 2) if no such routes are available, aircraft should be routed via conventional navigation aids, i.e. VOR/DME; or

When the above procedures are not feasible, the ATC unit should, where practicable, provide the aircraft with radar vectors until the aircraft is capable of resuming its own navigation.

With respect to the degradation/failure in flight of an RNAV system, while the aircraft is operating on an arrival or departure procedure requiring the use of RNAV:

- i. the aircraft should be provided with radar vectors until the aircraft is capable of resuming its own navigation; or
- ii. the aircraft should be routed by conventional navigation aids, i.e. VOR/DME.

Subsequent ATC action in respect of an aircraft that cannot meet the specified requirements due to a failure or degradation of the RNAV system, will be dependent upon the nature of the reported failure and the overall traffic situation. Continued operation in accordance with the current ATC clearance may be possible in many situations. When this cannot be achieved, a revised clearance may be required to revert to VOR/DME navigation.

GM1 SIRA.11013(c) Degraded aircraft performance

LOSS OF VERTICAL NAVIGATION PERFORMANCE REQUIRED FOR RVSM

An in-flight contingency affecting flight in RVSM airspace pertains to unforeseen circumstances that directly impact on the ability of one or more aircraft to operate in accordance with the vertical navigation performance requirements of RVSM airspace.

SIRA.11014 ACAS resolution advisory (RA)

a) ACAS II shall be used during flight, except as provided in the minimum equipment list specified in CAOIRI AIIOPS in a mode that enables RA indications to be produced for the flight crew when undue proximity to another aircraft is detected. This shall not apply if inhibition of RA indication mode (using traffic advisory (TA) indication only or equivalent) is called for by an abnormal procedure or due to performance-limiting conditions.

b) In the event of an ACAS RA, pilots shall:

- 1) respond immediately by following the RA, as indicated, unless doing so would jeopardize the safety of the aircraft;
- 2) follow the RA even if there is a conflict between the RA and an ATC instruction to manoeuvre;
- 3) not manoeuvre in the opposite sense to an RA;
- 4) as soon as possible, as permitted by flight crew workload, notify the appropriate ATC unit of any RA which requires a deviation from the current ATC instruction or clearance;
- 5) promptly comply with any modified RAs;

- 6) limit the alterations of the flight path to the minimum extent necessary to comply with the RAs;
 - 7) promptly return to the terms of the ATC instruction or clearance when the conflict is resolved; and
 - 8) notify ATC when returning to the current clearance.
- c) When a pilot reports an ACAS RA, the controller shall not attempt to modify the aircraft flight path until the pilot reports 'CLEAR OF CONFLICT'.
- d) Once an aircraft departs from its ATC clearance or instruction in compliance with an RA, or a pilot reports an RA, the controller ceases to be responsible for providing separation between that aircraft and any other aircraft affected as a direct consequence of the manoeuvre induced by the RA. The controller shall resume responsibility for providing separation to all the affected aircraft when:
- 1) the controller acknowledges a report from the flight crew that the aircraft has resumed the current clearance; or
 - 2) the controller acknowledges a report from the flight crew that the aircraft is resuming the current clearance and issues an alternative clearance which is acknowledged by the flight crew.

GM1 SIRA.11014 ACAS resolution advisory (RA)

Nothing in the procedures specified in [SIRA.11014](#) should prevent pilots-in-command from exercising their best judgement and full authority in the choice of the best course of action to resolve a traffic conflict or avert a potential collision.

GM2 SIRA.11014 ACAS resolution advisory (RA)

The ability of ACAS to fulfil its role of assisting pilots in the avoidance of potential collisions is dependent on the correct and timely response by pilots to ACAS indications. Operational experience has shown that the correct response by pilots is dependent on the effectiveness of the initial and recurrent training in ACAS procedures.

GM3 SIRA.11014 ACAS resolution advisory (RA)

Pilots should not manoeuvre their aircraft in response to traffic advisories (TAs) only.

GM4 SIRA.11014 ACAS resolution advisory (RA)

Visually acquired traffic may not be the same traffic causing an RA. The visual perception of an encounter may be misleading, particularly at night.

GM5 SIRA.11014 ACAS resolution advisory (RA)

In the case of an ACAS–ACAS coordinated encounter, the RAs complement each other in order to reduce the potential for a collision. Manoeuvres, or lack of manoeuvres, that result in vertical rates opposite to the sense of an RA could result in a collision with the intruder aircraft.

GM6 SIRA.11014 ACAS resolution advisory (RA)

Unless informed by the pilot, ATC does not know when ACAS issues RAs. It is possible for ATC to issue instructions that are unknowingly contrary to ACAS RA indications. Therefore, it is important that ATC be notified when an ATC instruction or clearance is not being followed because it conflicts with an RA.

GM7 SIRA.11014 ACAS resolution advisory (RA)

Pilots should use appropriate procedures by which an aeroplane climbing or descending to an assigned altitude or flight level may do so at a rate less than 8 m/s (or 1 500 ft/min) throughout the last 300 m (or 1 000 ft) of climb or descent to the assigned altitude or flight level when the pilot is made aware of another aircraft at or approaching an adjacent altitude or flight level, unless otherwise instructed by ATC. These procedures are intended to avoid unnecessary ACAS II RAs in aircraft at or approaching adjacent altitudes or flight levels. For commercial operations, these procedures should be specified by the operator.

SIRA.11015 Interception

- a) Except for intercept and escort service provided on request to an aircraft, interception of civil aircraft shall be in compliance with the Convention on International Civil Aviation, and in particular Article 3(d) under which ICAO Contracting States undertake, when issuing regulations for their State aircraft, to have due regard for the safety of navigation of civil aircraft.
- b) The pilot-in-command of a civil aircraft, when intercepted, shall:
 - 1) immediately follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals in accordance with the specifications in Tables S11-1 and S11-2;
 - 2) notify, if possible, the appropriate air traffic services unit;
 - 3) attempt to establish radio-communication with the intercepting aircraft or with the appropriate intercept control unit, by making a general call on the emergency frequency 121.5 MHz, giving the identity of the intercepted aircraft and the nature of the flight; and if no contact has been established and if practicable, repeating this call on the emergency frequency 243 MHz;
 - 4) if equipped with SSR transponder, select Mode A, Code 7700, unless otherwise instructed by the appropriate air traffic services unit;
 - 5) if equipped with ADS-B or ADS-C, select the appropriate emergency functionality, if available, unless otherwise instructed by the appropriate air traffic services unit.

Table S11-1				
Signals initiated by intercepting aircraft and responses by intercepted aircraft				
Series	INTERCEPTING Aircraft Signals	Meaning	INTERCEPTED Aircraft Responds	Meaning
1	DAY or NIGHT — Rocking aircraft and flashing navigational lights at irregular intervals (and landing lights in the case of a helicopter) from a position slightly above and ahead of, and normally to the left of, the intercepted aircraft (or to the right if the intercepted aircraft is a helicopter) and, after acknowledgement, a slow level turn, normally to the left (or to the right in the case of a helicopter) on the desired heading. Note 1 Meteorological conditions or terrain may require the intercepting aircraft to reverse the positions and direction of turn given above in Series 1. Note 2 If the intercepted aircraft is not able to keep pace with the intercepting aircraft, the latter is expected to fly a series of race-track patterns and to rock the aircraft each time it passes the intercepted aircraft.	You have been intercepted. Follow me.	DAY or NIGHT — Rocking aircraft, flashing navigational lights at irregular intervals and following.	Understood, will comply.
2	DAY or NIGHT — An abrupt breakaway manoeuvre from the intercepted aircraft consisting of a climbing turn of 90 degrees or more without crossing the line of flight of the intercepted aircraft.	You may proceed.	DAY or NIGHT — Rocking the aircraft.	Understood, will comply.
3	DAY or NIGHT — Lowering landing gear (if fitted), showing steady landing lights and overflying runway in use or, if the intercepted aircraft is a helicopter, overflying the helicopter landing area. In the case of helicopters, the intercepting helicopter makes a landing approach, coming to hover near to the landing area.	Land at this aerodrome.	DAY or NIGHT — Lowering landing gear, (if fitted), showing steady landing lights and following the intercepting aircraft and, if, after overflying the runway in use or helicopter landing area, landing is considered safe, proceeding to land.	Understood, will comply.

Table S11-2				
Signals initiated by intercepted aircraft and responses by intercepting aircraft				
Series	INTERCEPTED Aircraft Signals	Meaning	INTERCEPTING Aircraft Responds	Meaning
4	DAY or NIGHT — Raising landing gear (if fitted) and flashing landing lights while passing over runway in use or helicopter landing area at a height exceeding 300 m (1 000 ft) but not exceeding 600 m (2 000 ft) (in the case of a helicopter, at a height exceeding 50 m (170 ft) but not exceeding 100 m (330 ft)) above the aerodrome level, and continuing to circle runway in use or helicopter landing area. If unable to flash landing lights, flash any other lights available.	Aerodrome you have designated is inadequate.	DAY or NIGHT — If it is desired that the intercepted aircraft follow the intercepting aircraft to an alternate aerodrome, the intercepting aircraft raises its landing gear (if fitted) and uses the Series 1 signals prescribed for intercepting aircraft. If it is decided to release the intercepted aircraft, the intercepting aircraft uses the Series 2 signals prescribed for intercepting aircraft.	Understood, follow me. Understood, you may proceed.
5	DAY or NIGHT — Regular switching on and off of all available lights but in such a manner as to be distinct from flashing lights.	Cannot comply.	DAY or NIGHT — Use Series 2 signals prescribed for intercepting aircraft.	Understood.
6	DAY or NIGHT — Irregular flashing of all available lights.	In distress.	DAY or NIGHT — Use Series 2 signals prescribed for intercepting aircraft.	Understood.

c) If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by visual signals, the intercepted aircraft shall request immediate clarification while continuing to comply with the visual instructions given by the intercepting aircraft.

d) If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by radio, the intercepted aircraft shall request immediate clarification while continuing to comply with the radio instructions given by the intercepting aircraft.

e) If radio contact is established during interception but communication in a common language is not possible, attempts shall be made to convey instructions, acknowledgement of instructions and essential information by using the phrases and pronunciations in Table S11-3 and transmitting each phrase twice:

Table S11-3					
Phrases for use by INTERCEPTING aircraft			Phrases for use by INTERCEPTED aircraft		
Phrase	Pronunciation*	Meaning	Phrase	Pronunciation*	Meaning
CALL SIGN	KOL SA-IN	What is your call sign?	CALL SIGN (call sign)**	KOL SA-IN (call sign)	My call sign is (call sign)
FOLLOW	FOL-LO	Follow me	WILCO	VILL-KO	Understood, will comply
DESCEND	DEE-SEND	Descend for landing	---		
			CAN NOT	KANN NOTT	Unable to comply
YOU LAND	YOU LAAND	Land at this aerodrome	REPEAT	REE-PEET	Repeat your instruction
			AM LOST	AM LOSST	Position unknown
PROCEED	PRO-SEED	You may proceed			
			MAYDAY	MAYDAY	I am in distress
			HIJACK***	HI-JACK	I have been hijacked
			LAND (place name)	LAAND (place name)	I request to land at (place name)
			DESCEND	DEE-SEND	I require descent

* In the second column, syllables to be emphasized are underlined.

**The call sign required to be given is that used in radiotelephony communications with air traffic services units and corresponding to the aircraft identification in the flight plan.

***Circumstances may not always permit, nor make desirable, the use of the phrase 'HIJACK'.

f) As soon as an air traffic services unit learns that an aircraft is being intercepted in its area of responsibility, it shall take such of the following steps as are appropriate in the circumstances:

- 1) attempt to establish two-way communication with the intercepted aircraft via any means available, including the emergency radio frequency 121.5 MHz, unless such communication already exists,
- 2) inform the pilot of the intercepted aircraft of the interception;
- 3) establish contact with the intercept control unit maintaining two-way communication with the intercepting aircraft and provide it with available information concerning the aircraft;
- 4) relay messages between the intercepting aircraft or the intercept control unit and the intercepted aircraft, as necessary;
- 5) in close coordination with the intercept control unit take all necessary steps to ensure the safety of the intercepted aircraft;
- 6) inform air traffic services units serving adjacent flight information regions if it appears that the aircraft has strayed from such adjacent flight information regions.

g) As soon as an air traffic services unit learns that an aircraft is being intercepted outside its area of responsibility, it shall take such of the following steps as are appropriate in the circumstances:

- 1) inform the air traffic services unit serving the airspace in which the interception is taking place, providing this unit with available information that will assist in identifying the aircraft and requesting it to take action in accordance with (f);
- 2) relay messages between the intercepted aircraft and the appropriate air traffic services unit, the intercept control unit or the intercepting aircraft.

GM1 SIRA.11015 Interception

1) General

1.1. Interception of civil aircraft should be avoided and should be undertaken only as a last resort. If undertaken, the interception should be limited to determining the identity of the aircraft, unless it is necessary to return the aircraft to its planned track, direct it beyond the boundaries of national airspace, guide it away from a prohibited, restricted, danger, caution or temporary reserved area or instruct it to effect a landing at a designated aerodrome. Practice interception of civil aircraft is not to be undertaken unless prior agreement has been reached to conduct such activity with the pilot and operator of the civil aircraft concerned.

1.2. To eliminate or reduce the need for interception of civil aircraft, it is important that:

i. All possible efforts be made by intercept control units to secure identification of any aircraft which may be a civil aircraft, and to issue any necessary instructions or advice to such aircraft, through the appropriate ATS units. To this end, it is essential that means of rapid and reliable communications between intercept control units and ATS units be established and that agreements be formulated concerning exchanges of information between such units on the movements of civil aircraft, in accordance with the provisions of [SIRA.4001\(c\)](#), [SIRA.11010\(a\)\(1\)\(iv\)](#), [SIRA.11010\(a\)\(3\)\(ii\)](#), [SIRA.11010\(b\)](#), and [SIRA.11010\(b\)\(5\)](#);

ii. Areas prohibited to all civil flights and areas in which civil flight is not permitted without special authorization by the State be clearly promulgated in the AIP together with the risk, if any, of interception in the event of penetration of such areas. When delineating such areas in close proximity to promulgated ATS routes, or other frequently used tracks, account should be taken of the availability and overall systems accuracy of the navigation systems to be used by civil aircraft and their ability to remain clear of the delineated areas;

iii. The establishment of additional navigation aids be considered where necessary to ensure that civil aircraft are able to safely circumnavigate prohibited or, as required, restricted areas.

1.3. To eliminate or reduce the hazards inherent in interceptions undertaken as a last resort, all possible efforts should be made to ensure coordinated actions by the pilots and ground units concerned. To this end, it is essential that steps be taken to ensure that:

i. All pilots of civil aircraft are made fully aware of the actions to be taken by them and the visual signals to be used;

ii. Operators or pilots-in-command of civil aircraft implement the capability of aircraft to communicate on 121.5 MHz and the availability of interception procedures and visual signals on board aircraft;

iii. All ATS personnel be made fully aware of the actions to be taken by them in accordance with the provisions of [SIRA.4001\(c\)](#), [SIRA.11010\(a\)\(1\)\(iv\)](#), [SIRA.11010\(a\)\(3\)\(ii\)](#), [SIRA.11010\(b\)](#), and [SIRA.11010\(b\)\(5\)](#);

iv. All pilots-in-command of intercepting aircraft are made aware of the general performance limitations of civil aircraft and of the possibility that intercepted civil aircraft may be in a state of emergency due to technical difficulties or unlawful interference;

v. Clear and unambiguous instructions are issued to intercept control units and to pilots-in-command of potential intercepting aircraft, covering interception manoeuvres,

guidance of intercepted aircraft, action by intercepted aircraft, air-to-air visual signals, radiocommunication with intercepted aircraft, and the need to refrain from resorting to the use of weapons;

Note. See paragraphs 2 to 6.

vi. Intercept control units and intercepting aircraft are provided with radiotelephony equipment, so as to enable them to communicate with intercepted aircraft on the emergency frequency 121.5 MHz;

vii. Secondary surveillance radar and/or ADS-B facilities are made available to the extent possible to permit intercept control units to identify civil aircraft in areas where they might otherwise be intercepted. Such facilities should permit recognition of aircraft identity and immediate recognition of any emergency or urgency conditions.

2) Interception manoeuvres

2.1. A standard method should be established for the manoeuvring of aircraft intercepting a civil aircraft in order to avoid any hazard for the intercepted aircraft. Such method should take due account of the performance limitations of civil aircraft, the need to avoid flying in such proximity to the intercepted aircraft that a collision hazard may be created, and the need to avoid crossing the aircraft's flight path or to perform any other manoeuvre in such a manner that the wake turbulence may be hazardous, particularly if the intercepted aircraft is a light aircraft.

2.2. An aircraft equipped with an ACAS, which is being intercepted, may perceive the interceptor as a collision threat and thus initiate an avoidance manoeuvre in response to an ACAS RA. Such a manoeuvre might be misinterpreted by the interceptor as an indication of unfriendly intentions. It is important, therefore, that pilots of intercepting aircraft equipped with a secondary surveillance radar (SSR) transponder suppress the transmission of pressure-altitude information (in Mode C replies or in the AC field of Mode S replies) within a range of at least 37 km (20 NM) of the aircraft being intercepted. This prevents the ACAS in the intercepted aircraft from using RAs in respect of the interceptor, while the ACAS traffic advisory information will remain available.

2.3. Manoeuvres for visual identification

The following method is recommended for the manoeuvring of intercepting aircraft for the purpose of visually identifying a civil aircraft:

Phase I

The intercepting aircraft should approach the intercepted aircraft from astern. The element leader, or the single intercepting aircraft, should normally take up a position on the left (port) side, slightly above and ahead of the intercepted aircraft, within the field of view of the pilot of the intercepted aircraft, and initially not closer to the aircraft than 300 m. Any other participating aircraft should stay well clear of the intercepted aircraft, preferably above and behind. After speed and position have been established, the aircraft should, if necessary, proceed with Phase II of the procedure.

Phase II

The element leader, or the single intercepting aircraft, should begin closing in gently on the intercepted aircraft, at the same level, until no closer than absolutely necessary to obtain the information needed. The element leader, or the single intercepting aircraft, should use

caution to avoid startling the flight crew or the passengers of the intercepted aircraft, keeping constantly in mind the fact that manoeuvres considered normal to an intercepting aircraft may be considered hazardous to passengers and crews of civil aircraft. Any other participating aircraft should continue to stay well clear of the intercepted aircraft. Upon completion of identification, the intercepting aircraft should withdraw from the vicinity of the intercepted aircraft as outlined in Phase III.

Phase III

The element leader, or the single intercepting aircraft, should break gently away from the intercepted aircraft in a shallow dive. Any other participating aircraft should stay well clear of the intercepted aircraft and rejoin their leader.

2.4. Manoeuvres for navigational guidance

2.4.1. If, following the identification manoeuvres in Phase I and Phase II above, it is considered necessary to intervene in the navigation of the intercepted aircraft, the element leader, or the single intercepting aircraft, should normally take up a position on the left (port) side, slightly above and ahead of the intercepted aircraft, to enable the pilot in-command of the latter aircraft to see the visual signals given.

2.4.2. It is indispensable that the pilot-in-command of the intercepting aircraft be satisfied that the pilot-in-command of the intercepted aircraft is aware of the interception and acknowledges the signals given. If repeated attempts to attract the attention of the pilot-in-command of the intercepted aircraft by use of the Series 1 signal in Table S11-1, are unsuccessful, other methods of signalling may be used for this purpose, including as a last resort the visual effect of the reheat/afterburner, provided that no hazard is created for the intercepted aircraft.

2.5 It is recognized that meteorological conditions or terrain may occasionally make it necessary for the element leader, or the single intercepting aircraft, to take up a position on the right (starboard) side, slightly above and ahead of the intercepted aircraft. In such case, the pilot-in-command of the intercepting aircraft must take particular care that the intercepting aircraft is clearly visible at all times to the pilot-in command of the intercepted aircraft.

3) Guidance of an intercepted aircraft

3.1. Navigational guidance and related information should be given to an intercepted aircraft by radiotelephony, whenever radio contact can be established.

3.2. When navigational guidance is given to an intercepted aircraft, care must be taken that the aircraft is not led into conditions where the visibility may be reduced below that required to maintain flight in visual meteorological conditions and that the manoeuvres demanded of the intercepted aircraft do not add to already existing hazards in the event that the operating efficiency of the aircraft is impaired.

3.3. In the exceptional case where an intercepted civil aircraft is required to land in the territory overflowed, care must also be taken that:

- a) the designated aerodrome is suitable for the safe landing of the aircraft type concerned, especially if the aerodrome is not normally used for civil air transport operations;
- b) the surrounding terrain is suitable for circling, approach and missed approach manoeuvres;
- c) the intercepted aircraft has sufficient fuel remaining to reach the aerodrome;

d) if the intercepted aircraft is a civil transport aircraft, the designated aerodrome has a runway with a length equivalent to at least 2 500 m at MSL and a bearing strength sufficient to support the aircraft; and

e) whenever possible, the designated aerodrome is one that is described in detail in the AIP.

3.4. When requiring a civil aircraft to land at an unfamiliar aerodrome, it is essential that sufficient time be allowed it to prepare for a landing, bearing in mind that only the pilot-in command of the civil aircraft can judge the safety of the landing operation in relation to runway length and aircraft mass at the time.

3.5. It is particularly important that all information necessary to facilitate a safe approach and landing be given to the intercepted aircraft by radiotelephony.

4) Air-to-air visual signals

The visual signals to be used by intercepting and intercepted aircraft are those set forth in Tables S11-1 and S11-2. It is essential that intercepting and intercepted aircraft adhere strictly to those signals and interpret correctly the signals given by the other aircraft, and that the intercepting aircraft pay particular attention to any signals given by the intercepted aircraft to indicate that it is in a state of distress or urgency.

5) Radiocommunication between the intercept control unit or the intercepting aircraft and the intercepted aircraft

5.1. When an interception is being made, the intercept control unit and the intercepting aircraft should:

a) first attempt to establish two-way communication with the intercepted aircraft in a common language on the emergency frequency 121.5 MHz, using the call signs “INTERCEPT CONTROL”, “INTERCEPTOR (call sign)” and “INTERCEPTED AIRCRAFT” respectively; and

b) failing this, attempt to establish two-way communication with the intercepted aircraft on such other frequency or frequencies as may have been prescribed by CAA.IRI, or to establish contact through the appropriate ATS unit(s).

5.2. If radio contact is established during interception but communication in a common language is not possible, attempts must be made to convey instructions, acknowledgement of instructions and essential information by using the phrases and pronunciations in Table S11-3 and transmitting each phrase twice.

6) Refraining from the use of weapons

The use of tracer bullets to attract attention is hazardous, and it is expected that measures will be taken to avoid their use so that the lives of persons on board and the safety of aircraft will not be endangered.

7) Coordination between intercept control units and air traffic services units

It is essential that close coordination be maintained between an intercept control unit and the appropriate air traffic services unit during all phases of an interception of an aircraft which is, or might be, a civil aircraft, in order that the air traffic services unit is kept fully informed of the developments and of the action required of the intercepted aircraft.

AMC1 SIRA.11015(a) Interception

REGULATIONS AND ADMINISTRATIVE DIRECTIVES INTERCEPTION OF CIVIL AIRCRAFT

a) In accordance with the provisions on interception of civil aircraft in Annex 2 to the Convention on the International Civil Aviation, interception of civil aircraft should be in accordance as follows:

- 1) interception of civil aircraft is undertaken only as a last resort;
- 2) an interception is limited to determining the identity of the aircraft, unless it is necessary to return the aircraft to its planned track, direct it beyond the boundaries of national airspace, guide it away from a prohibited, restricted, danger, or temporary reserved area or congested areas, or instruct it to affect a landing at a designated aerodrome;
- 3) practice interception of civil aircraft is not undertaken, unless it has been previously agreed with the pilot-in-command of the aircraft to be intercepted and ATC has been informed accordingly that the interception is to take place;
- 4) navigational guidance and related information are given to an intercepted aircraft by radiotelephony, whenever radio contact can be established; and
- 5) in the case where an intercepted civil aircraft is required to land in the territory overflowed; the aerodrome designated for the landing is suitable for the safe landing of the aircraft type concerned.

SECTION 12

SERVICES RELATED TO METEOROLOGY — AIRCRAFT

OBSERVATIONS AND REPORTS BY VOICE COMMUNICATIONS

SIRA.12001 Types of aircraft observations

a) The following aircraft observations shall be made during any phase of the flight:

- 1) special aircraft observations; and
- 2) other non-routine aircraft observations.

SIRA.12005 Special aircraft observations

a) Special observations shall be made by all aircraft whenever the following conditions are encountered or observed:

- 1) moderate or severe turbulence; or
- 2) moderate or severe icing; or
- 3) severe mountain wave; or
- 4) thunderstorms, without hail, that are obscured, embedded, widespread or in squall lines; or
- 5) thunderstorms, with hail, that are obscured, embedded, widespread or in squall lines; or
- 6) heavy dust storm or heavy sandstorm; or
- 7) volcanic ash cloud; or
- 8) pre-eruption volcanic activity or a volcanic eruption.
- 9) runway braking action encountered is not as good as reported.

b) ANSP shall prescribe as necessary other conditions which shall be reported by all aircraft when encountered or observed.

c) Flight crews shall compile the reports using forms based on the model AIREP SPECIAL form as set out in point A of [Appendix 5](#). Those reports shall comply with the detailed instructions for reporting, as provided in point 2 of [Appendix 5](#).

- 1) The detailed instructions, including the formats of messages and the phraseologies provided in [Appendix 5](#), shall be used by flight crews when transmitting air-reports and by ATS units when retransmitting such reports.
- 2) Special air-reports containing observations of volcanic activity shall be recorded on the special air-report of volcanic activity form. Forms based on the model form for special air-reports of volcanic activity set out in point B of [Appendix 5](#) shall be provided for flight crews operating on routes which could be affected by volcanic ash clouds.

GM1 SIRA.12005(c) Special aircraft observations

In a busy environment where the transmission of complete special aircraft observations would have a negative impact on the frequency occupancy, ATC may instruct the aircraft to make the complete report on an alternative frequency.

SIRA.12010 Other non-routine aircraft observations

When other meteorological conditions not listed under [SIRA.12005\(a\)](#), e.g. wind shear, are encountered and which, in the opinion of the pilot -in-command, may affect the safety or markedly affect the efficiency of other aircraft operations, the pilot -in-command shall advise the appropriate air traffic services unit as soon as practicable.

SIRA.12015 Reporting of aircraft observations by voice communication

- a) Aircraft observations shall be reported during flight at the time the observation is made or as soon thereafter as is practicable.
- b) Aircraft observations shall be reported as air-reports and shall comply with the technical specifications in [Appendix 5](#).

SIRA.12020 Exchange of air-reports

- a) ATS units shall transmit, as soon as practicable, special and non-routine air-reports to:
 - 1) other aircraft concerned;
 - 2) the associated meteorological watch office (MWO) in accordance with point 3 of [Appendix 5](#); and
 - 3) other ATS units concerned.
- b) Transmissions to aircraft shall be repeated at a frequency and continued for a period of time which shall be determined by the ATS unit concerned.

AMC1 SIRA.12020 Exchange of air-reports

SPECIAL AIR-REPORTS

Special air-reports should be transmitted with the least possible delay to aircraft likely to be affected and should cover the portion of the route up to one hour's flying time ahead of the aircraft.

GM1 SIRA.12020(a)(3) Exchange of air-reports

OTHER ATS UNITS CONCERNED

Other ATS units concerned are those that have flights under their jurisdiction which are expected to enter the airspace concerned at a later stage of flight. Those flights could, for instance, require rerouting before entering the airspace concerned. As an example, a special air -report concerning volcanic ash or volcanic eruption could be necessary to transmit to aircraft by ATS units in the FIR adjacent to that affected by the air-report.

SECTION 13

SSR TRANSPONDER

SIRA.13001 Operation of an SSR transponder

- a) All aircraft flying within Tehran FIR are required to be equipped with SSR transponder having a combined Mode A/3, 4096 Codes capability and a Mode C automated altitude reporting capability.
- b) The use of SSR transponder is mandatory for all aircraft flying within controlled airspaces, unless otherwise approved by prior coordination or instructed by ATS unit.
- c) Pilots shall not operate the IDENT feature unless requested by ATS.

GM1 SIRA.13001 Operation of an SSR transponder

Pilots of aircraft engaged in formation join-ups are expected to continue operating the transponder until established in formation. Once established in formation, all except the lead aircraft should be instructed to 'squawk standby'.

GM2 SIRA.13001 Operation of an SSR transponder

Pilots of non-powered aircraft are also encouraged to operate the transponder during flight outside airspace where carriage and operation of SSR transponder is mandatory.

SIRA.13005 SSR transponder Mode A code setting

- a) SPECIFIC FAMILY CODES ARE RESERVED FOR SPECIAL PURPOSES AS FOLLOWS:

- 1) Code 0000 is available as a general-purpose code for domestic use to indicate a transponder malfunction;
- 2) Code 2000 is reserved for use by flight crew in the absence of any Air Traffic Control (ATC) instructions or operating in the non-mandatory area, unless the conditions for the use of codes 7000, 7500, 7600 and 7700 apply.
- 3) Code 1200 shall be set by VFR flights in the absence of code assignment instructions or when the aircraft is operating in an area in which the code setting is not mandatory, unless the conditions for the use of codes 7500, 7600 and 7700 apply;
- 4) Code 7500 is reserved for use in the event of unlawful interference;
- 5) Code 7600 is reserved for use in the event of radio communications failure;
- 6) Code 7700 is reserved for use in the event of emergencies and interception;
- 7) Code 7776 and Code 7777 are reserved for SSR ground transponder monitoring; and
- 8) Code 7601-7612 are reserved for flights with humanitarian purposes, e.g. medical aircraft operating in areas of international armed conflict.

- b) When it is observed that the code shown on the situation display is different from what has been assigned to the aircraft:

- 1) the pilot shall be requested to confirm the code selected and, if the situation warrants, to reselect the correct code; and
- 2) if the discrepancy between assigned and displayed codes still persists, the pilot may be requested to stop the operation of the aircraft's transponder. The next control position and any other affected unit using SSR and/or multilateration (MLAT) in the provision of ATS shall be informed accordingly.

GM1 SIRA.13005(a) SSR transponder Mode A code setting

If a pilot has selected Mode A Code 7500 and has been requested to confirm this code by ATC, the pilot should, according to circumstances, either confirm this or not reply at all. If the pilot does not reply, ATC should take this as confirmation that the use of Code 7500 is not an inadvertent false code selection.

AMC1 SIRA.13005(b) SSR transponder Mode A code setting

When requested by ATC to confirm the code selected, the pilot should:

- a) verify the Mode A code setting on the transponder;
- b) reselect the assigned code if necessary; and
- c) confirm to ATC the setting displayed on the controls of the transponder.

SIRA.13010 Pressure-altitude-derived information

- a) When the aircraft carries serviceable Mode C equipment, the pilot shall continuously operate this mode unless otherwise dictated by ATC.
- b) Verification of the pressure -altitude- derived level information displayed to the controller shall be affected at least once by each suitably equipped ATC unit on initial contact with the aircraft concerned or, if this is not feasible, as soon as possible thereafter.

GM1 SIRA.13010(b) Pressure-altitude-derived information

ERRONEOUS LEVEL INFORMATION

- a) If the displayed level information is not within the approved tolerance value or when a discrepancy in excess of the approved tolerance value is detected subsequent to verification, the pilot should be advised accordingly and requested to check the pressure setting and confirm the aircraft's level.
- b) If, following confirmation of the correct pressure setting, the discrepancy continues to exist, the following action should be taken by ATC according to circumstances:
 - 1) request the pilot to select and operate an alternative transponder, if available, and re - verify that the displayed level information is within the approved tolerance; or
 - 2) request the pilot to stop Mode C or ADS-B altitude data transmission, provided this does not cause the loss of position and identity information, and notify the next control positions or ATC unit concerned with the aircraft of the action taken; or

3) inform the pilot of the discrepancy and request that the relevant operation continue in order to prevent loss of position and identity information of the aircraft and, when so prescribed by the local instructions, override the label-displayed level information with the reported level. In addition, the ATC unit should notify the next control position or ATC unit concerned with the aircraft of the action taken.

c) It should be highlighted that ACAS will accept mode C replies that are erroneous, and it is possible to issue an RA based on these inputs. When the measures described in (b)(1) cannot be implemented, the controller should take into account the likelihood of generating ACAS RA in the provision of ATS.

SIRA.13015 SSR transponder Mode S aircraft identification setting

a) Aircraft equipped with Mode S having an aircraft identification feature shall transmit the aircraft identification as specified in Item 7 of the ICAO flight plan.

b) Whenever it is observed on the situation display that the aircraft identification transmitted by a Mode S-equipped aircraft is different from that expected from the aircraft, the pilot shall be requested to confirm and, if necessary, re-enter the correct aircraft identification.

c) If, following confirmation by the pilot that the correct aircraft identification has been set on the Mode S identification feature, the discrepancy continues to exist, the controller shall take the following actions:

- 1) inform the pilot of the persistent discrepancy;
- 2) where possible, correct the label showing aircraft identification on the situation; and
- 3) notify the next control position and any other unit concern using mode S for identification purposes that the aircraft identification transmitted by the aircraft is erroneous.

SIRA.13020 SSR transponder failure when the carriage of a functioning transponder is mandatory

a) If the transponder fails after departure or during en-route, ATS units will endeavour to provide for continuation of the flight in accordance with the flight plan. In certain traffic situations this may not be possible particularly when the failure is detected shortly after take-off. The aircraft may then be required to return to the departure aerodrome or to land at another aerodrome acceptable to the operator and to ATC. After landing, pilots shall make every effort to have the transponder restored to normal operation. If the transponder cannot be repaired then the provision in paragraph b) apply.

b) If the transponder fails before intended departure and cannot be repaired, pilots shall:

- 1) Plan to proceed to the nearest suitable aerodrome, where repair can be made, and
- 2) Inform ATS unit concerned as soon as possible preferably before the submission of a flight plan. When granting clearance to such aircraft, ATC will take into account the existing and anticipated traffic situation and may have to modify the time of departure, flight level or route of the intended flight, and
- 3) Insert in item 10 of the ICAO flight plan under SSR the letter N for complete unserviceability of the transponder or in the case of partial failure, the letter corresponding to the remaining transponder capability as specified in AIP ENR.1-10.

GM1 SIRA.13020(a) SSR transponder failure when the carriage of a functioning transponder is mandatory

TRANSPONDER FAILURE AFTER DEPARTURE

When an aircraft experiencing transponder failure after departure is operating or expected to operate in an area where the carriage of a functioning transponder with specified capabilities is mandatory, the ATC units concerned should endeavour to provide for continuation of the flight to the aerodrome of first intended landing in accordance with the flight plan. However, in certain traffic situations, either in terminal areas or en-route, continuation of the flight may not be possible, particularly when failure is detected shortly after take-off. The aircraft may then be required to return to the departure aerodrome or to land at the nearest suitable aerodrome acceptable to the operator concerned and to ATC.

SECTION 14

VOICE COMMUNICATION PROCEDURES

SIRA.14001 General

Standardized phraseology shall be used in all situations for which it has been specified. Only when standardized phraseology cannot serve an intended transmission, plain language shall be used.

AMC1 SIRA.14001 General

For standardized phraseology, refer to the [Appendix 1](#).

GM1 SIRA.14001 for Appendix 1 General

The phraseology in [AMC1 SIRA.14001](#) does not include phrases and regular radiotelephony procedure words contained in SIRA [Section 14](#).

Words in parentheses indicate that specific information, such as a level, a place or a time, etc. must be inserted to complete the phrase, or alternatively that optional phrases may be used. Words in square parentheses indicate optional additional words or information that may be necessary in specific instances.

Appendix 1 to AMC1 SIRA.14001

General

1) ATC PHRASEOLOGIES

1.1. GENERAL

Row	Circumstances	Phraseologies	Example
1.1.1	DESCRIPTION OF LEVELS (SUBSEQUENTLY REFERRED TO AS “(LEVEL)”)	FLIGHT LEVEL <i>(number)</i> ;	FLIGHT LEVEL160
		<i>(number)</i> FEET	8000 FEET
1.1.2	LEVEL CHANGES, REPORTS AND RATES	CLIMB <i>(or DESCEND)</i> TO <i>(level)</i>	CLIMB TO FL280
	... instruction that a climb (or descent) to a level within the vertical range defined is to commence	CLIMB <i>(or DESCEND)</i> TO AND MAINTAIN BLOCK <i>(level)</i> TO <i>(level)</i>	CLIMB TO AND MAINTAIN BLOCK 8000 FT TO 10000 FT
		CLIMB <i>(or DESCEND)</i> TO REACH <i>(level)</i> AT <i>(or BY)</i> <i>(time or significant point)</i>	DESCEND TO REACH FL 180 BY SAV CLIMB TO REACH 9000 FT AT 46
		CLIMB <i>(or DESCEND)</i> REPORT LEAVING <i>(or REACHING, or PASSING)</i> <i>(level)</i>	REPORT REACHING FL250

			REPORT LEAVING FL250
			REPORT PASSING FL250
		CLIMB (or DESCEND) AT (number) FEET PER MINUTE [OR GREATER (OR LESS)]	DESCEND TO 8000 FT AT 1000 FEET PER MINUTE OR GREATER
			DESCEND TO 9000 FT AT 1000 FEET PER MINUTE OR LESS
		REQUEST LEVEL (or FLIGHT LEVEL or ALTITUDE) CHANGE FROM (name of unit) [AT (time or significant point)];	REQUEST LEVEL CHANGE FROM TEHRAN ACC
			REQUEST LEVEL CHANGE FROM SHIRAZ APP AT 46
		STOP CLIMB (or DESCENT) AT (level);	STOP DESCENT AT ONE ZERO THOUSAND FEET
		CONTINUE CLIMB (or DESCENT) TO (level);	CONTINUE DESCENT TO FL130
		EXPEDITE CLIMB (or DESCENT) [UNTIL PASSING (level)];	EXPEDITE CLIMB UNTIL PASSING FL 180
		WHEN READY CLIMB (or DESCEND) TO (level);	WHEN READY DESCEND TO 7000 FT
		EXPECT CLIMB (or DESCENT) AT (time or significant point);	EXPECT DESCENT AT LVA
		REQUEST DESCENT AT (time) *	
	... to require action at a specific time or place	IMMEDIATELY	DESCEND IMMEDIATELY TO FL 200 DUE TRAFFIC
		AFTER PASSING (significant point)	AFTER PASSING ASNI DESCEND TO FL150
		AT (time or significant point);	
	... to require action when convenient	WHEN READY (instruction);	WHEN READY DESCEND TO 3000 FT
	... to require an aircraft to climb or descend maintaining own separation and VMC	MAINTAIN OWN SEPARATION AND VMC [FROM (level)] [TO (level)];	MAINTAIN OWN SEPARATION AND VMC FROM 8000 FT TO 4000 FT
		MAINTAIN OWN SEPARATION AND VMC ABOVE (or BELOW, or TO) (level);	MAINTAIN OWN SEPARATION AND VMC BELOW 9000 FT

... when there is doubt that an aircraft can comply with a clearance or instruction	IF UNABLE (<i>alternative instructions</i>) AND ADVISE	IF UNABLE MAINTAIN FL150 AND ADVISE
when a pilot is unable to comply with a clearance or instruction	UNABLE*	
... after a flight crew starts to deviate from any ATC clearance or instruction to comply with an ACAS resolution advisory (RA) (Pilot and controller interchange)	TCAS RA* ROGER	
... after the response to an ACAS RA is completed and a return to the ATC clearance or instruction is initiated (Pilot and controller interchange)	CLEAR OF CONFLICT, RETURNING TO (<i>assigned clearance</i>); *	
	ROGER (<i>or alternative instructions</i>);	
... after the response to an ACAS RA is completed and the assigned ATC clearance or instruction has been resumed (Pilot and controller interchange)	CLEAR OF CONFLICT (<i>assigned clearance</i>) RESUMED*	
	ROGER (<i>or alternative instructions</i>);	
... after an ATC clearance or instruction contradictory to the ACAS RA is received, the flight crew will follow the RA and inform ATC directly (Pilot and controller interchange)	UNABLE, TCAS RA* ROGER	
... clearance to climb on a SID which has published level and/or speed restrictions, where the pilot is to climb to the cleared level and comply with published level restrictions, follow the lateral profile of the SID and comply with published speed restrictions or ATC issued speed control instructions as applicable.	CLIMB VIA SID TO (<i>level</i>).	
... clearance to cancel level restriction(s) of the vertical profile of a SID during climb	[CLIMB VIA SID TO (<i>level</i>)], CANCEL LEVEL RESTRICTION(S);	

	... clearance to cancel specific level restriction(s) of the vertical profile of a SID during climb	[CLIMB VIA SID TO <i>(level)</i>], CANCEL LEVEL RESTRICTION(S) AT <i>(point(s))</i> ;	
	... clearance to cancel speed restrictions of a SID during climb	[CLIMB VIA SID TO <i>(level)</i>], CANCEL SPEED RESTRICTION(S);	
	... clearance to cancel specific speed restrictions of a SID during climb	[CLIMB VIA SID TO <i>(level)</i>], CANCEL SPEED RESTRICTION(S) AT <i>(point(s))</i> ;	
	... clearance to climb and to cancel speed and level restrictions of a SID	CLIMB UNRESTRICTED TO <i>(level)</i> (or) CLIMB TO <i>(level)</i> , CANCEL LEVEL AND SPEED RESTRICTIONS;	
	... clearance to descend on a STAR which has published level and/or speed restrictions, where the pilot is to descend to the cleared level and comply with published level restrictions, follow the lateral profile of the STAR and comply with published speed restrictions or ATC issued speed control instructions.	DESCEND VIA STAR TO <i>(level)</i> ;	
	... clearance to cancel level restrictions of a STAR during descent	[DESCEND VIA STAR TO <i>(level)</i>], CANCEL LEVEL RESTRICTION(S);	
	... clearance to cancel specific level restrictions of a STAR during descent	[DESCEND VIA STAR TO <i>(level)</i>], CANCEL LEVEL RESTRICTION(S) AT <i>(point(s))</i> ;	
	... clearance to cancel speed restrictions of a STAR during descent	[DESCEND VIA STAR TO <i>(level)</i>], CANCEL SPEED RESTRICTION(S);	
	... clearance to cancel specific speed restrictions of a STAR during descent	[DESCEND VIA STAR TO <i>(level)</i>], CANCEL SPEED RESTRICTION(S) AT <i>(point(s))</i> ;	
	... clearance to descend and to cancel speed and level restrictions of a STAR	DESCEND UNRESTRICTED TO <i>(level)</i> or DESCEND TO <i>(level)</i> , CANCEL LEVEL AND SPEED RESTRICTIONS.	
1.1.3	MINIMUM FUEL	MINIMUM FUEL*	
	... indication of minimum fuel	ROGER [NO DELAY EXPECTED or EXPECT <i>(delay information)</i>].	ROGER EXPECT 5 MINUTES DELAY
1.1.4	TRANSFER OF CONTROL AND/OR FREQUENCY CHANGE	CONTACT <i>(unit call sign)</i> <i>(frequency)</i> [NOW];	CONTACT TEHRAN CENTRE 125 DECIAL 7

		AT (or OVER) (time or place) [or WHEN] [PASSING/LEAVING/REACHING (level)] CONTACT (unit call sign) (frequency);	PASSING FL195 CONTACT TEHRAN ACC 126 DECIMAL 9
		IF NO CONTACT (instructions);	IF NO CONTACT BACK TO THIS FREQUENCY
	Note. An aircraft may be requested to "STAND BY" on a frequency when it is intended that the ATS unit will initiate communications soon and to "MONITOR" a frequency when information is being broadcast thereon.	STAND BY FOR (unit call sign) (frequency);	
		REQUEST CHANGE TO (frequency) *	
		FREQUENCY CHANGE APPROVED	
		MONITOR (unit call sign) (frequency);	MONITOR ATIS 128 DECIMAL 250
		MONITORING (frequency); *	
		WHEN READY CONTACT (unit call sign) (frequency);	WHEN READY CONTACT KISH TOWER 118 DECIMAL 450
		REMAIN THIS FREQUENCY	
1.1.5	CHANGE OF CALL SIGN		
	... to instruct an aircraft to change its type of call sign	CHANGE YOUR CALL SIGN TO (new call sign) [UNTIL FURTHER ADVISED];	IRA711 CHANGE YOUR CALL SIGN TO EPIFA UNTIL FURTHER ADVISED
	... to advise an aircraft to revert to the call sign indicated in the flight plan	REVERT TO FLIGHT PLAN CALL SIGN (call sign) [AT (significant point)].	EPIFA REVERT TO FLIGHT PLAN CALL SIGN IRA711
1.1.6	TRAFFIC INFORMATION	TRAFFIC (information);	TRAFFIC FOKKER100 ON FINAL
	... to pass traffic information	NO REPORTED TRAFFIC	
	... to acknowledge traffic information	LOOKING OUT*	
		TRAFFIC IN SIGHT*	
		NEGATIVE CONTACT [reasons] *	
		[ADDITIONAL] TRAFFIC (direction) BOUND (type of aircraft) (level) ESTIMATED (or OVER) (significant point) AT (time);	ADDITIONAL TRAFFIC WEST BOUND AIRBUS320 FL240 ESTIMATED ZANJAN AT 46
		TRAFFIC IS (classification) UNMANNED FREE BALLOON(S) WAS [or ESTIMATED] OVER (place) AT (time) REPORTED (level(s)) [or LEVEL UNKNOWN] MOVING (direction) (other pertinent information, if any).	TRAFFIC IS LIGHT UNMANNED FREE BALLOON ESTIMATED OVER BANDARABBAS AT 46 REPORTED LEVEL UNKNOWN MOVING WEST
1.1.7	METEOROLOGICAL CONDITIONS	[SURFACE] WIND (number) DEGREES (speed) (units);	WIND 270 DEGREES 8 KNOTS

		WIND AT (level) (number) DEGREES (number) KILOMETRES PER HOUR (or KNOTS); <i>Note. Wind is always expressed by giving the mean direction and speed and any significant variations thereof.</i>	WIND AT FL350 , 270 DEGREES 80 KNOTS
		VISIBILITY (distance) (units) [direction];	VISIBILITY 4000 METERS
		RUNWAY VISUAL RANGE (or RVR) [RUNWAY (number)] (distance) (units);	RVR RWY27L 800 METERS
		RUNWAY VISUAL RANGE (or RVR) RUNWAY (number) NOT AVAILABLE (or NOT REPORTED);	RVR RUNWAY 27L NOT AVAILABLE
	... for multiple RVR observations	RUNWAY VISUAL RANGE (or RVR) [RUNWAY (number)] (first position) (distance) (units), (second position) (distance) (units), (third position) (distance) (units); <i>Note 1. Multiple RVR observations are always representative of the touchdown zone, midpoint zone and the roll-out/stop end zone, respectively.</i> <i>Note 2. Where reports for three locations are given, the indication of these locations may be omitted, provided that the reports are passed in the order of touchdown zone, followed by the midpoint zone and ending with the roll-out/stop end zone report.</i>	RVR RWY27L 800 METERS 1000 METERS 1200 METERS
	... in the event that RVR information on any one position is not available this information will be included in the appropriate sequence	RUNWAY VISUAL RANGE (or RVR) [RUNWAY (number)] (first position) (distance) (units), (second position) NOT AVAILABLE, (third position) (distance) (units);	RVR RWY27L TOUCHDOWN ZONE 800 METERS, MIDPOINT ZONE NOT AVAILABLE ROLL-OUT ZONE 1200 METERS
		PRESENT WEATHER (details);	PRESENT WEATHER MIST
		CLOUD (amount, [(type)] and height of base) (units) (or SKY CLEAR);	CLOUD SCT CUMOLONIMBOS 3500 FEET
		CAVOK; <i>Note.— CAVOK pronounced CAV- O-KAY.</i>	
		TEMPERATURE [MINUS] (number) (and/or DEWPOINT [MINUS] (number));	TEMPERATURE 25 DEWPOINT 12

		QNH (number) [units];	QNH 1025 HECTOPASCAL
		QFE (number) [(units)];	QNH 2995 INCHES
		(aircraft type) REPORTED (description) ICING (or TURBULENCE) [IN CLOUD] (area) (time);	AIRBUS340 REPORTED SEVER ICING 30 NM EAST OF ZANJAN AIRBUS340 REPORTED SEVER TURBULENCE EAST OF ZANJAN
		REPORT FLIGHT CONDITIONS	
1.1.8	POSITION REPORTING	NEXT REPORT AT (significant point);	NEXT REPORT AT ZANJAN
	... to omit position reports until a specified position	OMIT POSITION REPORTS [UNTIL (specify)];	
		RESUME POSITION REPORTING.	
1.1.9	ADDITIONAL REPORTS	REPORT PASSING (significant point);	REPORT PASSING ZANJAN
	... to request a report at a specified place or distance	REPORT (distance) MILES (GNSS or DME) FROM (name of DME station) (or significant point);	REPORT 20 MILES GNSS FROM ZANJAN REPORT 20 MILES DME FROM ZANJAN
	... to report at a specified place or distance	(distance) MILES (GNSS or DME) FROM (name of DME station) (or significant point)*	
		REPORT PASSING (three digits) RADIAL (name of VOR) VOR;	REPORT PASSING 180 RADIAL ZANJAN VOR;
	... to request a report of present position	REPORT (GNSS or DME) DISTANCE FROM (significant point) or (name of DME station);	REPORT GNSS DISTANCE FROM ZANJAN
	... to report present position	(distance) MILES (GNSS or DME) FROM (name of DME station) (or significant point)*	REPORT DME DISTANCE FROM ZANJAN DME
1.1.10	AERODROME INFORMATION <i>Note. This information is provided for runway thirds or the full runway, as applicable.</i>	[(location)] RUNWAY (number) SURFACE CONDITION [CODE (three-digit number)] followed as necessary by: 1. ISSUED AT (date and time UTC); 2. DRY, or WET ICE, or WATER ON TOP OF COMPACTED SNOW, or DRY SNOW, or DRY SNOW ON TOP OF ICE, or WET SNOW ON TOP OF ICE, or ICE, or SLUSH, or STANDING WATER, or COMPACTED	

		SNOW, or WET SNOW, or DRY SNOW ON TOP OF COMPACTED SNOW, or WET SNOW ON TOP OF COMPACTED SNOW, or WET, or FROST; 3. DEPTH ((depth of deposit) MILLIMETRES or NOT REPORTED); 4. COVERAGE ((number) PER CENT or NOT REPORTED); 5. ESTIMATED SURFACE FRICTION (GOOD, or GOOD TO MEDIUM, or MEDIUM, or MEDIUM TO POOR, or POOR, or LESS THAN POOR); 6. AVAILABLE WIDTH (number) METRES; 7. LENGTH REDUCED TO (number) METRES; 8. DRIFTING SNOW; 9. LOOSE SAND; 10. CHEMICALLY TREATED; 11. SNOWBANK (number) METRES [LEFT, or RIGHT or LEFT AND RIGHT] [OF or FROM] CENTRELINE; 12. TAXIWAY (identification of taxiway) SNOWBANK (number) METRES [LEFT, or RIGHT or LEFT AND RIGHT] [OF or FROM] CENTRELINE; 13. ADJACENT SNOWBANKS; 14. TAXIWAY (identification of taxiway) POOR; 15. APRON (identification of apron) POOR; 16. Plain language remarks	
		[(location)] RUNWAY SURFACE CONDITION RUNWAY (number) NOT CURRENT;	
		LANDING SURFACE (condition);	
		CAUTION CONSTRUCTION WORK (location);	CAUTION CONSTRUCTION WORK NEAR TWY ALPHA
		CAUTION (specify reasons) RIGHT (or LEFT), (or BOTH SIDES) OF RUNWAY [number];	CAUTION CONSTRUCTION WORK RIGHT SIDES OF RUNWAY 27
		CAUTION WORK IN PROGRESS (or OBSTRUCTION) (position and any necessary advice);	

		BRAKING ACTION REPORTED BY <i>(aircraft type)</i> AT <i>(time)</i> GOOD (or GOOD TO MEDIUM, or MEDIUM, or MEDIUM TO POOR, or POOR);	BRAKING ACTION REPORTED BY MD82 AT 0946 GOOD TO MEDIUM
		TAXIWAY <i>(identification of taxiway)</i> WET [or STANDING WATER, or SNOW REMOVED <i>(length and width as applicable)</i> , or CHEMICALLY TREATED, or COVERED WITH PATCHES OF DRY SNOW (or WET SNOW, or COMPACTED SNOW, or SLUSH, or FROZEN SLUSH, or ICE, or WET ICE, or ICE UNDERNEATH, or ICE AND SNOW, or SNOWDRIFTS, or FROZEN RUTS AND RIDGES or LOOSE SAND)];	
		TOWER OBSERVES <i>(weather information)</i> ;	TOWER OBSERVES SNOW
		PILOT REPORTS <i>(weather information)</i> .	PILOT REPORTS SNOW
1.1.11	OPERATIONAL STATUS OF VISUAL AND NON-VISUAL AIDS	<i>(specify visual or non-visual aid)</i> RUNWAY <i>(number)</i> <i>(description of deficiency)</i> ;	
		<i>(type)</i> LIGHTING <i>(unserviceability)</i> ;	
		GBAS/SBAS/ILS CATEGORY <i>(category)</i> <i>(serviceability state)</i> ;	
		TAXIWAY LIGHTING <i>(description of deficiency)</i> ;	
		<i>(type of visual approach slope indicator)</i> RUNWAY <i>(number)</i> <i>(description of deficiency)</i> .	
1.1.12	REDUCED VERTICAL SEPARATION MINIMUM (RVSM) OPERATIONS	CONFIRM RVSM APPROVED	
	... to ascertain RVSM approval status of an aircraft		
	... to report RVSM approved status	AFFIRM RVSM*	
	... to report RVSM non-approved status followed by supplementary information	NEGATIVE RVSM <i>[(supplementary information, e.g. State aircraft)]*</i>	
	... to deny ATC clearance into RVSM airspace	UNABLE ISSUE CLEARANCE INTO RVSM AIRSPACE, MAINTAIN [or DESCEND TO, or CLIMB TO] <i>(level)</i> ;	

	... to report when severe turbulence affects the capability of an aircraft to maintain height-keeping requirements for RVSM	UNABLE RVSM DUE TURBULENCE*	
	... to report that the equipment of an aircraft has degraded below minimum aviation system performance standards	UNABLE RVSM DUE EQUIPMENT*	
	...to request an aircraft to provide information as soon as RVSM-approved status has been regained or the pilot is ready to resume RVSM operations	REPORT WHEN ABLE TO RESUME RVSM	
	... to request confirmation that an aircraft has regained RVSM-approved status or a pilot is ready to resume RVSM operations	CONFIRM ABLE TO RESUME RVSM;	
	... to report ability to resume RVSM operations after an equipment or weather-related contingency	READY TO RESUME RVSM*	
1.1.13	GNSS SERVICE STATUS	GNSS REPORTED UNRELIABLE (or GNSS MAY NOT BE AVAILABLE [DUE TO INTERFERENCE]) IN THE VICINITY OF (location) (radius) [BETWEEN (levels)];	
		GNSS REPORTED UNRELIABLE (or GNSS MAY NOT BE AVAILABLE [DUE TO INTERFERENCE]) IN THE AREA OF (description) (or IN (name) FIR) [BETWEEN (levels)];	
		BASIC GNSS (or SBAS, or GBAS) UNAVAILABLE FOR (specify operation) [FROM (time) TO (time) (or UNTIL FURTHER NOTICE)];	
		BASIC GNSS UNAVAILABLE [DUE TO (reason, e.g. LOSS OF RAIM or RAIM ALERT)] *	
		GBAS (or SBAS) UNAVAILABLE*	
		CONFIRM GNSS NAVIGATION	
		AFFIRM GNSS NAVIGATION*	
1.1.14	DEGRADATION OF AIRCRAFT NAVIGATION PERFORMANCE	UNABLE RNP (specify type) (or RNAV) [DUE TO (reason, e.g.	

		LOSS OF RAIM or RAIM ALERT)].	
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‘*’ denotes pilot transmission.

1.2. AREA CONTROL SERVICE PHRASEOLOGIES

Row	Circumstances	Phraseologies	Example
1.2.1	ISSUANCE OF A CLEARANCE	(name of unit) CLEARS (aircraft call sign);	Tehran ACC CLEARS IRA123
		(aircraft call sign) CLEARED TO	IRA123 CLEARED TO;
		RECLEARED (amended clearance details) [REST OF CLEARANCE UNCHANGED];	RECLEARED VIA UL124 TO ZANJAN REST OF CLEARANCE UNCHANGED
		RECLEARED (amended route portion) TO (significant point of original route) [REST OF CLEARANCE UNCHANGED];	
		ENTER CONTROLLED AIRSPACE (or CONTROL ZONE) [VIA (significant point or route)] AT (level) [AT (time)];	ENTER CONTROL ZONE VIA SESMA AT FL150
		LEAVE CONTROLLED AIRSPACE (or CONTROL ZONE) [VIA (significant point or route)] AT (level) (or CLIMBING, or DESCENDING);	LEAVE CONTROLLED AIRSPACE AT FL170 DESCENDING
		JOIN (specify) AT (significant point) AT (level) [AT (time)].	JOIN P574 AT PEKAM
1.2.2	INDICATION OF ROUTE AND CLEARANCE LIMIT	FROM (location) TO (location);	FROM MEHRABAD TO RASHT
		TO (location), DIRECT;	TO MELMI DIRECT
		TO (location), VIA (route and/or significant points);	TO MELMI VIA W10
		TO (location), FLIGHT PLANNED ROUTE;	TO CHABAHAH FLIGHT PLANNED ROUTE
		TO (location), VIA (distance) DME ARC (direction) OF (name of DME station);	
		(route) NOT AVAILABLE DUE (reason) ALTERNATIVE[S] IS/ARE (routes) ADVISE	T215 NOT AVAILABLE DUE GUN FIRING ALTERNATIVE IS P574 ADVISE
1.2.3	MAINTENANCE OF SPECIFIED LEVELS Note. The term “MAINTAIN” is not to be used in lieu of “DESCEND” or “CLIMB” when	MAINTAIN (level) [TO (significant point)];	MAINTAIN FL200 TO LVA
		MAINTAIN (level) UNTIL PASSING (significant point);	MAINTAIN FL250 UNTIL PASSING ALMOB
		MAINTAIN (level) UNTIL (minutes) AFTER PASSING (significant point);	MAINTAIN FL210 UNTIL 5minutes AFTER PASSING BJD
		MAINTAIN (level) UNTIL (time);	MAINTAIN FL130 UNTIL 46

	<i>instructing an aircraft to change level.</i>	MAINTAIN (level) UNTIL ADVISED BY (name of unit);	MAINTAIN FL200 UNTIL ADVISED BY Tehran ACC
		MAINTAIN (level) UNTIL FURTHER ADVISED;	MAINTAIN FL200 UNTIL FURTHER ADVISED;
		MAINTAIN (level) WHILE IN CONTROLLED AIRSPACE;	MAINTAIN FL180 WHILE IN CONTROLLED AIRSPACE;
1.2.4	SPECIFICATION OF CRUISING LEVELS	CROSS (significant point) AT (or ABOVE, or BELOW) (level);	CROSS BOXAM ABOVE, FL200
		CROSS (significant point) AT (time) OR LATER (or BEFORE) AT (level);	CROSS RARTA AT 46 OR LATER AT FL160
		CRUISE CLIMB BETWEEN (levels) (or ABOVE (level));	
		CROSS (distance) MILES, (GNSS or DME) [(direction)] OF (name of DME station) OR (distance) [(direction)] OF (significant point) AT (or ABOVE or BELOW) (level).	CROSS 30 MILES DME NORTH OF YSJ BELOW FL160
1.2.5	EMERGENCY DESCENT	EMERGENCY DESCENT (intentions)*	
		ATTENTION ALL AIRCRAFT IN THE VICINITY OF [or AT] (significant point or location) EMERGENCY DESCENT IN PROGRESS FROM (level) (followed as necessary by specific instructions, clearances, traffic information, etc.).	ATTENTION ALL AIRCRAFT IN THE VICINITY OF SYZ EMERGENCY DESCENT IN PROGRESS FROM FL250
1.2.6	IF CLEARANCE CANNOT BE ISSUED IMMEDIATELY UPON REQUEST	EXPECT CLEARANCE (or type of clearance) AT (time).	EXPECT CLEARANCE AT 46
1.2.7	WHEN CLEARANCE FOR DEVIATION CANNOT BE ISSUED	UNABLE, TRAFFIC (direction) BOUND (type of aircraft) (level) ESTIMATED (or OVER) (significant point) AT (time) CALL SIGN (call sign) ADVISE INTENTIONS.	UNABLE, TRAFFIC EAST BOUND MD88 FL310 OVER TBS AT 46 CALL SIGN IRM456 ADVISE INTENTIONS.
1.2.8	SEPARATION INSTRUCTIONS	CROSS (significant point) AT (time) [OR LATER (or OR BEFORE)];	CROSS SBZ AT 46 OR LATER
		ADVISE IF ABLE TO CROSS (significant point) AT (time or level);	ADVISE IF ABLE TO CROSS MAH AT FL130
		MAINTAIN MACH (number) [OR GREATER (or OR LESS)] [UNTIL (significant point)];	MAINTAIN MACH 0.81 OR LESS UNTIL BONAM
		DO NOT EXCEED MACH (number).	DO NOT EXCEED MACH 0.79

		CONFIRM ESTABLISHED ON THE TRACK BETWEEN (<i>significant point</i>) AND (<i>significant point</i>) [WITH ZERO OFFSET];	CONFIRM ESTABLISHED ON THE TRACK BETWEEN <i>GESIP</i> AND <i>DAPOG</i> WITH ZERO OFFSET
		ESTABLISHED ON THE TRACK BETWEEN (<i>significant point</i>) AND (<i>significant point</i>) [WITH ZERO OFFSET];*	MAINTAIN TRACK BETWEEN <i>ZAJ</i> AND <i>DASIS</i> REPORT ESTABLISHED ON THE TRACK
		MAINTAIN TRACK BETWEEN (<i>significant point</i>) AND (<i>significant point</i>). REPORT ESTABLISHED ON THE TRACK;	
		ESTABLISHED ON THE TRACK*	
		CONFIRM ZERO OFFSET	
		AFFIRM ZERO OFFSET.	
1.2.9	INSTRUCTIONS ASSOCIATED WITH FLYING A TRACK (OFFSET), PARALLEL TO THE CLEARED ROUTE	ADVISE IF ABLE TO PROCEED PARALLEL OFFSET;	
		PROCEED OFFSET (<i>distance</i>) RIGHT/LEFT OF (<i>route</i>) (<i>track</i>) [CENTRE LINE] [AT (<i>significant point</i> or <i>time</i>)] [UNTIL (<i>significant point</i> or <i>time</i>)];	PROCEED OFFSET 5 MILES RIGHT/LEFT OF <i>UT36</i> CENTRE LINE AT <i>ENEDA</i>
		CANCEL OFFSET (<i>instructions to rejoin cleared flight route or other information</i>).	CANCEL OFFSET <i>rejoin UT36</i> AT <i>DEPSU</i>

“*” denotes pilot transmission.

1.3. APPROACH CONTROL SERVICE PHRASEOLOGIES

Row	Circumstances	Phraseologies	Example
1.3.1	DEPARTURE INSTRUCTIONS	[AFTER DEPARTURE] TURN RIGHT (<i>or</i> LEFT) HEADING (<i>three digits</i>) (<i>or</i> CONTINUE RUNWAY HEADING) (<i>or</i> TRACK EXTENDED CENTRE LINE) TO (<i>level or significant point</i>) [(<i>other instructions as required</i>)];	AFTER DEPARTURE TURN RIGHT HEADING 270 TO <i>DHN</i>
		AFTER REACHING (<i>or</i> PASSING) (<i>level or significant point</i>) (<i>instructions</i>);	AFTER REACHING 120 TURN LEFT CLIMB TO FL 280
		TURN RIGHT (<i>or</i> LEFT) HEADING (<i>three digits</i>) TO (<i>level</i>) [TO INTERCEPT (<i>track, route, airway, etc.</i>)];	TURN RIGHT HEADING 030 TO FL 160 TO INTERCEPT <i>W130</i>
		(<i>standard departure name and number</i>) DEPARTURE;	<i>KUGVO 1A</i> DEPARTURE;

		TRACK (<i>three digits</i>) DEGREES [MAGNETIC (or TRUE)] TO (or FROM) (<i>significant point</i>) UNTIL (<i>time, or REACHING (fix or significant point or level)</i>) [BEFORE PROCEEDING ON COURSE];	TRACK 090 DEGREES MAGNETIC TO PEKAM UNTIL REACHING TO FL230 BEFORE PROCEEDING ON COURSE
		CLEARED (<i>designation</i>) DEPARTURE	CLEARED SESMA2A DEPARTURE
	...clearance to proceed direct with advance notice of a future instruction to rejoin the SID	CLEARED DIRECT (<i>waypoint</i>), CLIMB TO (<i>level</i>), EXPECT TO REJOIN SID [(<i>SID designator</i>)] [AT (<i>waypoint</i>)], then REJOIN SID [(<i>SID designator</i>)] [AT (<i>waypoint</i>)];	CLEARED TO SAV VIA SAV2B ARRIVAL;
		CLEARED DIRECT (<i>waypoint</i>), CLIMB TO (<i>level</i>), then REJOIN SID (<i>SID designator</i>) AT (<i>waypoint</i>).	
1.3.2	APPROACH INSTRUCTIONS ...clearance to proceed direct with advance notice of a future instruction to rejoin the STAR	CLEARED (<i>designation</i>) ARRIVAL;	CLEARED LABOT2B ARRIVAL
		CLEARED TO (<i>clearance limit</i>) (<i>designation</i>);	CLEARED TO VR VIA SAV2B ARRIVAL;
		CLEARED (or PROCEED) (<i>details of route to be followed</i>);	CLEARED VIA W32 TO OVHD
		CLEARED DIRECT (<i>waypoint</i>), DESCEND TO (<i>level</i>), EXPECT TO REJOIN STAR [(<i>STAR designator</i>)] AT (<i>waypoint</i>), then REJOIN STAR [(<i>STAR designator</i>)] [AT (<i>waypoint</i>)];	
		CLEARED DIRECT (<i>waypoint</i>), DESCEND TO (<i>level</i>), then REJOIN STAR (<i>STAR designator</i>) AT (<i>waypoint</i>);	
		CLEARED (<i>type of approach</i>) APPROACH [RUNWAY (<i>number</i>)];	CLEARED VOR APPROACH RUNWAY 35;
		CLEARED (<i>type of approach</i>) RUNWAY (<i>number</i>) FOLLOWED BY CIRCLING TO RUNWAY (<i>number</i>);	CLEARED NDB APPROACH RUNWAY 30 FOLLOWED BY CIRCLING TO RUNWAY 12;
		CLEARED APPROACH [RUNWAY (<i>number</i>)];	CLEARED APPROACH RUNWAY 31L
		COMMENCE APPROACH AT (<i>time</i>);	COMMENCE APPROACH AT 10:05
		REQUEST STRAIGHT-IN [(<i>type of approach</i>)] APPROACH [RUNWAY (<i>number</i>)]*	

		CLEARED STRAIGHT-IN [(type of approach)] APPROACH [RUNWAY (number)];	
		REPORT VISUAL;	
		REPORT RUNWAY [LIGHTS] IN SIGHT;	
	... when a pilot requests a visual approach	REQUEST VISUAL APPROACH*	
		CLEARED VISUAL APPROACH RUNWAY (number);	
	... to request if a pilot is able to accept a visual approach	ADVISE ABLE TO ACCEPT VISUAL APPROACH RUNWAY (number);	
	... in case of successive visual approaches when the pilot of a succeeding aircraft has reported having the preceding aircraft in sight	CLEARED VISUAL APPROACH RUNWAY (number), MAINTAIN OWN SEPARATION FROM PRECEDING (aircraft type and wake turbulence category as appropriate) [CAUTION WAKE TURBULENCE];	CLEARED VISUAL APPROACH RUNWAY 32, MAINTAIN OWN SEPARATION FROM PRECEDING A30B HEAVY CAUTION WAKE TURBULENCE
		REPORT (significant point); [OUTBOUND, or INBOUND];	
		REPORT COMMENCING PROCEDURE TURN;	
		REQUEST VMC DESCENT*	
		MAINTAIN OWN SEPARATION	
		MAINTAIN VMC;	
		ARE YOU FAMILIAR WITH (name) APPROACH PROCEDURE	
		REQUEST (type of approach) APPROACH [RUNWAY (number)] *	
		REQUEST (RNAV plain-language designator) *	
		CLEARED (RNAV plain-language designator)	
1.3.3	HOLDING CLEARANCES ... visual	HOLD VISUAL [OVER] (position), (or BETWEEN (two prominent landmarks));	HOLD VISUAL OVER POINT "H"
	... published holding procedure over a facility or fix	CLEARED (or PROCEED) TO (significant point, name of facility or fix) [MAINTAIN (or CLIMB or DESCEND TO) (level)] HOLD [(direction)] AS PUBLISHED EXPECT APPROACH CLEARANCE (or FURTHER CLEARANCE) AT (time);	CLEARED TO BUZ [MAINTAIN FL170 HOLD AS PUBLISHED EXPECT APPROACH CLEARANCE AT 03:45
		REQUEST HOLDING INSTRUCTIONS*	

	... when a detailed holding clearance is required	CLEARED (or PROCEED) TO (significant point, name of facility or fix) [MAINTAIN (or CLIMB or DESCEND TO) (level)] HOLD [(direction)] [(specified) RADIAL, COURSE, INBOUND TRACK (three digits) DEGREES] [RIGHT (or LEFT) HAND PATTERN] [OUTBOUND TIME (number) MINUTES] EXPECT APPROACH CLEARANCE (or FURTHER CLEARANCE) AT (time) (additional instructions, if necessary);	
		CLEARED TO THE (three digits) RADIAL OF THE (name) VOR AT (distance) DME FIX [MAINTAIN (or CLIMB or DESCEND TO) (level)] HOLD [(direction)] [RIGHT (or LEFT) HAND PATTERN] [OUTBOUND TIME (number) MINUTES] EXPECT APPROACH CLEARANCE (or FURTHER CLEARANCE) AT (time) (additional instructions, if necessary);	
1.3.4	EXPECTED APPROACH TIME	NO DELAY EXPECTED;	
		EXPECTED APPROACH TIME (time);	
		REVISED EXPECTED APPROACH TIME (time);	
		DELAY NOT DETERMINED (reasons).	DELAY NOT DETERMINED DUE TO EMERGENCY FLIGHT.
1.3.5	VISUAL DEPARTURE	REQUEST VISUAL DEPARTURE [DIRECT] TO/UNTIL (navaid, waypoint, altitude) * VISUAL DEPARTURE RUNWAY (number) APPROVED, TURN LEFT/RIGHT [DIRECT] TO (navaid, heading, waypoint) [MAINTAIN VISUAL REFERENCE UNTIL (altitude)] VISUAL DEPARTURE TO/UNTIL (navaid, waypoint/altitude) *	
1.3.6	SPECIAL VFR	(CALL-SIGN) CLEARED SPECIAL VFR UPTO CTR	

	a) When the destination is located outside the control zone	BOUNDARY TOWARD (<i>DESTINATION</i>) VIA [<i>SECTOR</i>] NOT ABOVE (<i>LEVEL</i>) INSIGHT OF SURFACE.	
	b) when the destination is located within the control zone	(<i>CALL-SIGN</i>) CLEARED SPECIAL VFR WITHIN CONTROL ZONE TO (<i>DESTINATION</i>) VIA [<i>SECTOR</i>] NOT ABOVE (<i>LEVEL</i>) INSIGHT OF SURFACE.	

“*” denotes pilot transmission.

1.4. PHRASEOLOGIES FOR USE ON AND IN THE VICINITY OF THE AERODROME

Row	Circumstances	Phraseologies	Example
1.4.1	IDENTIFICATION OF AIRCRAFT	SHOW LANDING LIGHTS	
1.4.2	ACKNOWLEDGEMENT BY VISUAL MEANS	ACKNOWLEDGE BY MOVING AILERONS (or RUDDER);	
		ACKNOWLEDGE BY ROCKING WINGS;	
		ACKNOWLEDGE BY FLASHING LANDING LIGHTS.	
1.4.3	STARTING PROCEDURES	[aircraft location] REQUEST START UP*	STAND NO:102 REQUEST START UP;
	... to request permission to start engines	[aircraft location] REQUEST START UP, INFORMATION (ATIS identification) *	STAND NO:102 REQUEST START UP, INFORMATION D
	... ATC replies	START UP APPROVED;	
		START UP AT (time);	START UP AT 46
		EXPECT START UP AT (time);	EXPECT START UP AT 46
		START UP AT OWN DISCRETION;	
		EXPECT DEPARTURE (time) START UP AT OWN DISCRETION.	EXPECT DEPARTURE 46 START UP AT OWN DISCRETION.
1.4.4	PUSHBACK PROCEDURES	[aircraft location] REQUEST PUSHBACK*	STAND NO:102 REQUEST PUSHBACK
	<i>Note. When local procedures so prescribe, authorization for pushback should be obtained from the control tower.</i>	PUSHBACK APPROVED	
		STAND BY;	
		PUSHBACK AT OWN DISCRETION;	
	... aircraft/ATC	EXPECT (number) MINUTES DELAY DUE (reason).	EXPECT 5 MINUTES DELAY DUE TRAFFIC
1.4.5	TOWING PROCEDURES	REQUEST TOW [company name] (aircraft type) FROM (location) TO (location);	REQUEST TOW KARUN F100 FROM EAST RAMP TO STAND NO:102
	... ATC response	TOW APPROVED VIA (specific routing to be followed);	TOW APPROVED VIA TAXIWAY A
		HOLD POSITION;	

		STAND BY	
1.4.6	TO REQUEST TIME, CHECK AND/OR AERODROME DATA FOR DEPARTURE	REQUEST TIME CHECK*	
		TIME (time);	TIME 46, TIME 1246,
	... when no ATIS broadcast is available	REQUEST DEPARTURE INFORMATION*	
		RUNWAY (number), WIND (direction and speed) (units) QNH (or QFE) (number) [(units)] TEMPERATURE [MINUS] (number), [VISIBILITY (distance) (units) (or RUNWAY VISUAL RANGE (or RVR) (distance) (units)))] [TIME (time)].	RUNWAY 27, WIND 150degrees 08knot QNH 996 Hectopascals TEMPERATURE MINUS 02, VISIBILITY 6 Kilometers
1.4.7	TAXI PROCEDURES ... for departure	[aircraft type] [wake turbulence category if "super" or "heavy"] [aircraft location] REQUEST TAXI [intentions];	Airbus320 Stand102 REQUEST TAXI
		[aircraft type] [wake turbulence category if "super" or "heavy"] [aircraft location] (flight rules) TO (aerodrome of destination) REQUEST TAXI [intentions]*	Ilyushin76 heavy yashi ramp VFR TO VR REQUEST TAXI
		TAXI TO HOLDING POINT [number] [RUNWAY (number)] [HOLD SHORT OF RUNWAY (number) (or CROSS RUNWAY (number))] [TIME (time)];	
	... where detailed taxi instructions are required	[aircraft type] [wake turbulence category if "super" or "heavy"] REQUEST DETAILED TAXI INSTRUCTIONS*	Airbus 30B heavy REQUEST DETAILED TAXI INSTRUCTIONS
		TAXI TO HOLDING POINT [number] [RUNWAY (number)] VIA (specific route to be followed) [TIME (time)] [HOLD SHORT OF RUNWAY (number) (or CROSS RUNWAY (number))];	TAXI TO HOLDING POINT RUNWAY 27L VIA TAXI WAY A CROSS RUNWAY 27R
	... where aerodrome information is not available from an alternative source such as ATIS	TAXI TO HOLDING POINT [number] (followed by aerodrome information as applicable) [TIME (time)];	
		TAKE (or TURN) FIRST (or SECOND) LEFT (or RIGHT);	
		TAXI VIA (identification of taxiway);	TAXI VIA A
		TAXI VIA RUNWAY (number);	TAXI VIA RUNWAY 27

		TAXI TO TERMINAL (or other location, e.g. GENERAL AVIATION AREA) [STAND (number)];	
	... for helicopter operations	REQUEST AIR-TAXIING FROM (or VIA) TO (location or routing as appropriate) *	
		AIR-TAXI TO (or VIA) (location or routing as appropriate) [CAUTION (dust, blowing snow, loose debris, taxiing light aircraft, personnel, etc.)];	AIR-TAXI TO EAST RAMP CAUTION taxiing light aircraft
		AIR TAXI VIA (direct, as requested, or specified route) TO (location, heliport, operating or movement area, active or inactive runway). AVOID (aircraft or vehicles or personnel);	AIR TAXI VIA direct TO heliport AVOID vehicles and personnel
	... after landing	REQUEST BACKTRACK*	
		BACKTRACK APPROVED	
		BACKTRACK RUNWAY (number);	
	... general	[(aircraft location)] REQUEST TAXI TO (destination on aerodrome) *	
		TAXI STRAIGHT AHEAD	
		TAXI WITH CAUTION	
		GIVE WAY TO (description and position of other aircraft);	GIVE WAY TO F100 on your left
		GIVING WAY TO (traffic)*	
		TRAFFIC (or type of aircraft) IN SIGHT*	TRAFFIC F100 IN SIGHT;
		TAXI INTO HOLDING BAY	
		FOLLOW (description of other aircraft or vehicle);	FOLLOW MD88 Ahead
		VACATE RUNWAY	
		RUNWAY VACATED*	
		EXPEDITE TAXI [(reason)];	
		EXPEDITING;	
		[CAUTION] TAXI SLOWER [reason];	
		SLOWING DOWN*	

1.4.8	HOLDING Requires specific acknowledgement from the pilot. Denotes pilot transmission. The procedure words ROGER and WILCO are insufficient acknowledgement of the instructions HOLD, HOLD POSITION and HOLD SHORT OF (position). In each case the acknowledgement shall be by the phraseology HOLDING or HOLDING SHORT, as appropriate.	HOLD (<i>direction</i>) OF (<i>position, runway number, etc.</i>);	
		HOLD POSITION	
		HOLD (<i>distance</i>) FROM (<i>position</i>);	
		HOLD SHORT OF (<i>position</i>);	
		HOLDING;	
		HOLDING SHORT	
1.4.9	TO CROSS A RUNWAY	REQUEST CROSS RUNWAY (<i>number</i>)* <i>Note. If the control tower is unable to see the crossing aircraft (e.g. night, low visibility), the instruction should always be accompanied by a request to report when the aircraft has vacated the runway.</i>	
		CROSS RUNWAY (<i>number</i>) [REPORT VACATED];	
		EXPEDITE CROSSING RUNWAY (<i>number</i>) TRAFFIC (<i>aircraft type</i>) (<i>distance</i>) KILOMETRES (or MILES) FINAL	EXPEDITE CROSSING RUNWAY 27 TRAFFIC RJ1H 6 MILES FINAL
		TAXI TO HOLDING POINT [<i>number</i>] [RUNWAY (<i>number</i>)] VIA (<i>specific route to be followed</i>), [HOLD SHORT OF RUNWAY (<i>number</i>)] or [CROSS RUNWAY (<i>number</i>)];	TAXI TO HOLDING POINT RUNWAY 27L VIA TAXI WAY A and C HOLD SHORT OF RUNWAY 27R
	<i>Note. The pilot will, when requested, report "RUNWAY VACATED" when the entire aircraft is beyond the relevant runway-holding position.</i>	RUNWAY VACATED*	
1.4.10	PREPARATION FOR TAKE-OFF	UNABLE TO ISSUE (<i>designator</i>) DEPARTURE (<i>reasons</i>);	
		REPORT WHEN READY [FOR DEPARTURE];	
		ARE YOU READY [FOR DEPARTURE]?	

		ARE YOU READY FOR IMMEDIATE DEPARTURE?	
		READY;	
	... clearance to enter runway and await take-off clearance	LINE UP [AND WAIT];	
		LINE UP RUNWAY (<i>number</i>);	
		LINE UP. BE READY FOR IMMEDIATE DEPARTURE	
	... confirmation or otherwise of the read-back of conditional clearance	[THAT IS] CORRECT (<i>or</i> NEGATIVE) [I SAY AGAIN] ... (<i>as appropriate</i>).	
1.4.11	TAKE-OFF CLEARANCE	RUNWAY (<i>number</i>) CLEARED FOR TAKE-OFF [REPORT AIRBORNE];	RUNWAY 27 CLEARED FOR TAKE-OFF
	... when reduced runway separation is used	(<i>traffic information</i>) RUNWAY (<i>number</i>) CLEARED FOR TAKE-OFF;	<i>traffic</i> Piper28 Right Downwind RUNWAY 27 CLEARED FOR TAKE-OFF
	... when take-off clearance has not been complied with	TAKE OFF IMMEDIATELY OR VACATE RUNWAY [<i>instructions</i>];	TAKE OFF IMMEDIATELY OR VACATE RUNWAY VIA TWY D
		TAKE OFF IMMEDIATELY OR HOLD SHORT OF RUNWAY;	
	... to cancel a take-off clearance	HOLD POSITION, CANCEL TAKE-OFF I SAY AGAIN CANCEL TAKE-OFF (<i>reasons</i>);	HOLD POSITION, CANCEL TAKE-OFF I SAY AGAIN CANCEL TAKE-OFF UNAUTHORIZED CAR ON THE RUNWAY
		HOLDING*	
	... to stop a take-off after an aircraft has commenced take-off Roll pilot transmission. HOLDING and STOPPING are the procedural responses to respectively	STOP IMMEDIATELY [(<i>repeat aircraft call sign</i>) STOP IMMEDIATELY];	
		STOPPING*	
	... for helicopter operations	CLEARED FOR TAKE-OFF [FROM (<i>location</i>)] (<i>present position, taxiway, final approach and take-off area, runway and number</i>);	
		REQUEST DEPARTURE INSTRUCTIONS*	

		AFTER DEPARTURE TURN RIGHT (or LEFT, or CLIMB) (instructions as appropriate).	
1.4.12	TURN OR CLIMB INSTRUCTIONS AFTER TAKE-OFF	REQUEST RIGHT (or LEFT) TURN*	
		RIGHT (or LEFT) TURN APPROVED	
		WILL ADVISE LATER FOR RIGHT (or LEFT) TURN	
	... to request airborne time	REPORT AIRBORNE	
		AIRBORNE (time);	
		AFTER PASSING (level) (instructions);	AFTER PASSING FL110 Turn Left Direct To SAV
	... heading to be followed	CONTINUE RUNWAY HEADING (instructions);	
	... when a specific track is to be followed	TRACK EXTENDED CENTRE LINE (instructions);	
		CLIMB STRAIGHT AHEAD (instructions).	
1.4.13	ENTERING AN AERODROME TRAFFIC CIRCUIT	[aircraft type] (position) (level) FOR LANDING*	
		JOIN [(direction of circuit)] (position in circuit) (runway number) [SURFACE] WIND (direction and speed) (units) [TEMPERATURE [MINUS] (number)] QNH (or QFE) (number) [(units)] [TRAFFIC (detail)];	
		MAKE STRAIGHT-IN APPROACH, RUNWAY (number) [SURFACE] WIND (direction and speed) (units) [TEMPERATURE [MINUS] (number)] QNH (or QFE) (number) [(units)] [TRAFFIC (detail)];	
	... when ATIS information is available	(aircraft type) (position) (level) INFORMATION (ATIS identification) FOR LANDING*	Piper28 15DME 7000 Feet FOR LANDING
		JOIN (position in circuit) [RUNWAY (number)] QNH (or QFE) (number) [(units)] [TRAFFIC (detail)].	JOIN left downwind runway 27 SURFACE WIND 220 10knots TEMPERATURE 27 QNH 1012 TRAFFIC Cesena172R Left Base Runway 27
1.4.14	IN THE CIRCUIT	(position in circuit, e.g. DOWNWIND/FINAL) *	

	APPROACH INSTRUCTIONS	NUMBER ... FOLLOW (<i>aircraft type and position</i>) [<i>additional instructions if required</i>].	NUMBER 3 FOLLOW <i>Falcon20 Extend Downwind</i> .
1.4.15	<i>Note. The report "LONG FINAL" is made when aircraft turn on to final approach at a distance greater than 4 NM from touchdown or when an aircraft on a straight-in approach is 8 NM from touchdown. In both cases a report "FINAL" is required at 4 NM from touchdown.</i>	MAKE SHORT APPROACH	
		MAKE LONG APPROACH (or EXTEND DOWNWIND);	
		REPORT BASE (or FINAL, or LONG FINAL);	
		CONTINUE APPROACH [PREPARE FOR POSSIBLE GO AROUND].	
1.4.16	LANDING CLEARANCE	RUNWAY (<i>number</i>) CLEARED TO LAND;	
	... when reduced runway separation is used	(<i>traffic information</i>) RUNWAY (<i>number</i>) CLEARED TO LAND;	
	... special operations	[RUNWAY (<i>number</i>)] CLEARED TOUCH AND GO;	
		MAKE FULL STOP;	
	... to make an approach along, or parallel to a runway, descending to an agreed minimum level	REQUEST LOW APPROACH (<i>reasons</i>)*	
		CLEARED LOW APPROACH [RUNWAY (<i>number</i>)] [(<i>altitude restriction if required</i>) (<i>go around instructions</i>)];	
	... to fly past the control tower or other observation point for the purpose of visual inspection by persons on the ground	REQUEST LOW PASS (<i>reasons</i>)*	
		CLEARED LOW PASS [RUNWAY (<i>number</i>)] [(<i>altitude restriction if required</i>) (<i>go around instructions</i>)];	
	... for helicopter operations	REQUEST STRAIGHT-IN (or CIRCLING APPROACH, LEFT (or RIGHT) TURN TO (<i>location</i>)) *	
		MAKE STRAIGHT-IN (or CIRCLING APPROACH, LEFT (or RIGHT) TURN TO (<i>location, runway, taxiway, final approach and take-off area</i>)) [ARRIVAL (or ARRIVAL ROUTE) (<i>number, name, or code</i>)]. [HOLD SHORT OF (<i>active runway, extended runway centre line, other</i>)]. [REMAIN (<i>direction or distance</i>) FROM (<i>runway, runway centre line, other helicopter or aircraft</i>)]. [CAUTION (<i>power</i>	CIRCLING APPROACH LEFT TURN CAUTION <i>power lines</i> CLEARED TO LAND.

		<i>lines, unlighted obstructions, wake turbulence, etc.)).</i> CLEARED TO LAND.	
1.4.17	DELAYING AIRCRAFT	CIRCLE THE AERODROME;	
		ORBIT (RIGHT, <i>or</i> LEFT) [FROM PRESENT POSITION];	
		MAKE ANOTHER CIRCUIT.	
1.4.18	MISSED APPROACH	GO AROUND;	
		GOING AROUND*	
1.4.19	INFORMATION TO AIRCRAFT	LANDING GEAR APPEARS DOWN;	
	... when pilot requested visual inspection of landing gear	RIGHT (<i>or</i> LEFT, <i>or</i> NOSE) WHEEL APPEARS UP (<i>or</i> DOWN);	
		WHEELS APPEAR UP;	
		RIGHT (<i>or</i> LEFT, <i>or</i> NOSE) WHEEL DOES NOT APPEAR UP (<i>or</i> DOWN);	
	... wake turbulence	CAUTION WAKE TURBULENCE [FROM ARRIVING (<i>or</i> DEPARTING) (<i>type of aircraft</i>)] [<i>additional information as required</i>];	
	... jet blast on apron or taxiway	CAUTION JET BLAST;	
	... propeller-driven aircraft slipstream	CAUTION SLIPSTREAM.	
1.4.20	RUNWAY VACATING AND COMMUNICATIONS AFTER LANDING	CONTACT GROUND (<i>frequency</i>);	
		WHEN VACATED CONTACT GROUND (<i>frequency</i>);	
		EXPEDITE VACATING;	
		YOUR STAND (<i>or</i> GATE) (<i>designation</i>);	
		TAKE (<i>or</i> TURN) FIRST (<i>or</i> SECOND, <i>or</i> CONVENIENT) LEFT (<i>or</i> RIGHT) AND CONTACT GROUND (<i>frequency</i>);	
	... for helicopter operations	AIR-TAXI TO HELICOPTER STAND (<i>or</i>) HELICOPTER PARKING POSITION (<i>area</i>);	
		AIR-TAXI TO (<i>or</i> VIA) (<i>location or routing as appropriate</i>) [CAUTION (<i>dust, blowing snow, loose debris,</i>	

		<i>taxiing light aircraft, personnel, etc.)];</i>	
		<i>AIR-TAXI VIA (direct, as requested, or specified route) TO (location, heliport, operating or movement area, active or inactive runway). AVOID (aircraft or vehicles or personnel).</i>	

‘**’ denotes pilot transmission.

1.5. COORDINATION BETWEEN ATS UNITS

Row	Circumstances	Phraseologies	Example
1.5.1	ESTIMATES AND REVISIONS	ESTIMATE <i>[direction of flight] (aircraft call sign) [SQUAWKING (SSR code)] (type) ESTIMATED (significant point) (time) (level) (or DESCENDING FROM (level) TO (level)) [SPEED (filed TAS)] (route) [REMARKS];</i>	ESTIMATE IRM051 SQUAWKING 3215 A30B ESTIMATED KAVOT 0643 FL280 UP574
	... sending unit	ESTIMATE <i>(significant point) ON (aircraft call sign);</i>	
	... receiving unit reply (if flight plan details are not available)	NO DETAILS;	
	... receiving unit reply (if flight plan details are available)	<i>(aircraft type) (destination);</i>	
	... sending unit reply	[SQUAWKING (SSR code)] [ESTIMATED] <i>(significant point) (time) AT (level);</i>	
	<i>Note. In the event that flight plan details are not available the receiving station shall reply to b) NO DETAILS and transmitting station shall pass full estimate</i>	ESTIMATE UNMANNED FREE BALLOON(S) <i>(identification and classification) ESTIMATED OVER (place) AT (time) REPORTED FLIGHT LEVEL(S) (figure or figures) [or FLIGHT LEVEL UNKNOWN] MOVING (direction) ESTIMATED GROUND SPEED (figure) (other pertinent information, if any);</i>	
		REVISION <i>(aircraft call sign) (details as necessary).</i>	
1.5.2	TRANSFER OF CONTROL	REQUEST RELEASE OF <i>(aircraft call sign);</i>	
		<i>(aircraft call sign) RELEASED [AT (time)] [conditions/restrictions];</i>	CPN037 SQUAWKING 4312 B747 FROM CHABAHAR RELEASED AT 0740 CLEARED TO AND

			ESTIMATING RADAL 0745 AT FL 280 CONTACT AT 0740
		IS (aircraft call sign) RELEASED [FOR CLIMB (or DESCENT)];	
		(aircraft call sign) NOT RELEASED [UNTIL (time or significant point)];	
		UNABLE (aircraft call sign) [TRAFFIC IS (details)].	
1.5.3	CHANGE OF CLEARANCE	MAY WE CHANGE CLEARANCE OF (aircraft call sign) TO (details of alteration proposed);	
		AGREED TO (alteration of clearance) OF (aircraft call sign);	
		UNABLE (aircraft call sign);	
		UNABLE (desired route, level, etc.) [FOR (aircraft call sign)] [DUE (reason)] (alternative clearance proposed).	
1.5.4	APPROVAL REQUEST	APPROVAL REQUEST (aircraft call sign) ESTIMATED DEPARTURE FROM (significant point) AT (time);	
		(aircraft call sign) REQUEST APPROVED [(restriction if any)];	
		(aircraft call sign) UNABLE (alternative instructions).	
1.5.5	INBOUND RELEASE	[INBOUND RELEASE] (aircraft call sign) [SQUAWKING (SSR code)] (type) FROM (departure point) RELEASED AT (significant point, or time, or level) CLEARED TO AND ESTIMATING (clearance limit) (time) AT (level) [EXPECTED APPROACH TIME or NO DELAY EXPECTED] CONTACT AT (time).	
1.5.6	HANDOVER	HANDOVER (aircraft call sign) [SQUAWKING (SSR code)] POSITION (aircraft position) (level).	HANDOVER IZG4041 POSITION BOXAM FL280
1.5.7	EXPEDITION OF CLEARANCE	EXPEDITE CLEARANCE (aircraft call sign) EXPECTED DEPARTURE FROM (place) AT (time);	EXPEDITE CLEARANCE TBZ5251 EXPECTED DEPARTURE FROM TABRIZ AT 2330
		EXPEDITE CLEARANCE (aircraft call sign) [ESTIMATED] OVER (place) AT (time) REQUESTS (level or route, etc.).	EXPEDITE CLEARANCE TBN6268 OVER

			ZANJAN AT 0750 REQUESTS FL310
1.5.8	REDUCED VERTICAL SEPARATION MINIMUM (RVSM) OPERATIONS ... to verbally supplement estimate messages of aircraft non-approved for RVSM or to verbally supplement an automated estimate message exchange that does not automatically transfer information from Item 18 of the flight plan followed by supplementary information, as appropriate	NEGATIVE RVSM [(supplementary information, e.g. State aircraft)];	
	... to communicate the cause of a contingency relating to an aircraft that is unable to conduct RVSM operations due to severe turbulence or other severe meteorological phenomena or equipment failure, as applicable	UNABLE RVSM DUE TURBULENCE (or EQUIPMENT, as applicable).	

“*” denotes pilot transmission.

1.6. GENERAL ATS SURVEILLANCE SERVICE PHRASEOLOGIES

Row	Circumstances	Phraseologies	Example
1.6.1	IDENTIFICATION OF AIRCRAFT	REPORT HEADING [AND FLIGHT LEVEL (or ALTITUDE)];	
		FOR IDENTIFICATION TURN LEFT (or RIGHT) HEADING (three digits);	
		TRANSMIT FOR IDENTIFICATION AND REPORT HEADING;	
		RADAR CONTACT [position];	
		IDENTIFIED [position];	
		NOT IDENTIFIED [reason], RESUME (or CONTINUE) OWN NAVIGATION].	
		CLIMB (or DESCEND) AT (number) FEET PER MINUTE [OR GREATER (or OR LESS)]	
1.6.2	POSITION INFORMATION	POSITION (distance) (direction) OF (significant point) (or OVER or ABEAM (significant point)).	
1.6.3	VECTERING INSTRUCTIONS	LEAVE (significant point) HEADING (three digits);	
		CONTINUE HEADING (three digits);	
		CONTINUE PRESENT HEADING;	
		FLY HEADING (three digits);	
		TURN LEFT (or RIGHT) HEADING (three digits) [reason];	
		TURN LEFT (or RIGHT) (number of degrees) DEGREES [reason];	
		STOP TURN HEADING (three digits);	
		FLY HEADING (three digits), WHEN ABLE PROCEED DIRECT (name) (significant point);	
		HEADING IS GOOD.	
1.6.4	TERMINATION OF VECTERING	RESUME OWN NAVIGATION (position of aircraft) (specific instructions);	
		RESUME OWN NAVIGATION [DIRECT] (significant point) [MAGNETIC TRACK (three digits) DISTANCE (number) KILOMETRES (or MILES)].	

1.6.5	MANOEUVRES	MAKE A THREE SIXTY TURN LEFT (or RIGHT) [reason];	
		ORBIT LEFT (or RIGHT) [reason];	
	... (in case of unreliable directional instruments on board aircraft) <i>Note. When it is necessary to specify a reason for vectoring or for the above manoeuvres, the following phraseologies should be used:</i> a) DUE TRAFFIC; b) FOR SPACING; c) FOR DELAY; d) FOR DOWNWIND (or BASE, or FINAL).	MAKE ALL TURNS RATE ONE (or RATE HALF, or (number) DEGREES PER SECOND) START AND STOP ALL TURNS ON THE COMMAND “NOW”;	
		TURN LEFT (or RIGHT) NOW;	
		STOP TURN NOW	
1.6.6	SPEED CONTROL	REPORT SPEED	
		SPEED (number) KILOMETRES PER HOUR (or KNOTS)*	
		MAINTAIN (number) KILOMETRES PER HOUR (or KNOTS) [OR GREATER (or OR LESS)] [UNTIL (significant point)];	
		DO NOT EXCEED (number) KILOMETRES PER HOUR (or KNOTS);	
		MAINTAIN PRESENT SPEED	
		INCREASE (or REDUCE) SPEED TO (number) KILOMETRES PER HOUR (or KNOTS) [OR GREATER (or OR LESS)];	
		INCREASE (or REDUCE) SPEED BY (number) KILOMETRES PER HOUR (or KNOTS);	
		RESUME NORMAL SPEED	
		REDUCE TO MINIMUM APPROACH SPEED	
		REDUCE TO MINIMUM CLEAN SPEED	
		RESUME PUBLISHED SPEED	
		NO [ATC] SPEED RESTRICTIONS	
1.6.7		OMIT POSITION REPORTS [UNTIL (specify)];	

	POSITION REPORTING	NEXT REPORT AT (<i>significant point</i>);	
	... to omit position reports	REPORTS REQUIRED ONLY AT (<i>significant point(s)</i>);	
		RESUME POSITION REPORTING.	
1.6.8	TRAFFIC INFORMATION AND AVOIDING ACTION	TRAFFIC (<i>number</i>) O'CLOCK (<i>distance</i>) (<i>direction of flight</i>) [<i>any other pertinent information</i>]: 11) UNKNOWN; 12) SLOW MOVING; 13) FAST MOVING; 14) CLOSING; 15) OPPOSITE (<i>or</i> SAME) DIRECTION; 16) OVERTAKING; 17) CROSSING LEFT TO RIGHT (<i>or</i> RIGHT TO LEFT); 18) (<i>aircraft type</i>); (... (<i>if known</i>)) 19) (<i>level</i>); 10) CLIMBING (<i>or</i> DESCENDING);	
	... to request avoiding action	REQUEST VECTORS*	
		DO YOU WANT VECTORS?;	
	... when passing unknown traffic	CLEAR OF TRAFFIC [<i>appropriate instructions</i>];	
	... for avoiding action	TURN LEFT (<i>or</i> RIGHT) IMMEDIATELY HEADING (<i>three digits</i>) TO AVOID [UNIDENTIFIED] TRAFFIC (<i>bearing by clock-reference and distance</i>);	
		TURN LEFT (<i>or</i> RIGHT) (<i>number of degrees</i>) DEGREES IMMEDIATELY TO AVOID [UNIDENTIFIED] TRAFFIC AT (<i>bearing by clock-reference and distance</i>).	
1.6.9	COMMUNICATIONS AND LOSS OF COMMUNICATIONS	[IF] RADIO CONTACT LOST (<i>instructions</i>);	
		IF NO TRANSMISSIONS RECEIVED FOR (<i>number</i>) MINUTES (<i>or</i> SECONDS) (<i>instructions</i>);	
		REPLY NOT RECEIVED (<i>instructions</i>);	
	... if loss of communications suspected	IF YOU READ [<i>manoeuvre instructions or SQUAWK (code or IDENT)</i>];	
		(<i>manoeuvre, SQUAWK or IDENT</i>) OBSERVED. POSITION (<i>position of aircraft</i>). [<i>instructions</i>].	

1.6.10	TERMINATION OF RADAR SERVICE	RADAR SERVICE (or IDENTIFICATION) TERMINATED [DUE <i>(reason)</i>] <i>(instructions)</i> ;	
		WILL SHORTLY LOSE IDENTIFICATION <i>(appropriate instructions or information)</i> ;	
		IDENTIFICATION LOST <i>[reasons] (instructions)</i> .	
1.6.11	RADAR EQUIPMENT DEGRADATION	SECONDARY RADAR OUT OF SERVICE <i>(appropriate information as necessary)</i> ;	
		PRIMARY RADAR OUT OF SERVICE <i>(appropriate information as necessary)</i> ;	

‘*’ denotes pilot transmission.

1.7. RADAR IN APPROACH CONTROL SERVICE PHRASEOLOGIES

Row	Circumstances	Phraseologies	Example
1.7.1	VECTORIZING FOR APPROACH	VECTORIZING FOR (<i>type of pilot-interpreted aid</i>) APPROACH RUNWAY (<i>number</i>);	VECTORIZING FOR ILS APPROACH RUNWAY 27L
		VECTORIZING FOR VISUAL APPROACH RUNWAY (<i>number</i>) REPORT FIELD (<i>or</i> RUNWAY) IN SIGHT;	VECTORIZING FOR VISUAL APPROACH RUNWAY 27L REPORT RUNWAY IN SIGHT
		VECTORIZING FOR (<i>positioning in the circuit</i>);	VECTORIZING FOR DOWNWIND
		VECTORIZING FOR SURVEILLANCE RADAR APPROACH RUNWAY (<i>number</i>);	VECTORIZING FOR SURVEILLANCE RADAR APPROACH RUNWAY 27L
		VECTORIZING FOR PRECISION APPROACH RUNWAY (<i>number</i>);	
		(<i>type</i>) APPROACH NOT AVAILABLE DUE (<i>reason</i>) (<i>alternative instructions</i>).	ILS APPROACH NOT AVAILABLE DUE FLIGHT CHECK EXPIRED VECTORIZING FOR VOR/DME
1.7.2	VECTORIZING FOR ILS AND OTHER PILOT- INTERPRETED AIDS	POSITION (<i>number</i>) KILOMETRES (<i>or</i> MILES) from (<i>fix</i>). TURN LEFT (<i>or</i> RIGHT) HEADING (<i>three digits</i>);	POSITION 55 MILES from ISN TURN LEFT HEADING 125
		YOU WILL INTERCEPT (<i>radio aid or track</i>) (<i>distance</i>) FROM (<i>significant point or TOUCHDOWN</i>);	YOU WILL INTERCEPT LLZ 6 MILES FROM TOUCHDOWN
	... when a pilot wishes to be positioned a specific distance from touchdown	REQUEST (<i>distance</i>) FINAL*	
		CLEARED FOR (<i>type of approach</i>) APPROACH RUNWAY (<i>number</i>);	CLEARED FOR ILS APPROACH RUNWAY 27L
		REPORT ESTABLISHED ON [ILS] LOCALIZER (<i>or</i> ON GBAS/SBAS APPROACH COURSE);	REPORT ESTABLISHED ON LOCALIZER

		CLOSING FROM LEFT (<i>or</i> RIGHT) [REPORT ESTABLISHED];	CLOSING FROM LEFT REPORT ESTABLISHED
		TURN LEFT (<i>or</i> RIGHT) HEADING (<i>three digits</i>) [TO INTERCEPT] <i>or</i> [REPORT ESTABLISHED];	TURN LEFT HEADING 325 TO INTERCEPT
		EXPECT VECTOR ACROSS (<i>localizer course or radio aid</i>) (<i>reason</i>);	EXPECT VECTOR ACROSS LOCALIZER COURSE DUE TRAFFIC
		THIS TURN WILL TAKE YOU THROUGH (<i>localizer course or radio aid</i>) [<i>reason</i>];	THIS TURN WILL TAKE YOU THROUGH LOCALIZER COURSE DUE HIGH ALTITUDE
		TAKING YOU THROUGH (<i>localizer course or radio aid</i>) [<i>reason</i>];	
		MAINTAIN (<i>altitude</i>) UNTIL GLIDE PATH INTERCEPTION;	
		REPORT ESTABLISHED ON GLIDE PATH;	
		INTERCEPT (<i>localizer course or radio aid</i>) [REPORT ESTABLISHED].	
1.7.3	MANOEUVRE DURING INDEPENDENT AND DEPENDENT PARALLEL APPROACHES	CLEARED FOR (<i>type of approach</i>) APPROACH RUNWAY (<i>number</i>) LEFT (<i>or</i> RIGHT);	
		YOU HAVE CROSSED THE LOCALIZER (<i>or</i> GBAS/SBAS FINAL APPROACH COURSE). TURN LEFT (<i>or</i> RIGHT) IMMEDIATELY AND RETURN TO THE LOCALIZER (<i>or</i> GBAS/SBAS FINAL APPROACH COURSE);	
		ILS RUNWAY (<i>number</i>) LEFT (<i>or</i> RIGHT) LOCALIZER FREQUENCY IS (<i>frequency</i>);	
	... for avoidance action when an aircraft is observed penetrating the NTZ	TURN LEFT (<i>or</i> RIGHT) (<i>number</i>) DEGREES (<i>or</i> HEADING) (<i>three digits</i>) IMMEDIATELY TO AVOID	

		TRAFFIC [DEVIATING FROM ADJACENT APPROACH], CLIMB TO <i>(altitude)</i> ;	
1.7.4	... for avoidance action below 120 m (400 ft) above the runway threshold elevation where parallel approach obstacle assessment surfaces (PAOAS) criteria are being applied	CLIMB TO <i>(altitude)</i> IMMEDIATELY TO AVOID TRAFFIC [DEVIATING FROM ADJACENT APPROACH] <i>(further instructions)</i> .	

“*” denotes pilot transmission

1.8. SURVEILLANCE RADAR APPROACH

Row	Circumstances	Phraseologies	Example
1.8.1	PROVISION OF SERVICE	THIS WILL BE A SURVEILLANCE RADAR APPROACH RUNWAY <i>(number)</i> TERMINATING AT <i>(distance)</i> FROM TOUCHDOWN, OBSTACLE CLEARANCE ALTITUDE <i>(or HEIGHT)</i> <i>(number)</i> METRES <i>(or FEET)</i> CHECK YOUR MINIMA [IN CASE OF GO AROUND <i>(instructions)</i>];	IN CASE OF GO AROUND SET HEADING 260 CLIMB TO 7000 FT CONTACT 119.7
		APPROACH INSTRUCTIONS WILL BE TERMINATED AT <i>(distance)</i> FROM TOUCHDOWN.	
1.8.2	ELEVATION	COMMENCE DESCENT NOW [TO MAINTAIN A <i>(number)</i> DEGREE GLIDE PATH];	
		<i>(distance)</i> FROM TOUCHDOWN ALTITUDE <i>(or HEIGHT)</i> SHOULD BE <i>(numbers and units)</i> .	
1.8.3	POSITION	<i>(distance)</i> FROM TOUCHDOWN	
1.8.4	CHECKS	CHECK GEAR DOWN [AND LOCKED];	
		OVER THRESHOLD.	
1.8.5	COMPLETION OF APPROACH	REPORT VISUAL	
		REPORT RUNWAY [LIGHTS] IN SIGHT;	
		APPROACH COMPLETED [CONTACT <i>(unit)</i>].	

1.8.6	PAR APPROACH PROVISION OF SERVICE	THIS WILL BE A PRECISION RADAR APPROACH RUNWAY (<i>number</i>);	
		PRECISION APPROACH NOT AVAILABLE DUE (<i>reason</i>) (<i>alternative instructions</i>);	
		IN CASE OF GO AROUND (<i>instructions</i>).	
1.8.7	COMMUNICATIONS	DO NOT ACKNOWLEDGE FURTHER TRANSMISSIONS;	
		REPLY NOT RECEIVED. WILL CONTINUE INSTRUCTIONS	
1.8.8	AZIMUTH	CLOSING [SLOWLY (<i>or</i> QUICKLY)] [FROM THE LEFT (<i>or</i> FROM THE RIGHT)];	
		HEADING IS GOOD;	
		ON TRACK;	
		SLIGHTLY (<i>or</i> WELL, <i>or</i> GOING) LEFT (<i>or</i> RIGHT) OF TRACK	
		(<i>number</i>) METRES LEFT (<i>or</i> RIGHT) OF TRACK	
1.8.9	ELEVATION	APPROACHING GLIDE PATH	
		COMMENCE DESCENT NOW [AT (<i>number</i>) METRES PER SECOND OR (<i>number</i>) FEET PER MINUTE (<i>or</i> ESTABLISH A (<i>number</i>) DEGREE GLIDE PATH)];	
		RATE OF DESCENT IS GOOD;	
		ON GLIDE PATH	
		SLIGHTLY (<i>or</i> WELL, <i>or</i> GOING) ABOVE (<i>or</i> BELOW) GLIDE PATH;	
		[STILL] (<i>number</i>) METRES (<i>or</i> FEET) TOO HIGH (<i>or</i> TOO LOW);	
		ADJUST RATE OF DESCENT	
		COMING BACK [SLOWLY (<i>or</i> QUICKLY)] TO THE GLIDE PATH	
		RESUME NORMAL RATE OF DESCENT	
		ELEVATION ELEMENT UNSERVICEABLE (<i>to be followed by appropriate instructions</i>);	

		(distance) FROM TOUCHDOWN. ALTITUDE (or HEIGHT) SHOULD BE (numbers and units).	
1.8.10	POSITION	(distance) FROM TOUCHDOWN	
		OVER APPROACH LIGHTS	
		OVER THRESHOLD	
	CHECKS	CHECK GEAR DOWN AND LOCKED	
		CHECK DECISION ALTITUDE (or HEIGHT).	
	COMPLETION OF APPROACH	REPORT VISUAL	
		REPORT RUNWAY [LIGHTS] IN SIGHT	
		APPROACH COMPLETED [CONTACT (unit)].	
	MISSED APPROACH	CONTINUE VISUALLY OR GO AROUND [missed approach instructions];	
		GO AROUND IMMEDIATELY [missed approach instructions] (reason);	
		ARE YOU GOING AROUND?;	
		IF GOING AROUND (appropriate instructions);	
		GOING AROUND*	

“*” denotes pilot transmission.

1.9. SECONDARY SURVEILLANCE RADAR (SSR)

Row	Circumstances	Phraseologies	Example
1.9.1	TO REQUEST THE CAPABILITY OF THE SSR EQUIPMENT	ADVISE TRANSPONDER CAPABILITY	
		TRANSPONDER (as shown in the flight plan) *	
		NEGATIVE TRANSPONDER*	
1.9.2	TO INSTRUCT SETTING OF TRANSPONDER	FOR DEPARTURE SQUAWK (code);	
		SQUAWK (code).	
1.9.3	TO REQUEST THE PILOT TO	RESET SQUAWK [(mode)] (code);	

	RESELECT THE ASSIGNED MODE AND CODE	RESETTING <i>(mode) (code) *</i>	
1.9.4	TO REQUEST RESELECTION OF AIRCRAFT IDENTIFICATION	RE-ENTER [ADS-B or MODE S] AIRCRAFT IDENTIFICATION	
1.9.5	TO REQUEST THE PILOT TO CONFIRM THE CODE SELECTED ON THE AIRCRAFT'S TRANSPONDER	CONFIRM SQUAWK <i>(code)</i> ;	
		SQUAWKING <i>(code)*</i>	
1.9.6	TO REQUEST THE OPERATION OF THE IDENT FEATURE	SQUAWK <i>[(code)] [AND] IDENT</i>	
		SQUAWK LOW;	
		SQUAWK NORMAL;	
1.9.7	TO REQUEST TEMPORARY SUSPENSION OF TRANSPONDER OPERATION	SQUAWK STANDBY	
1.9.8	TO REQUEST EMERGENCY CODE	SQUAWK MAYDAY [CODE SEVEN-SEVEN-ZERO-ZERO].	
1.9.9	TO REQUEST TERMINATION OF TRANSPONDER	STOP SQUAWK	
1.9.10	TO REQUEST TRANSMISSION OF PRESSURE-ALTITUDE	SQUAWK CHARLIE	
		TRANSMIT ADS-B ALTITUDE	
1.9.11	TO REQUEST PRESSURE SETTING CHECK AND CONFIRMATION OF LEVEL	CHECK ALTIMETER SETTING AND CONFIRM <i>(level)</i> .	
1.9.12	TO REQUEST TERMINATION OF PRESSURE-ALTITUDE TRANSMISSION	STOP SQUAWK CHARLIE WRONG INDICATION	
		STOP ADS-B ALTITUDE TRANSMISSION <i>[(WRONG INDICATION, or reason)]</i> .	

	BECAUSE OF FAULTY OPERATION		
1.9.13	TO REQUEST LEVEL CHECK	CONFIRM (<i>level</i>).	

‘*’ denotes pilot transmission.

1.10. ALERTING PHRASEOLOGIES

Row	Circumstances	Phraseologies	Example
1.10.1	LOW ALTITUDE WARNING	(<i>aircraft call sign</i>) LOW ALTITUDE WARNING, CHECK YOUR ALTITUDE IMMEDIATELY, QNH IS (<i>number</i>) [(<i>units</i>)]. [THE MINIMUM FLIGHT ALTITUDE IS (<i>altitude</i>)].	EP-ASB LOW ALTITUDE WARNING, CHECK YOUR ALTITUDE IMMEDIATELY, QNH IS 1021 HECTOPASCAL
1.10.2	TERRAIN ALERT	(<i>aircraft call sign</i>) TERRAIN ALERT, (<i>suggested pilot action, if possible</i>).	EP-ATC TERRAIN ALERT

2) AERODROME FLIGHT INFORMATION SERVICE (AFIS) PHRASEOLOGIES

Row	Circumstances	Phraseologies	Example
2.1	STARTING PROCEDURES ... TO REQUEST PERMISSION TO START ENGINES <i>Note. When local procedures so prescribe, authorisation for start up should be obtained from the AFIS unit....</i> ... AT AFIS AERODROMES WITH START UP PROCEDURES, AFIS REPLIES ... AT AERODROMES WITHOUT START UP PROCEDURES, AFIS REPLIES	*a) [aircraft location] REQUEST START UP; *b) [aircraft location] REQUEST START UP, INFORMATION (ATIS identification); c) START UP APPROVED; d) START UP AT (time) e) ROGER f) START UP AT OWN DISCRETION; g) EXPECT DEPARTURE (time) START UP AT OWN DISCRETION. h) START UP AT OWN DISCRETION (local information) h) EXPECT DEPARTURE (time) START UP AT OWN DISCRETION	
2.2	PUSHBACK PROCEDURES <i>Note. When local procedures so prescribe, authorization for pushback should be obtained from the AFIS unit.</i> ... AIRCRAFT/AFIS	*a) [aircraft location] REQUEST PUSHBACK; b) PUSHBACK AT OWN DISCRETION; c) EXPECT (number) MINUTES DELAY DUE (reason).	
2.3	TAXI ... AIRCRAFT/AFIS	*a) READY TO TAXI (position) b) [TRAFFIC (details)] [AERODROME CONDITIONS (details)] RUNWAY (number) *c) WILL TAXI TO HOLDING POINT (name) [RUNWAY (number)] VIA TAXIWAY (name) *d) HOLDING	
2.4	RELAYING CLEARANCE ... AFIS ... CONFIRMATION OR OTHERWISE OF THE READBACK OF CLEARANCE	a) (ATC unit) CLEARS (details of clearance) b) [THAT IS CORRECT] [READBACK CORRECT] (or NEGATIVE) [I SAY AGAIN] ... (as appropriate);	
2.5	TAKE-OFF	a) [REPORT READY] *b) READY FOR DEPARTURE c) TRAFFIC (details) d) NO REPORTED TRAFFIC RUNWAY (number) e) RUNWAY (number) OCCUPIED (or BLOCKED) BY (aircraft or vehicles or persons)] *f) HOLDING;	

		*g) WILL LINE UP RUNWAY (number) [VIA BACKTRACK]; *g) WILL TAKE OFF RUNWAY (number).	
2.6	AFTER TAKE-OFF ... to request airborne time	a) REPORT AIRBORNE; b) AIRBORNE (time); c) AFTER PASSING (LEAVING, THROUGH, EXITING THE ZONE, CLEAR OF THE ZONE) (level) (contact instructions);	
2.7	ENTERING AN AERODROME TRAFFIC CIRCUIT ... when ATIS information is available	*a) [aircraft type] (position) (level) FOR LANDING; b) ROGER [(direction of circuit in use)] [RUNWAY (number)] [SURFACE] WIND (direction and speed) (units) [TEMPERATURE [MINUS] (number)] QNH (or QFE) (number) [(units)] [TRAFFIC (detail)]; *c) (aircraft type) (position) (level) INFORMATION (ATIS identification) FOR LANDING; d) ROGER (circuit in use) [RUNWAY (number)] QNH (or QFE) (number) [(units)] [TRAFFIC (detail)].	
2.8	IN THE CIRCUIT	*a) (position in circuit, e.g. (DOWNWIND/FINAL); b) ROGER, NO REPORTED TRAFFIC RUNWAY (number) or [TRAFFIC (detail)] [additional information if required]. * Denotes pilot transmission.	
2.9	APPROACH Note. The report "LONG FINAL" is made when aircraft turn on to final approach at a distance greater than 7 km (4 NM) from touchdown or when an aircraft on a straight- in approach is 15 km (8 NM) from touchdown. In both cases a report "FINAL" is required at 7 km (4 NM) from touchdown.	a) REPORT BASE (or FINAL, or LONG FINAL); *b) BASE [or FINAL, or LONG FINAL]; c) TRAFFIC (details); d) NO REPORTED TRAFFIC RUNWAY (number); e) [RUNWAY (number) OCCUPIED (details)]; *e) WILL LAND [RUNWAY (number)]; *f) GOING AROUND.	
2.10	RUNWAY VACATING AND COMMUNICATIONS AFTER LANDING	a) TRAFFIC (details) or NO REPORTED TRAFFIC b) YOUR STAND (or GATE) (designation);	

* denotes pilot transmission.

GM1 SIRA.14001 General

Messages concerning acts of unlawful interference constitute a case of exceptional circumstances which may preclude the use of recognized communication procedures used to determine message category and priority.

GM2 SIRA.14001 General

When a general call 'ALL STATIONS' has been made, meaning that the call is addressed to all stations likely to intercept, no reply is expected unless individual stations are subsequently called to acknowledge receipt.

SIRA.14005 Categories of messages

a) The categories of messages handled by the aeronautical mobile service, and the order of priority in the establishment of communications and the transmission of messages shall be in accordance with Table S14-1.

Table S14-1	
Message category and radiotelephony order of priority signal	Radiotelephony signal
(a) Distress calls, distress messages and distress traffic	MAYDAY
(b) Urgency messages, including messages preceded by the medical transports signal	PAN PAN or PAN MEDICAL
(c) Communications relating to direction finding	—
(d) Flight safety messages	—
(e) Meteorological messages	—
(f) Flight regularity messages	—

a) Distress messages and distress traffic shall be handled in accordance with the provisions of point [SIRA.14095](#).

b) Urgency messages and urgency traffic, including messages preceded by the medical transports signal, shall be handled in accordance with the provisions of point [SIRA.14095](#).

SIRA.14010 Flight safety messages

Flight safety messages shall comprise the following:

- a) movement and control messages;
- b) messages originated by an aircraft operator or by an aircraft, of immediate concern to an aircraft in flight;
- c) meteorological advice of immediate concern to an aircraft in flight or about to depart (individually communicated or for broadcast);
- d) other messages concerning aircraft in flight or about to depart.

SIRA.14015 Language to be used in air-ground communication

a) The language that is normally used in all air-ground communications shall be English language while in some cases, for the purpose of better mutual understanding of Persian speaking parties, such as unusual situations, Persian language may also be used.

b) The standard phraseologies specified in [SIRA.14001](#), and ICAO Doc. 9432 shall primarily be used. It shall be considered that the phraseologies contained in these documents are not intended to be exhaustive, and in several instances “appropriate subsidiary phraseologies”, or “plain language” may be used. The use of slang or idiomatic speech in no circumstances is authorized.

c) The languages available at a given station on the ground shall form part of the Aeronautical Information Publication.

GM1 SIRA.14015 Language to be used in air-ground communication

In addition to the requirement in [SIRA.14015](#), the benefits of situational awareness which could improve safety on airports and relevant surrounding airspace sectors by extending the use of the English language on some safety critical frequencies at international aerodromes according to AIP. AD 1.4 and relevant surrounding airspace sectors with international traffic, and pilots with acceptable level of English may be considered. This consideration would in particular encompass:

- a) use of a single frequency for all the safety-critical operations on a runway or a set of runways;
- b) the need to and feasibility of applying the requirement for English-only communications also to communications with vehicles in order to enhance situational awareness.

Where this consideration could lead to a change in current communication arrangements, it should be based on the outcome of a local safety assessment.

SIRA.14020 Word spelling in radiotelephony

When proper names, service abbreviations and words of which the spelling is doubtful are spelled out in radiotelephony, the alphabet in the Table S14-2 shall be used.

Table S14-2		
The radiotelephony spelling alphabet		
Letter	Word	Approximate pronunciation (Latin alphabet representation)
A	Alfa	<u>AL</u> FAH
B	Bravo	<u>BRAH</u> VOH
C	Charlie	<u>CHAR</u> LEE or <u>SHAR</u> LEE
D	Delta	<u>DELL</u> TAH
E	Echo	<u>ECK</u> OH
F	Foxtrot	<u>FOKS</u> TROT
G	Golf	<u>GOLF</u>
H	Hotel	HO <u>TELL</u>
I	India	<u>INDEE</u> AH
J	Juliett	<u>JEW</u> LEE <u>ETT</u>
K	Kilo	<u>KEY</u> LOH
L	Lima	<u>LEE</u> MAH
M	Mike	<u>MIKE</u>
N	November	NO <u>VEM</u> BER
O	Oscar	<u>OSS</u> CAH
P	Papa	<u>PAH</u> PAH
Q	Quebec	<u>KEH</u> <u>BECK</u>
R	Romeo	<u>ROW</u> ME OH
S	Sierra	SEE <u>AIR</u> RAH
T	Tango	<u>TANG</u> GO
U	Uniform	<u>YOU</u> NEE FORM or <u>OO</u> NEE FORM
V	Victor	<u>VIK</u> TAH
W	Whiskey	<u>WISS</u> KEY
X	X-ray	<u>ECKS</u> RAY
Y	Yankee	<u>YANG</u> KEY
Z	Zulu	<u>ZOO</u> LOO

In the approximate representation using the Latin alphabet, syllables to be emphasized are underlined.

SIRA.14025 Principles governing the identification of ATS routes other than standard departure and arrival routes

a) Use of ATS route designators in communications

1) In voice communications, the basic letter of a designator shall be spoken in accordance with the spelling alphabet as defined in Table S14-2.

2) Where the prefixes K, U or S are used, they shall, in voice communications, be spoken as follows:

- i. K — KOPTER

ii. U — UPPER

iii. S — SUPERSONIC

b) The word ‘kopter’ shall be pronounced as in the word ‘helicopter’ and the words ‘upper’ and ‘supersonic’ as in the English language.

AMC1 SIRA.14025 Principles governing the identification of ATS routes other than standard departure and arrival routes

LETTERS ‘F’ AND ‘G’

Where letters ‘F’ or ‘G’ are added after the basic designator of the ATS route in question, in order to indicate the type of service provided:

- a) letter ‘F’ indicates that on the route or portion thereof advisory service only is provided; and
- b) letter ‘G’ indicates that on the route or portion thereof flight information service only is provided,
- c) the flight crew are not required to use them in voice communications.

SIRA.14026 Significant points

Normally the plain language name for significant points marked by the site of a radio navigation aid, or the unique five-letter pronounceable ‘name-code’ for significant points not marked by the site of a radio navigation aid, shall be used to refer to the significant point in voice communications. If the plain language name for the site of a radio navigation aid is not used, it shall be replaced by the coded designator which, in voice communications, shall be spoken in accordance with the spelling alphabet.

SIRA.14030 Use of designators for standard instrument departure and arrival routes

The plain language designator for standard instrument departure or arrival routes shall be used in voice communications.

GM1 SIRA.14030 Use of designators for standard instrument departure and arrival routes

For the purpose of identification of routes, the words ‘departure’, ‘arrival’, and ‘visual’ are considered to be an integral element of the plain language designator.

SIRA.14035 Transmission of numbers in radiotelephony

a) Transmission of numbers

- 1) All numbers used in the transmission of aircraft call sign, headings, runway, wind direction, and speed shall be transmitted by pronouncing each digit separately.
 - i. Flight levels shall be transmitted by pronouncing each digit separately, except for the case of flight levels in whole hundreds.
 - ii. The altimeter setting shall be transmitted by pronouncing each digit separately, except for the case of a setting of 1000 hPa, which shall be transmitted as ‘ONE THOUSAND’.

iii. All numbers used in the transmission of transponder codes shall be transmitted by pronouncing each digit separately except that, when the transponder codes contain whole thousands only, the information shall be transmitted by pronouncing the digit in the number of thousands followed by the word 'THOUSAND'.

2) All numbers used in the transmission of altitude, cloud height, visibility and runway visual range (RVR) information, which contain whole hundreds and whole thousands, shall be transmitted by pronouncing each digit in the number of hundreds or thousands followed by the word "HUNDRED" or "THOUSAND" as appropriate. Combinations of thousands and whole hundreds shall be transmitted by pronouncing each digit in the number of thousands followed by the word "THOUSAND" followed by the number of hundreds followed by the word "HUNDRED".

3) In cases where there is a need to clarify the number transmitted as whole thousands and/or whole hundreds, the number shall be transmitted by pronouncing each digit separately.

4) When providing information regarding the relative bearing to an object or to conflicting traffic in terms of the 12-hour clock, the information shall be given pronouncing the digits together such as 'TEN O'CLOCK', 'ELEVEN O'CLOCK', or 'TWELVE O'CLOCK'.

5) Numbers containing a decimal point shall be transmitted as prescribed in point (a)(1) with the decimal point in appropriate sequence, indicated by the word 'DECIMAL'.

6) All six digits of the numerical designator shall be used to identify the transmitting channel in very high frequency (VHF) radiotelephony communications, except in the case of both the fifth- and sixth-digits being zeros, in which case only the first four digits shall be used.

GM1 SIRA.14035(a)(1) Transmission of numbers in radiotelephony

CALL SIGN, HEADING, RUNWAY AND WIND

The following examples illustrate the application.

Aircraft call signs	Transmitted as
IRA 238	Iran air two three eight
DLH 600	Lufthansa six zero zero

Headings	Transmitted as
100 degrees	Heading one zero zero
080 degrees	Heading zero eight zero

Runway	Transmitted as
27	Runway two seven
30	Runway three zero

Wind direction and speed	Transmitted as
200 degrees 70 knots	Wind two zero zero degrees seven zero knots
160 degrees 18 knots gusting 30 knots	Wind one six zero degrees one eight knots gusting three zero knots
040 degrees 05 knots	Wind zero four zero degrees five knots

GM2 SIRA.14035(a)(1)(i) Transmission of numbers in radiotelephony

FLIGHT LEVELS

The following examples illustrate the application.

Flight levels	Transmitted as
FL 180	Flight level one eight zero
FL200	Flight level two hundred
FL 70	Flight level seven zero

GM3 SIRA.14035(a)(1)(ii) Transmission of numbers in radiotelephony

ALTIMETER SETTING

The following examples illustrate the application.

Altimeter setting	Transmitted as
1009 hpa	QNH one zero zero nine
1000 hpa	QNH one thousand
993 hpa	QNH nine nine three

GM4 SIRA.14035(a)(1)(iii) Transmission of numbers in radiotelephony

TRANSPONDER CODES

The following examples illustrate the application.

Transponder codes	Transmitted as
2400	Squawk two four zero zero
1000	Squawk one thousand
2000	Squawk two thousand

GM1 SIRA.14035(a)(2) Transmission of numbers in radiotelephony

ALTITUDE

The following examples illustrate the application.

Altitude	Transmitted as
800	Eight hundred
3 400	Three thousand four hundred
12 000	One two thousand

GM2 SIRA.14035(a)(2) Transmission of numbers in radiotelephony

CLOUD HEIGHT

The following examples illustrate the application.

Cloud height	Transmitted as
2 200	Two thousand two hundred
4 300	Four thousand three hundred

GM3 SIRA.14035(a)(2) Transmission of numbers in radiotelephony

VISIBILITY

The following examples illustrate the application.

Visibility	Transmitted as
1 000	Visibility one thousand
700	Visibility seven hundred

GM4 SIRA.14035(a)(2) Transmission of numbers in radiotelephony

RUNWAY VISUAL RANGE

The following examples illustrate the application.

Runway Visual Ranges	Transmitted as
600	RVR six hundred
1 700	RVR one thousand seven hundred

GM5 SIRA.14035(a)(5) Transmission of numbers in radiotelephony

DECIMALS

The following examples illustrate the application.

Number	Transmitted as
100.3	ONE ZERO ZERO DECIMAL THREE
38 143.9	THREE EIGHT ONE FOUR THREE DECIMAL NINE

GM1 SIRA.14035(a)(6) Transmission of numbers in radiotelephony

TRANSMISSION OF NUMBERS FOR RADIOTELEPHONY CHANNEL FREQUENCIES

a) The following examples illustrate the application of the procedure.

Channel	Transmitted as
118.000	ONE ONE EIGHT DECIMAL ZERO
118.005	ONE ONE EIGHT DECIMAL ZERO ZERO FIVE
118.010	ONE ONE EIGHT DECIMAL ZERO ONE ZERO
118.025	ONE ONE EIGHT DECIMAL ZERO TWO FIVE
118.050	ONE ONE EIGHT DECIMAL ZERO FIVE ZERO
118.100	ONE ONE EIGHT DECIMAL ONE

b) Caution must be exercised with respect to the indication of transmitting channels in VHF radiotelephony communications when all six digits of the numerical designator are used in airspace where communication channels are separated by 25 kHz, because on aircraft installations with a channel separation capability of 25 kHz or more, it is only possible to select the first five digits of the numerical designator on the radio management panel.

SIRA.14040 Pronunciation of numbers

When the language used for communication is English, numbers shall be transmitted using the pronunciation shown in Table S14-3:

Table S14-3	
Numeral or numeral element	Pronunciation
0	ZE-RO
1	WUN
2	TOO
3	TREE
4	FOW-er
5	FIFE
6	SIX
7	SEV-en
8	AIT
9	NIN-er
10	TEN
11	EE-LE-VEN
12	TWELF
Decimal	DAY-SEE-MAL
Hundred	HUN-dred
Thousand	TOU-SAND

SIRA.14045 Transmitting technique

- a) Transmissions shall be conducted concisely in a normal conversational tone.
- b) The following words and phrases shall be used in radiotelephony communications as appropriate and shall have the meaning ascribed in Table S14-4:

Table S14-4

Phrase	Meaning
ACKNOWLEDGE	'Let me know that you have received and understood this message.'
AFFIRM	'Yes.'
APPROVED	'Permission for proposed action granted.'
BREAK	'I hereby indicate the separation between portions of the message.'
BREAK BREAK	'I hereby indicate the separation between messages transmitted to different aircraft in a very busy environment.'
CANCEL	'Annul the previously transmitted clearance.'
CHECK	'Examine a system or procedure.'
CLEARED	'Authorized to proceed under the conditions specified.'
CONFIRM	'I request verification of: (clearance, instruction, action, information).'
CONTACT	'Establish communications with...'
CORRECT	'True' or 'Accurate'.
CORRECTION	'An error has been made in this transmission (or message indicated). The correct version is...'
DISREGARD	'Ignore.'
HOW DO YOU READ	'What is the readability of my transmission?' (see point SIRA.14070(c))
I SAY AGAIN	'I repeat for clarity or emphasis.'
MAINTAIN	'Continue in accordance with the condition(s) specified' or in its literal sense.
MONITOR	'Listen out on (frequency).'
NEGATIVE	'No' or 'Permission not granted' or 'That is not correct' or 'Not capable'.
OVER	'My transmission is ended, and I expect a response from you.'
OUT	'This exchange of transmissions is ended and no response is expected.'
READ BACK	'Repeat all, or the specified part, of this message back to me exactly as received.'
RECLEARED	'A change has been made to your last clearance and this new clearance supersedes your previous clearance or part thereof.'
REPORT	'Pass me the following information...'
REQUEST	'I should like to know...' or 'I wish to obtain...'
ROGER	'I have received all of your last transmission.'
SAY AGAIN	'Repeat all, or the following part, of your last transmission.'
SPEAK SLOWER	'Reduce your rate of speech.'
STANDBY	'Wait and I will call you.'
UNABLE	'I cannot comply with your request, instruction, or clearance.'
WILCO	(Abbreviation for 'will comply') 'I understand your message and will comply with it.'
WORDS TWICE	As a request: 'Communication is difficult. Please send every word, or group of words, twice.' As information: 'Since communication is difficult, every word, or group of words, in this message will be sent twice.'
GO AHEAD	<i>The phrase GO AHEAD may only be used in Ground-Ground communication at the time a call ring is being answered. The phrase "PASS YOUR MESSAGE" is optional to be used following the aeronautical station call sign.</i>

GM1 SIRA.14045 Transmitting technique

BREAK

‘BREAK’ is to be used where there is no clear distinction between the text and other portions of the message.

GM2 SIRA.14045 Transmitting technique

CHECK

‘CHECK’ is not to be used in any other context than ‘examine a system or procedure’. No answer is normally expected.

GM3 SIRA.14045 Transmitting technique

MAINTAIN

For example, ‘Maintain VFR’.

GM4 SIRA.14045 Transmitting technique

OVER

‘OVER’ is not normally used in VHF communications.

GM5 SIRA.14045 Transmitting technique

OUT

‘OUT’ is not normally used in VHF communications.

GM6 SIRA.14045 Transmitting technique

ROGER

‘ROGER’ is under no circumstances to be used in reply to a question requiring ‘READ BACK’ or a direct answer in the affirmative (AFFIRM) or negative (NEGATIVE).

GM7 SIRA.14045 Transmitting technique

STANDBY

The caller would normally re-establish contact if the delay is lengthy. ‘STANDBY’ is not an approval or denial.

GM8 SIRA.14045 Transmitting technique

UNABLE

‘UNABLE’ is normally followed by a reason.

SIRA.14050 Radiotelephony call signs for aircraft

a) Full call signs:

An aircraft radiotelephony call sign shall be one of the following types:

- 1) Type (a) — the characters corresponding to the registration marking of the aircraft; or
- 2) Type (b) — the telephony designator of the aircraft operator, followed by the last four characters of the registration marking of the aircraft;
- 3) Type (c) — the telephony designator of the aircraft operator, followed by the flight identification.

b) Abbreviated call signs:

The aircraft radiotelephony call signs shown in point (a), with the exception of Type (c), may be abbreviated under the circumstances prescribed in point SIRA.14055(c). Abbreviated call signs shall be in the following form:

- 1) Type (a) — the first character of the registration and at least the last two characters of the call sign;
- 2) Type (b) — the telephony designator of the aircraft operator, followed by at least the last two characters of the call sign;
- 3) Type (c) — no abbreviated form.

GM1 SIRA.14050 Radiotelephony call signs for aircraft

PREFIX TO CALL SIGNS

The name of the aircraft manufacturer or of the aircraft model may be used as a radiotelephony prefix to the Type (a) call sign.

GM2 SIRA.14050 Radiotelephony call signs for aircraft

EXAMPLES OF FULL AND ABBREVIATED CALL SIGNS

	Type a)			Type b)	Type c)
Full call sign	EP11826	*CESSNA EPBCD	*CITATION EPBCD	IRANAIR PABC	IRANAIR 237
Abbreviated call sign	E26 or E826	CESSNA CD or CESSNA BCD	CITATION CD or CITATION BCD	IRANAIR BC or IRANAIR ABC	(no abbreviated form)

*The examples illustrate the application of [GM1 SIRA.14050](#).

GM3 SIRA.14050 Radiotelephony call signs for aircraft

State aircraft may use special call signs, such as FLTCK01, SOROUGH, EMDAD01, etc.

SIRA.14055 Radiotelephony procedures

a) An aircraft shall not change the type of its radiotelephony call sign during flight, except temporarily on the instruction of an ATC unit in the interests of safety. Except for reasons of safety, no transmission shall be directed to an aircraft during take-off, during the last part of the final approach or during the landing roll.

b) Establishment of radiotelephony communications

- 1) Full radiotelephony call signs shall always be used when establishing communication. When establishing communication, aircraft shall start their call by the designation of the station called, followed by the designation of the station calling.
- 2) The reply to the above calls shall use the calls sign of the station calling, followed by the call sign of the station answering, which shall be considered an invitation to proceed with transmission by the station calling.
- 3) Communications shall commence with a call and a reply when it is desired to establish contact, except that, when it is certain that the station called will receive the call, the calling station may transmit the message, without waiting for a reply from the station called.

c) Subsequent radiotelephony communications

- 1) Abbreviated radiotelephony call signs, as prescribed in point [SIRA.14050\(b\)](#), shall be used only after satisfactory communication has been established and provided that no confusion is likely to arise. An aircraft shall use its abbreviated call sign only after it has been addressed in this manner by the aeronautical station.
- 2) When issuing ATC clearances and reading back such clearances, controllers and pilots shall always add the call sign of the aircraft to which the clearance applies. For other than those occasions, continuous two-way communication after contact has been established shall be permitted without further identification or call until termination of the contact.

GM1 SIRA.14055(b) Radiotelephony procedures

RADIOTELEPHONY CALLING PROCEDURE*

	Type a)	Type b)	Type c)
Designation of the station called	TEHRAN RADIO	TEHRAN RADIO	TEHRAN RADIO
Designation of the station calling	EPABC**	IRANAIR PABC**	IRAN AIR 321**

* In certain cases where the call is initiated by the aeronautical station, the call may be affected by transmission of coded tone signals.

** With the exception of the telephony designators and the type of aircraft, each character in the call sign is to be spoken separately. When individual letters are spelled out, the radiotelephony spelling alphabet prescribed in [SIRA.14020](#) is to be used. Numbers are to be spoken in accordance with [SIRA.14040](#).

RADIOTELEPHONY REPLY PROCEDURE

	Type a)	Type b)	Type c)
Designation of the station called	EPABC*	IRANAIR PABC*	IRANAIR 321*
Designation of the answering station	TEHRAN RADIO	TEHRAN RADIO	TEHRAN RADIO

* With the exception of the telephony designator and the type of aircraft, each character in the call sign is to be spoken separately. When individual letters are spelled out, the radiotelephony spelling alphabet prescribed in [SIRA.14020](#) is to be used. Numbers are to be spoken in accordance with [SIRA.14040](#).

SIRA.14060 Transfer of VHF communications

- a) An aircraft shall be advised by the appropriate ATS unit to transfer from one radio frequency to another in accordance with agreed procedures. In the absence of such advice, the aircraft shall notify the ATS unit before such a transfer takes place.
- b) When establishing initial contact on, or when leaving, a VHF frequency, an aircraft shall transmit such information as may be prescribed by the ANSP responsible for the provision of services and approved by the CAA.IRI.

SIRA.14065 Radiotelephony procedures for air-ground voice communication channel changeover

- a) The initial call to Tehran ACC after a change of air -ground voice communication channel shall contain the following elements:

- 1) The designation of the ATS unit being called;
- 2) Call sign and, for aircraft in the heavy wake turbulence category, the word 'Heavy' or 'Super';
- 3) SSR code;
- 4) Position
- 5) Time
- 6) level, including passing and cleared levels, if not maintaining the cleared level;
- 7) Next position and time over, and any deviation from ATS routs including direct routing (or heading instruction if any) assigned by ATS unit;
- 8) Speed restrictions including any restrictions assigned by ATS (e.g. rate of climb or descend restrictions).
- 9) Additional elements, as required by the ANSP responsible for the provision of services and approved by CAA.IRI.

- b) The initial call to a unit providing APP/RADAR control service after a change of air -ground voice communication channel shall contain the following elements:

- 1) The designation of the ATS unit being called;
- 2) Call sign and, for aircraft in the heavy wake turbulence category, the word 'Heavy' or 'Super';
- 3) SSR code;
- 4) Position
- 5) Time
- 6) level, including passing and cleared levels, if not maintaining the cleared level;
- 7) any deviation from ATS routs including direct routing (or heading instruction if any) assigned by ATS unit;
- 8) received WX information (only for arriving flights);

- 9) speed restrictions including any restrictions assigned by ATS (e.g. rate of climb or descend restrictions); and
 - 10) Additional elements, as required by the ANSP responsible for the provision of services and approved by CAA.IRI.
- c) The initial call to a unit providing Aerodrome control service after a change of air-ground voice communication channel shall contain the following elements:
- 1) the designation of the ATS unit being called;
 - 2) call sign and, for aircraft in the heavy wake turbulence category, the word 'Heavy' or 'Super';
 - 3) position; and
 - 4) Additional elements, as required by the ANSP responsible for the provision of services and approved by CAA.IRI.
- d) Pilots shall provide level information at the nearest full 30 m or 100 ft as indicated on the pilot's altimeter.

SIRA.14070 Test procedures

- a) The form of test transmissions shall be as follows:
- 1) the identification of the station being called;
 - 2) the identification of the station calling;
 - 3) the words 'RADIO CHECK';
 - 4) the frequency being used.
- b) The reply to a test transmission shall be as follows:
- 1) the identification of the station requesting the test;
 - 2) the identification of the station replying;
 - 3) information regarding the readability of the station requesting the test transmission.
- c) When the tests are made, the following readability scale shall be used:

Readability Scale

- 1) 1 Unreadable
- 2) 2 Readable now and then
- 3) 3 Readable but with difficulty
- 4) 4 Readable
- 5) 5 Perfectly readable

SIRA.14075 Exchange of communications

- a) Communications shall be concise and unambiguous, using standard phraseology whenever available.

1) When transmitted by an aircraft, the acknowledgement of receipt of a message shall comprise the call sign of that aircraft.

2) When acknowledgement of receipt is transmitted by an ATS unit to an aircraft, it shall comprise the call sign of the aircraft, followed if considered necessary, by the call sign of the ATS unit.

b) End of conversation

A radiotelephone conversation shall be terminated by the receiving ATS unit or the aircraft using its own call sign.

c) Corrections and repetitions

1) When an error has been made in transmission, the word 'CORRECTION' shall be spoken, the last correct group or phrase repeated, and then the correct version transmitted.

2) If a correction can best be made by repeating the entire message the phrase, 'CORRECTION, I SAY AGAIN' shall be used before the message is transmitted a second time.

3) If the receiving station is in doubt as to the correctness of the message received, a repetition either in full or in part shall be requested.

4) If repetition of an entire message is required, the words 'SAY AGAIN' shall be spoken. If repetition of a portion of a message is required, the phrase: 'SAY AGAIN ALL BEFORE... (first word satisfactorily received)' shall be used; or 'SAY AGAIN... (word before missing portion) TO (word after missing portion)'; or 'SAY AGAIN ALL AFTER ... (last word satisfactorily received)'.

d) If, in checking the correctness of a read-back, incorrect items are noticed, the words 'NEGATIVE I SAY AGAIN' shall be transmitted at the conclusion of the read-back followed by the correct version of the items concerned.

GM1 SIRA.14075(c)(4) Exchange of communications

REPETITIONS

Specific items are to be requested, as appropriate, such as 'SAY AGAIN ALTIMETER', SAY AGAIN WIND'.

SIRA.14080 Communications watch/Hours of service

a) During flight, aircraft shall maintain watch and shall not cease watch, except for reasons of safety, without informing the ATS unit concerned.

1) Aircraft on long over-water flights or on flights over designated areas over which the carriage of an emergency locator transmitter (ELT) is required, shall continuously guard the VHF emergency frequency 121.5 MHz, except for those periods when air craft carry out communications on other VHF channels or when airborne equipment limitations or cockpit duties do not permit simultaneous guarding of two channels.

2) Aircraft shall continuously guard the VHF emergency frequency 121.5 MHz in areas or over routes where the possibility of interception of aircraft or other hazardous situations exists, and a requirement has been established by CAA.IRI.

b) Aeronautical stations shall maintain a continuous listening watch on VHF emergency channel 121.5 MHz during the hours of service of the units at which it is installed. Where two or more such stations are co-located, provision of 121.5 MHz listening watch at one of them shall meet that requirement.

c) When it is necessary for an aircraft or ATS unit to suspend operation for any reason, it shall, if possible, so inform other stations concerned, giving the time at which, it is expected that operation will be resumed. When operation is resumed, other stations concerned shall be so informed. When it is necessary to suspend operation beyond the time specified in the original notice, a revised time of resumption of operation shall, if possible, be transmitted at or near the time first specified.

AMC1 SIRA.14080 Communications watch/Hours of service

GUARD ON FREQUENCY 121.5 MHZ

Aircraft on flights other than those specified should guard the emergency frequency 121.5 MHz to the extent possible

SIRA.14085 Use of blind transmission

a) When an aircraft fails to establish contact on the designated channel, on the previous channel used or on another channel appropriate to the route, and fails to establish communication with the appropriate ATS unit, other ATS unit or other aircraft using all available means, the aircraft shall transmit its message twice on the designated channel(s), preceded by the phrase 'TRANSMITTING BLIND' and, if necessary, include the addressee(s) for which the message is intended.

b) When an aircraft is unable to establish communication due to receiver failure, it shall transmit reports at the scheduled times, or positions, on the channel in use preceded by the phrase 'TRANSMITTING BLIND DUE TO RECEIVER FAILURE'. The aircraft shall:

- 1) transmit the intended message, following this by a complete repetition;
- 2) advise the time of its next intended transmission;
- 3) when provided with ATS, transmit information regarding the intention of the pilot -in-command with respect to the continuation of the flight.

SIRA.14087 Use of relay communication technique

a) When an ATS unit has been unable to establish contact with an aircraft after calls on the frequencies on which the aircraft is believed to be listening, it shall:

- 1) request other ATS units to render assistance by calling the aircraft and relaying traffic, if necessary; and
- 2) request aircraft on the route to attempt to establish communication with the aircraft and relay traffic, if necessary.

b) The provisions of point (a) shall also be applied:

- 1) at request of the ATS unit concerned;
- 2) when an expected communication from an aircraft has not been received within a time period such that the occurrence of a communication failure is suspected.

SIRA.14090 Specific communication procedures

a) Movement of vehicles

Phraseologies for the movement of vehicles, other than tow-tractors, on the manoeuvring area shall be the same as those used for the movement of aircraft, with the exception of taxi instructions, in which case the word 'PROCEED' shall be substituted for the word 'TAXI' when communicating with vehicles.

b) Air traffic advisory service

Air traffic advisory service does not deliver 'clearances' but only 'advisory information' and it shall use the word 'advise' or 'suggest' when a course of action is proposed to an aircraft.

c) Indication of heavy wake turbulence category

For aircraft in the SUPER or HEAVY wake turbulence categories, the word "super" or "heavy" shall be included, as appropriate, immediately after the aircraft call sign in the initial radiotelephony contact between such aircraft and ATS units.

d) Procedures related to weather deviation

When the pilot initiates communications with ATC, a rapid response may be obtained by stating 'WEATHER DEVIATION REQUIRED' to indicate that priority is desired on the frequency and for ATC response. When necessary, the pilot shall initiate communications using the urgency call 'PAN PAN' (preferably spoken three times).

SIRA.14095 Distress and radiotelephony communication urgency procedures

a) General

1) Distress and urgency traffic shall comprise all radiotelephony messages relative to the distress and urgency conditions respectively. Distress and urgency conditions are defined as:

- i. *Distress*: a condition of being threatened by serious and/or imminent danger and of requiring immediate assistance.
- ii. *Urgency*: a condition concerning the safety of an aircraft or other vehicle, or of some person on board or within sight, but which does not require immediate assistance.

2) The radiotelephony distress signal 'MAYDAY' and the radiotelephony urgency signal 'PAN PAN' shall be used at the commencement of the first distress and urgency communication respectively. At the commencement of any subsequent communication in distress and urgency traffic, it shall be permissible to use the radiotelephony distress and urgency signals.

3) The originator of messages addressed to an aircraft in distress or urgency condition shall restrict to the minimum the number and volume and content of such messages as required by the condition.

4) If no acknowledgement of the distress or urgency message is made by the ATS unit addressed by the aircraft, other ATS units shall render assistance as prescribed in points (b)(2) and (b)(3) respectively.

5) Distress and urgency traffic shall normally be maintained on the frequency on which such traffic was initiated until it is considered that better assistance can be provided by transferring that traffic to another frequency.

6) In cases of distress and urgency communications, in general, the transmissions by radiotelephony shall be made slowly and distinctly, each word being clearly pronounced to facilitate transcription.

b) Radiotelephony distress communications

1) Action by the aircraft in distress

In addition to being preceded by the radiotelephony distress signal 'MAYDAY' in accordance with point (a)(2), preferably spoken three times, the distress message to be sent by an aircraft in distress shall:

- i. be on the air-ground frequency in use at the time;
- ii. consist of as many as possible of the following elements spoken distinctly and, if possible, in the following order:
 - A) the name of the ATS unit addressed (time and circumstances permitting);
 - B) the identification of the aircraft;
 - C) the nature of the distress condition;
 - D) the intention of the pilot-in-command;
 - E) present position, level and heading.

2) Action by the ATS unit addressed or by the first ATS unit acknowledging the distress message The ATS unit addressed by an aircraft in distress, or the first ATS unit acknowledging the distress message, shall:

- i. immediately acknowledge the distress message;
- ii. take control of the communications or specifically and clearly transfer that responsibility, advising the aircraft if a transfer is made; and
- iii. take immediate action to ensure that all necessary information is made available, as soon as possible, to:
 - A) the ATS unit concerned;
 - B) the aircraft operator concerned, or its representative, in accordance with pre-established arrangements;
- iv. warn other ATS units, as appropriate, in order to prevent the transfer of traffic to the frequency of the distress communication.

3) Imposition of silence

- i. The aircraft in distress, or the ATS unit in control of distress traffic, shall be permitted to impose silence, either on all stations of the mobile service in the area or on any station which interferes with the distress traffic. It shall address these instructions 'to all stations' or to one station only, according to the circumstances. In either case, it shall use:
 - A) 'STOP TRANSMITTING';
 - B) the radiotelephony distress signal 'MAYDAY'.

ii. The use of the signals specified in point (b)(3)(i) shall be reserved for the aircraft in distress and for the ATS unit controlling the distress traffic.

4) Action by all other ATS units/aircraft

i. The distress communications have absolute priority over all other communications and ATS units/aircraft aware of them shall not transmit on the frequency concerned unless:

- A) the distress is cancelled or the distress traffic is terminated;
- B) all distress traffic has been transferred to other frequencies;
- C) the ATS unit controlling communications gives permission;
- D) it has itself to render assistance.

ii. Any ATS unit/aircraft which has knowledge of distress traffic, and which cannot itself assist the aircraft in distress, shall nevertheless continue listening to such traffic until it is evident that assistance is being provided.

5) Termination of distress communications and of silence

i. When an aircraft is no longer in distress, it shall transmit a message cancelling the distress condition.

ii. When the ATS unit which has controlled the distress communication traffic becomes aware that the distress condition is ended, it shall take immediate action to ensure that this information is made available, as soon as possible, to:

- A) the ATS units concerned;
- B) the aircraft operator concerned, or its representative, in accordance with pre-established arrangements.

iii. The distress communication and silence conditions shall be terminated by transmitting a message, including the words “DISTRESS TRAFFIC ENDED”, on the frequency or frequencies being used for the distress traffic. This message shall be originated only by the station controlling the communications when, after the reception of the message prescribed.

c) Radiotelephony urgency communications

1) Action by the aircraft reporting an urgency condition except as indicated in point (c)(4) In addition to being preceded by the radiotelephony urgency signal ‘PAN PAN’ in accordance with point (a)(2), preferably spoken three times and each word of the group pronounced as the French word ‘panne’, the urgency message to be sent by an aircraft reporting an urgency condition shall:

i. be on the air-ground frequency in use at the time;

ii. consist of as many as required of the following elements spoken distinctly and, if possible, in the following order:

- A) the name of the ATS unit addressed;
- B) the identification of the aircraft;
- C) the nature of the urgency condition;
- D) the intention of the pilot-in-command;

- E) present position, level and heading;
 - F) any other useful information.
- 2) Action by the ATS unit addressed or first ATS unit acknowledging the urgency message: The ATS unit addressed by an aircraft reporting an urgency condition or the first ATS unit acknowledging the urgency message shall:
- i. acknowledge the urgency message;
 - ii. take immediate action to ensure that all necessary information is made available, as soon as possible, to:
 - A) the ATS unit concerned;
 - B) the aircraft operator concerned, or its representative, in accordance with pre-established arrangements;
 - iii. if necessary, exercise control of communications.
- 3) Action by all other ATS units/aircraft: The urgency communications have priority over all other communications except distress communications and all ATS units/aircraft shall take care not to interfere with the transmission of urgency traffic.
- 4) Action by an aircraft used for medical transports:
- i. The use of the signal described in point (c)(4)(ii) shall indicate that the message which follows concerns a protected medical transport pursuant to the 1949 Geneva Conventions and Additional Protocols.
 - ii. For the purpose of announcing and identifying aircraft used for medical transports, a transmission of the radiotelephony urgency signal 'PAN PAN', preferably spoken three times, and each word of the group pronounced as the French word 'panne', shall be followed by the radiotelephony signal for medical transports 'MAY-DEE- CAL', pronounced as in the French 'medical'. The use of the signals described above indicates that the message which follows concerns a protected medical transport.
- The message shall convey the following data:
- A) the call sign or other recognized means of identification of the medical transports;
 - B) position of the medical transports;
 - C) number and type of the medical transports;
 - D) intended route;
 - E) estimated time en-route and of departure and arrival, as appropriate; and
 - F) any other information such as flight altitude, radio frequencies guarded, languages used and secondary surveillance radar modes and codes.
- 5) Action by the ATS units addressed, or by other stations receiving a medical transports message: The provisions of points (c)(2) and (c)(3) shall apply as appropriate to ATS units receiving a medical transports message.

GM1 SIRA.14095(b)(1) Distress and urgency radiotelephony communication procedures

ACTION BY THE AIRCRAFT IN DISTRESS

a) The provisions may be supplemented by the following measures:

- 1) the distress message of an aircraft in distress being made on the emergency frequency 121.5 MHz or another aeronautical mobile frequency, if considered necessary or desirable. Not all aeronautical stations maintain a continuous guard on the emergency frequency,
- 2) the distress message of an aircraft in distress being broadcast if time and circumstances render this course preferable;
- 3) the aircraft transmitting on the maritime mobile service radiotelephony calling frequencies;
- 4) the aircraft using any means at its disposal to attract attention and make known its conditions (including the activation of the appropriate SSR mode and code);
- 5) any station taking any means at its disposal to assist an aircraft in distress;
- 6) any variation on the elements listed, when the transmitting station is not itself in distress, provided that such circumstance is clearly stated in the distress message.

b) The ATS unit addressed will normally be that ATS unit communicating with the aircraft or in whose area of responsibility the aircraft is operating.

GM1 SIRA.14095(b)(2)(iii)(B) Distress and urgency radiotelephony communication procedures

ACTION BY THE ATS UNIT

The requirement to inform the aircraft operator concerned does not have priority over any other action which involves the safety of the flight in distress, or of any other flight in the area, or which might affect the progress of expected flights in the area.

GM1 SIRA.14095(c)(1) Distress and urgency radiotelephony communication procedures

ACTION BY AIRCRAFT REPORTING AN URGENCY CONDITION

- a) These provisions are not intended to prevent an aircraft from broadcasting an urgency message if time and circumstances render this course preferable.
- b) The ATS unit addressed will normally be that ATS unit communicating with the aircraft or in whose area of responsibility the aircraft is operating.

GM1 SIRA.14095(c)(1)(ii)(F) Distress and urgency radiotelephony communication procedures

Any other useful information may consist of information such as but not limited to remaining aircraft endurance/fuel, number of persons on board, possible presence of hazardous materials and the nature thereof, aircraft colour/markings, survival aids, etc. and may also be transmitted in situation of distress.

GM1 SIRA.14095(c)(2) Distress and urgency radiotelephony communication procedures

ACTION BY ATS WHEN AN URGENCY CONDITION IS REPORTED

The requirement to inform the aircraft operating agency concerned does not have priority over any other action which involves the safety of the flight in distress, or of any other flight in the area, or which might affect the progress of expected flights in the area.

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APPENDIX 1

SIGNALS

1. DISTRESS AND URGENCY SIGNALS

1.1. General

1.1.1. Notwithstanding the provisions in a) and b), an aircraft in distress shall use any means at its disposal to attract attention, make known its position and obtain help.

1.1.2. The telecommunication transmission procedures for the distress and urgency signals shall be in accordance with [Section 14](#).

1.2. Distress signals

1.2.1. The following signals, used either together or separately, mean that grave and imminent danger threatens, and immediate assistance is requested:

- a) a signal made by radiotelegraphy or by any other signalling method consisting of the group SOS (... — — — ... in the Morse Code);
- b) a radiotelephony distress signal consisting of the spoken word MAYDAY;
- c) a distress message sent via data link which transmits the intent of the word MAYDAY;
- d) rockets or shells throwing red lights, fired one at a time at short intervals;
- e) a parachute flare showing a red light;
- f) setting of the transponder to Mode A Code 7700.

1.3. Urgency signals

1.3.1. The following signals, used either together or separately, mean that an aircraft wishes to give notice of difficulties which compel it to land without requiring immediate assistance:

- a) the repeated switching on and off of the landing lights; or
- b) the repeated switching on and off of the navigation lights in such manner as to be distinct from flashing navigation lights.

1.3.2. The following signals, used either together or separately, mean that an aircraft has a very urgent message to transmit concerning the safety of a ship, aircraft or other vehicle, or of some person on board or within sight:

- a) a signal made by radiotelegraphy or by any other signalling method consisting of the group XXX (—.. — —.. — —.. in the Morse Code);
- b) a radiotelephony urgency signal consisting of the spoken words PAN, PAN;
- c) an urgency message sent via data link which transmits the intent of the words PAN, PAN.

2. VISUAL SIGNALS USED TO WARN AN UNAUTHORISED AIRCRAFT FLYING IN OR ABOUT TO ENTER A RESTRICTED, PROHIBITED OR DANGER AREA

2.1. When visual signals are used to warn unauthorized aircraft flying in or about to enter a restricted, prohibited or danger area by day and by night, a series of projectiles discharged from the ground at intervals of 10 seconds, each showing, on bursting, red and green lights or stars shall indicate to an unauthorized aircraft that it is flying in or about to enter a restricted, prohibited or danger area, and that the aircraft is to take such remedial action as may be necessary.

3. SIGNALS FOR AERODROME TRAFFIC

3.1. Light and pyrotechnic signals

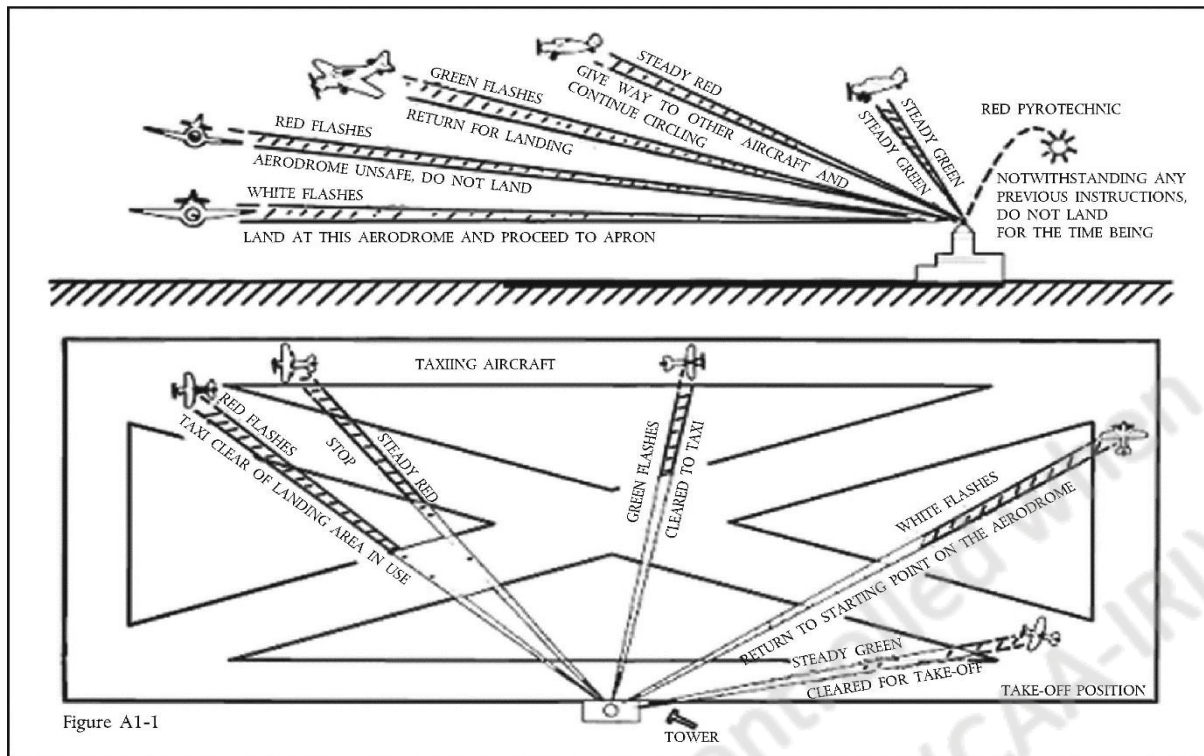
3.1.1. Instructions

Table AP 1-1

Light		From Aerodrome Control to:		
		Aircraft in flight	Aircraft on the ground	Movement of vehicles and personnel
Directed towards aircraft concerned (see Figure A1-1).	Steady green	Cleared to land	Cleared for take-off	NIL
	Steady red	Give way to other aircraft and continue circling	Stop	Permission to cross landing area or to move onto taxiway
	Series of green flashes	Return for landing*	Cleared to taxi	Stop
	Series of red flashes	Aerodrome unsafe, do not land	Taxi clear of landing area in use	Move off the landing area or taxiway and watch out for aircraft
	Series of white flashes	Land at this aerodrome and proceed to apron**	Return to starting point on the aerodrome	Vacate manoeuvring area in accordance with local instructions
Red pyrotechnic		Notwithstanding any previous instructions, do not land for the time being		

‘*’ Clearances to land and to taxi will be given in due course.

‘**’ Clearances to land and to taxi will be given in due course.



3.1.2. Acknowledgement by an aircraft

a) FIXED-WING AIRCRAFT:

I. between sunrise and sunset:

1. move ailerons or rudders while on the ground.
2. rock wings while in flight.

II. between sunset and sunrise:

1. flash navigation or landing lights.

b) HELICOPTERS:

I. between sunrise and sunset:

1. while hovering turn the helicopter toward the aerodrome control Tower and flash the landing light.
2. while in flight flash the landing light.

II. between sunset and sunrise:

1. flash landing light or search light.

3.2. Visual ground signals

3.2.1. Prohibition of landing

3.2.1.1. A horizontal red square panel with yellow diagonals (Figure A1-2) when displayed in a signal area indicates that landings are prohibited and that the prohibition is liable to be prolonged.



Figure A1-2

3.2.2. Need for special precautions while approaching or landing

3.2.2.1 A horizontal red square panel with one yellow diagonal (Figure A1-3) when displayed in a signal area indicates that owing to the bad state of the manoeuvring area, or for any other reason, special precautions must be observed in approaching to land or in landing.



Figure A1-3

3.2.3. Use of runways and taxiways

3.2.3.1. A horizontal white dumb-bell (Figure A1-4) when displayed in a signal area indicates that aircraft are required to land, take off and taxi on runways and taxiways only.

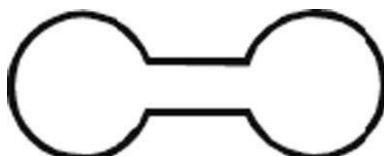


Figure A1-4

3.2.3.2. The same horizontal white dumb-bell as in 3.2.3.1 but with a black bar placed perpendicular to the shaft across each circular portion of the dumb-bell (Figure A1-5) when displayed in a signal area indicates that aircraft are required to land and take off on runways only, but other manoeuvres need not be confined to runways and taxiways.

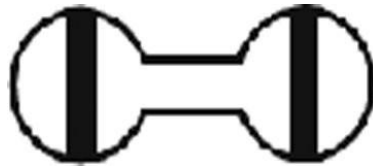


Figure A1-5

3.2.4. Closed runways or taxiways

3.2.4.1. Crosses of a single contrasting colour, white on runways and yellow on taxiways (Figure A1-6), displayed horizontally on runways and taxiways or parts thereof indicate an area unfit for movement of aircraft.



Figure A1-6

3.2.5. Directions for landing or take-off

3.2.5.1. A horizontal white or orange landing T (Figure A1-7) indicates the direction to be used by aircraft for landing and take-off, which shall be in a direction parallel to the shaft of the T towards the cross arm. When used at night, the landing T shall be either illuminated or outlined in white lights.



Figure A1-7

3.2.5.2. A set of two digits (Figure A1-8) displayed vertically at or near the aerodrome control tower indicates to aircraft on the manoeuvring area the direction for take-off, expressed in units of 10 degrees to the nearest 10 degrees of the magnetic compass.



Figure A1-8

3.2.6. Right-hand traffic

3.2.6.1. When displayed in a signal area, or horizontally at the end of the runway or strip in use, a right-hand arrow of conspicuous colour (Figure A1- 9) indicates that turns are to be made to the right before landing and after take-off.

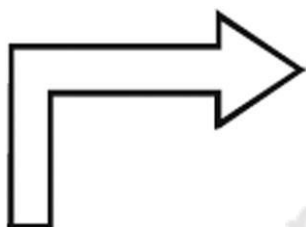


Figure A1-9

3.2.7. Air traffic services reporting office

3.2.7.1. The letter C displayed vertically in black against a yellow background (Figure A1-10) indicates the location of the air traffic services reporting office.



Figure A1-10

3.2.8. Sailplane flights in operation

3.2.8.1. A double white cross displayed horizontally (Figure A1-11) in the signal area indicates that the aerodrome is being used by sailplanes and that sailplane flights are being performed.

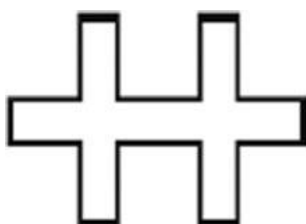


Figure A1-11

4. MARSHALLING SIGNALS

4.1. From a signalman/marshaller to an aircraft

4.1.1. The signals for use by the signalman/marshaller, with hands illuminated as necessary to facilitate observation by the pilot, and facing the aircraft in a position shall be:

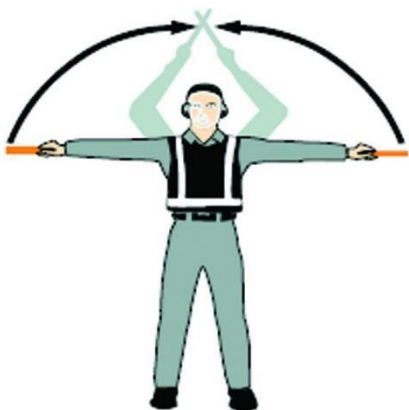
- a) for fixed-wing aircraft, on left side of aircraft, where best seen by the pilot; and
- b) for helicopters, where the signalman/marshaller can best be seen by the pilot.

4.1.2. Prior to using the following signals, the signalman/marshaller shall ascertain that the area within which an aircraft is to be guided is clear of objects which the aircraft, in complying with [SIRA.3301\(a\)](#), might otherwise strike.

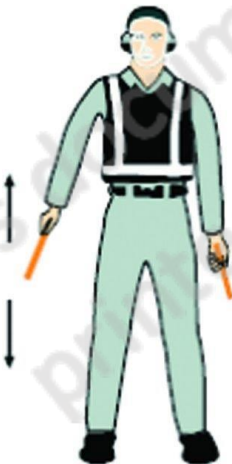
	1. Wing walker/guide¹ Raise right hand above head level with wand pointing up; move left-hand wand pointing down toward body.
	2. Identify gate Raise fully extended arms straight above head with wands pointing up.

¹ This signal provides an indication by a person positioned at the aircraft wing tip, to the pilot/marshaller/push-back operator, that the aircraft movement on/off a parking position would be unobstructed.

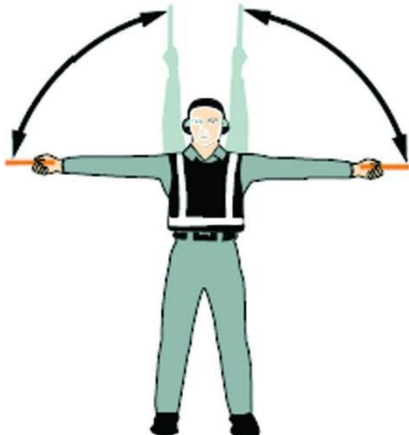
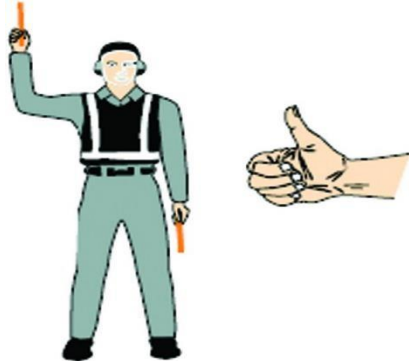
	3. Proceed to next signalman/marshaller or as directed by tower/ground control Point both arms upward; move and extend arms outward to sides of body and point with wands to direction of next signalman/marshaller or taxi area.
	4. Straight ahead Bend extended arms at elbows and move wands up and down from chest height to head.
	5(a) Turn left (from pilot's point of view) With right arm and wand extended at a 90-degree angle to body, make 'come ahead' signal with left hand. The rate of signal motion indicates to pilot the rate of aircraft turn.

	5(b) Turn right (from pilot's point of view) With left arm and wand extended at a 90-degree angle to body, make 'come ahead' signal with right hand. The rate of signal motion indicates to pilot the rate of aircraft turn.
	6(a) Normal stops Fully extend arms and wands at a 90-degree angle to sides and slowly move to above head until wands cross.
	6(b) Emergency stops Abruptly extend arms and wands to top of head, crossing wands.
	7(a) Set brakes Raise hand just above shoulder height with open palm. Ensuring eye contact with flight crew, close hand into a fist. <i>Do not</i> move until receipt of 'thumbs up' acknowledgement from flight crew.

	7(b) Release brakes Raise hand just above shoulder height with hand closed in a fist. Ensuring eye contact with flight crew, open palm. <i>Do not</i> move until receipt of 'thumbs up' acknowledgement from flight crew.
	8(a) Chocks inserted With arms and wands fully extended above head, move wands inward in a 'jabbing' motion until wands touch. <i>Ensure</i> acknowledgement is received from flight crew.
	8(b) Chocks removed With arms and wands fully extended above head, move wands outward in a 'jabbing' motion. <i>Do not</i> remove chocks until authorized by flight crew.
	9. Start engine(s) Raise right arm to head level with wand pointing up and start a circular motion with hand; at the same time, with left arm raised above head level, point to engine to be started.

	10. Cut engines Extend arm with wand forward of body at shoulder level; move hand and wand to top of left shoulder and draw wand to top of right shoulder in a slicing motion across throat.
	11. Slow down Move extended arms downwards in a 'patting' gesture, moving wands up and down from waist to knees.
	12. Slow down engine(s) on indicated side With arms down and wands toward ground, wave either <i>right</i> or <i>left</i> wand up and down indicating engine(s) on <i>left</i> or <i>right</i> side respectively should be slowed down.

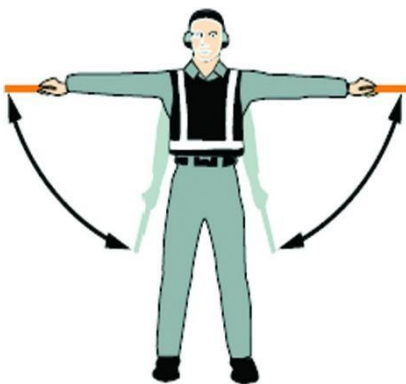
	13. Move back With arms in front of body at waist height, rotate arms in a forward motion. To stop rearward movement, use signal 6(a) or 6(b).
	14(a) Turns while backing (for tail to starboard) Point left arm with wand down and bring right arm from overhead vertical position to horizontal forward position, repeating right-arm movement.
	14(b) Turns while backing (for tail to port) Point right arm with wand down and bring left arm from overhead vertical position to horizontal forward position, repeating left-arm movement.

	15. Affirmative/all clear² Raise right arm to head level with wand pointing up or display hand with ‘thumbs up’; left arm remains at side by knee.
	16. Hover³ Fully extend arms and wands at a 90-degree angle to sides.
	17. Move upwards⁴ Fully extend arms and wands at a 90-degree angle to sides and, with palms turned up, move hands upwards. Speed of movement indicates rate of ascent.

² This signal is also used as a technical/servicing communication signal.

³ For use to hovering helicopters

⁴ For use to hovering helicopters.

	18. Move downwards⁵ Fully extend arms and wands at a 90-degree angle to sides and, with palms turned down, move hands downwards. Speed of movement indicates rate of descent.
	19(a) Move horizontally left (from pilot's point of view)⁶ Extend arm horizontally at a 90-degree angle to right side of body. Move other arm in same direction in a sweeping motion.
	19(b) Move horizontally right (from pilot's point of view)⁷ Extend arm horizontally at a 90-degree angle to left side of body. Move other arm in same direction in a sweeping motion.

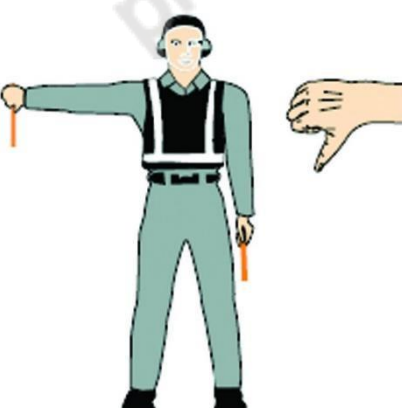
⁵ For use to hovering helicopters.

⁶ For use to hovering helicopters.

⁷ For use to hovering helicopters.

	20. Land⁸ Cross arms with wands downwards and in front of body.
	21. Hold position/stand by Fully extend arms and wands downwards at a 45-degree angle to sides. Hold position until aircraft is clear for next manoeuvre.
	22. Dispatch aircraft Perform a standard salute with right hand and/or wand to dispatch the aircraft. Maintain eye contact with flight crew until aircraft has begun to taxi.

⁸ For use to hovering helicopters.

	23. Do not touch controls (technical/servicing communication signal) Extend right arm fully above head and close fist or hold wand in horizontal position; left arm remains at side by knee.
	24. Connect ground power (technical/servicing communication signal) Hold arms fully extended above head; open left hand horizontally and move finger tips of right hand into and touch open palm of left hand (forming a 'T'). At night, illuminated wands can also be used to form the 'T' above head.
	25. Disconnect power (technical/servicing communication signal) Hold arms fully extended above head with finger tips of right hand touching open horizontal palm of left hand (forming a 'T'); then move right hand away from the left. <i>Do not</i> disconnect power until authorized by flight crew. At night, illuminated wands can also be used to form the 'T' above head.
	26. Negative (technical/servicing communication signal) Hold right arm straight out at 90 degrees from shoulder and point wand down to ground or display hand with 'thumbs down'; left hand remains at side by knee.

	27. Establish communication via interphone (technical/servicing communication signal) Extend both arms at 90 degrees from body and move hands to cup both ears.
	28. Open/close stairs (technical/servicing communication signal)⁹ With right arm at side and left arm raised above head at a 45- degree angle, move right arm in a sweeping motion towards top of left shoulder.

⁹ This signal is intended mainly for aircraft with the set of integral stairs at the front.

4.2. From the pilot of an aircraft to a signalman/marshaller

4.2.1. These signals shall be used by a pilot in the cockpit with hands plainly visible to the signalman/marshaller, and illuminated as necessary to facilitate observation by the signalman/marshaller.

	(a) Brakes engaged: raise arm and hand, with fingers extended, horizontally in front of face, then clench fist.
	(b) Brakes released: raise arm, with fist clenched, horizontally in front of face, then extend fingers.
	(c) Insert chocks: arms extended, palms outwards, move hands inwards to cross in front of face.
	(d) Remove chocks: hands crossed in front of face, palms outwards, move arms outwards.
	(e) ready to start engine(s): Raise the appropriate number of fingers on one hand indicating the number of the engine to be started.

4.3. Technical/servicing communication signals

4.3.1. Manual signals shall only be used when verbal communication is not possible with respect to technical/servicing communication signals.

4.3.2. Signalmen/marshalls shall ensure that an acknowledgement is received from the flight crew with respect to technical/servicing communication signals.

5. STANDARD EMERGENCY HAND SIGNALS

5.1. The following hand signals are established as the minimum required for emergency communication between the ARFF incident commander/ARFF firefighters and the cockpit and/or cabin crews of the incident aircraft. ARFF emergency hand signals should be given from the left front side of the aircraft for the cockpit crew.

	1. Recommend evacuation Evacuation recommended based on aircraft rescue and fire-fighting and Incident Commander's assessment of external situation. Arm extended from body, and held horizontal with hand upraised at eye level. Execute beckoning arm motion angled backward. Non- beckoning arm held against body. Night — same with wands.
	2. Recommend stop Recommend evacuation in progress be halted. Stop aircraft movement or other activity in progress. Arms in front of head — Crossed at wrists Night — same with wands.
	3. Emergency contained No outside evidence of dangerous conditions or 'all clear.' Arms extended outward and down at a 45-degree angle. Arms moved inward below waistline simultaneously until wrists crossed, then extended outward to starting position. Night — same with wands.

	4. Fire Move right-hand in a ‘fanning’ motion from shoulder to knee, while at the same time pointing with left hand to area of fire. Night — same with wands.
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GM1 to Appendix 1(4.1) MARSHALLING SIGNALS

FROM A SIGNALMAN/MARSHALLER TO AN AIRCRAFT — GENERAL

- a) The meaning of the relevant signals remains the same if bats, illuminated wands or torch lights are held rather than the signalman's hands being illuminated.
- b) The aircraft engines are numbered, for the signalman facing the aircraft, from right to left (i.e. No 1 engine being the port outer engine).
- c) References to wands may also be read to refer to daylight -fluorescent table-tennis bats or gloves (daytime only).
- d) References to the signalman may also be read to refer to marshaller.
- e) The design of many aircraft is such that the path of the wing tips, engines and other extremities cannot always be monitored visually from the flights deck while the aircraft is being manoeuvred on the ground.

GM1 to Appendix 1(4.2.1.1) MARSHALLING SIGNALS

FROM THE PILOT OF AN AIRCRAFT TO A SIGNALMAN/MARSHALLER — BRAKES

When providing the signal for 'brakes engaged' the moment the fist is clenched indicates the moment of brake engagement. When providing the signal for 'brakes released' the moment the fingers are extended indicates the moment of brake release.

GM1 to Appendix 1(5.1) STANDARD EMERGENCY HAND SIGNALS

GENERAL

In order to communicate more effectively with the cabin crew, emergency hand signals may be given by ARFF firefighters from positions other than those that would be used by a signalman to provide marshalling signals.

APPENDIX 2

UNMANNED FREE BALLOONS

1. CLASSIFICATION OF UNMANNED FREE BALLOONS

1.1. Unmanned free balloons shall be classified as (see Figure AP2-1):

- a) *light*: an unmanned free balloon which carries a payload of one or more packages with a combined mass of less than 4 kg, unless qualifying as a heavy balloon in accordance with (c)(2), (3) or (4); or
- b) *medium*: an unmanned free balloon which carries a payload of two or more packages with a combined mass of 4 kg or more, but less than 6 kg, unless qualifying as a heavy balloon in accordance with (c)(2), (3) or (4) below; or
- c) *heavy*: an unmanned free balloon which carries a payload which:
 - I. has a combined mass of 6 kg or more; or
 - II. includes a package of 3 kg or more; or
 - III. includes a package of 2 kg or more with an area density of more than 13 g per square centimetre, determined by dividing the total mass in grams of the payload package by the area in square centimetres of its smallest surface; or
 - IV. uses a rope or other device for suspension of the payload that requires an impact force of 230 N or more to separate the suspended payload from the balloon.

2. GENERAL OPERATING RULES

- 2.1. An unmanned free balloon shall not be operated without authorisation from the State from which the launch is made.
- 2.2. An unmanned free balloon, other than a light balloon used exclusively for meteorological purposes and operated in the manner prescribed by the CAA.IRI, shall not be operated across the territory of another State without authorisation from the other State concerned.
- 2.3. The authorisation referred to in 2.2 shall be obtained prior to the launching of the balloon if there is reasonable expectation, when planning the operation, that the balloon may drift into airspace over the territory of another State. Such authorisation may be obtained for a series of balloon flights or for a particular type of recurring flight, e.g. atmospheric research balloon flights.
- 2.4. An unmanned free balloon shall be operated in accordance with conditions specified by the State of Registry and the State(s) expected to be overflown.
- 2.5. An unmanned free balloon shall not be operated in such a manner that impact of the balloon, or any part thereof, including its payload, with the surface of the earth, creates a hazard to persons or property.
- 2.6. A heavy unmanned free balloon shall not be operated over the high seas without prior coordination with the CAA.IRI.

Figure AP2-1

CHARACTERISTICS		PAYLOAD MASS (kilogrammes)					
		1	2	3	4	5	6 or more
ROPE or OTHER SUSPENSION 230 Newtons or MORE		HEAVY					
INDIVIDUAL PAYLOAD PACKAGE	AREA DENSITY more than 13 g/cm ²						
AREA DENSITY CALCULATION MASS (g) Area of smallest surface (cm²)	AREA DENSITY less than 13 g/cm ²						
COMBINED MASS (if Suspension OR Area density OR Mass of individual package are not factors)		LIGHT		MEDIUM			

3. OPERATING LIMITATIONS AND EQUIPMENT REQUIREMENTS

3.1. A heavy unmanned free balloon shall not be operated without authorisation from the ANSP(s) at or through any level below 18 000 m (60 000 ft) pressure-altitude at which:

- a) there are clouds or obscuring phenomena of more than four oktas coverage; or
- b) the horizontal visibility is less than 8 km.

3.2. A heavy or medium unmanned free balloon shall not be released in a manner that will cause it to fly lower than 300 m (1 000 ft) over the congested areas of cities, towns or settlements or an open-air assembly of persons not associated with the operation.

3.3. A heavy unmanned free balloon shall not be operated unless:

- a) it is equipped with at least two payload flight -termination devices or systems, whether automatic or operated by telecommand, that operate independently of each other;
- b) for polyethylene zero-pressure balloons, at least two methods, systems, devices, or combinations thereof, that function independently of each other are employed for terminating the flight of the balloon envelope;
- c) the balloon envelope is equipped with either a radar reflective device(s) or radar reflective material that will present an echo to surface radar operating in the 200 MHz to 2 700 MHz frequency range, and/or the balloon is equipped with such other devices as will permit continuous tracking by the operator beyond the range of ground-based radar.

3.4. A heavy unmanned free balloon shall not be operated under the following conditions:

- a) in an area where ground-based SSR equipment is in use, unless it is equipped with a secondary surveillance radar transponder, with pressure-altitude reporting capability, which is continuously operating on an assigned code, or which can be turned on when necessary by the tracking station; or
- b) in an area where ground-based ADS-B equipment is in use, unless it is equipped with an ADS-B transmitter, with pressure-altitude reporting capability, which is continuously operating or which can be turned on when necessary by the tracking station.

3.5. An unmanned free balloon that is equipped with a trailing antenna that requires a force of more than 230 N to break it at any point shall not be operated unless the antenna has coloured pennants or streamers that are attached at not more than 15 m intervals.

3.6. A heavy unmanned free balloon shall not be operated below 18 000 m (60 000 ft) pressure-altitude at night or during any other period prescribed by CAA.IRI, unless the balloon and its attachments and payload, whether or not they become separated during the operation, are lighted.

3.7. A heavy unmanned free balloon that is equipped with a suspension device (other than a highly conspicuously coloured open parachute) more than 15 m long shall not be operated during night below 18 000 m (60 000 ft) pressure-altitude unless the suspension device is coloured in alternate bands of high conspicuity colours or has coloured pennants attached.

4. TERMINATION

4.1. The operator of a heavy unmanned free balloon shall activate the appropriate termination devices required by 3.3(a) and (b):

- a) when it becomes known that weather conditions are less than those prescribed for the operation;
- b) if a malfunction or any other reason makes further operation hazardous to air traffic or to persons or property on the surface; or
- c) Prior to unauthorized entry into the airspace over another State's territory.

5. FLIGHT NOTIFICATION

5.1. Pre-flight notification

5.1.1. Early notification of the intended flight of an unmanned free balloon in the medium or heavy category shall be made to the appropriate air traffic services unit not less than seven days before the date of the intended flight.

5.1.2. Notification of the intended flight shall include such of the following information as may be required by the appropriate air traffic services unit:

- a) balloon flight identification or project code name;
- b) balloon classification and description;
- c) SSR code, aircraft address or NDB frequency as applicable;
- d) operator's name and telephone number;
- e) launch site;
- f) estimated time of launch (or time of commencement and completion of multiple launches);
- g) number of balloons to be launched and the scheduled interval between launches (if multiple launches);
- h) expected direction of ascent;
- i) cruising level(s) (pressure-altitude);
- j) the estimated elapsed time to pass 18 000 m (60 000 ft) pressure-altitude or to reach cruising level if at or below 18 000 m (60 000 ft), together with the estimated location. If the operation consists of continuous launchings, the time to be included shall be the estimated time at which the first and the last in the series will reach the appropriate level (e.g. 122136Z–130330Z);
- k) the estimated date and time of termination of the flight and the planned location of the impact/recovery area. In the case of balloons carrying out flights of long duration, as a result of which the date and time of termination of the flight and the location of impact cannot be forecast with accuracy, the term 'long duration' shall be used. If there is to be more than one location of impact/recovery, each location shall be listed together with the appropriate estimated time of impact. If there is to be a series of continuous impacts, the time to be included shall be the estimated time of the first and the last in the series (e.g. 070330Z–072300Z).

5.1.3. Any changes in the pre-launch information notified in accordance with point 5.1.2 shall be forwarded to the ATS unit concerned not less than 6 hours before the estimated time of launch, or in the case of solar or cosmic disturbance investigations involving a critical

time element, not less than 30 minutes before the estimated time of the commencement of the operation.

5.2. Notification of launch

5.2.1. Immediately after a medium or heavy unmanned free balloon is launched the operator shall notify the appropriate air traffic services unit of the following:

- a) balloon flight identification;
- b) launch site;
- c) actual time of launch;
- d) estimated time at which 18 000 m (60 000 ft) pressure-altitude will be passed, or the estimated time at which the cruising level will be reached if at or below 18 000 m (60 000 ft), and the estimated location; and
- e) any changes to the information previously notified in accordance with 5.1.2(g) and (h).

5.3. Notification of cancellation

5.3.1. The operator shall notify the appropriate air traffic services unit immediately it is known that the intended flight of a medium or heavy unmanned free balloon, previously notified in accordance with paragraph 5.1, has been cancelled.

6. POSITION RECORDING AND REPORTS

6.1. The operator of a heavy unmanned free balloon operating at or below 18 000 m (60 000 ft) pressure-altitude shall monitor the flight path of the balloon and forward reports of the balloon's position as requested by air traffic services. Unless air traffic services require reports of the balloon's position at more frequent intervals, the operator shall record the position every 2 hours.

6.2. The operator of a heavy unmanned free balloon operating above 18 000 m (60 000 ft) pressure-altitude shall monitor the flight progress of the balloon and forward reports of the balloon's position as requested by air traffic services. Unless air traffic services require reports of the balloon's position at more frequent intervals, the operator shall record the position every 24 hours.

6.3. If a position cannot be recorded accordance with 6.1 and 6.2, the operator shall immediately notify the appropriate air traffic services unit. This notification shall include the last recorded position. The appropriate air traffic services unit shall be notified immediately when tracking of the balloon is re-established.

6.4. One hour before the beginning of planned descent of a heavy unmanned free balloon, the operator shall forward to the appropriate ATS unit the following information regarding the balloon:

- a) the current geographical position;
- b) the current level (pressure-altitude);
- c) the forecast time of penetration of 18 000 m (60 000 ft) pressure-altitude, if applicable;
- d) the forecast time and location of ground impact.

6.5. The operator of a heavy or medium unmanned free balloon shall notify the appropriate air traffic services unit when the operation is ended.

GM1 to Appendix 2(3.3b) OPERATING LIMITATIONS AND EQUIPMENT REQUIREMENTS

SUPER-PRESSURE BALLOONS

Super-pressure balloons do not require flight termination devices as they quickly rise after payload discharge and burst without the need for a device or system designed to puncture the balloon envelope. In this context a super-pressure balloon is a simple non-extensible envelope capable of withstanding a differential of pressure, higher inside than out. It is inflated so that the smaller night - time pressure of the gas still fully extends the envelope. Such a super -pressure balloon will keep essentially constant level until too much gas diffuses out of it.

APPENDIX 3

TABLE OF CRUISING LEVELS

1.1. The cruising levels to be observed are as follows:

Track*											
From 000 degrees to 179 degrees						From 180 degrees to 359 degrees					
IFR Flights			VFR Flights			IFR Flights			VFR Flights		
Level			Level			Level			Level		
FL	Feet	Metres	FL	Feet	Metres	FL	Feet	Metres	FL	Feet	Metres
010	1000	300	—	—	—	020	2000	600	—	—	—
030	3000	900	035	3500	1050	040	4000	1200	045	4500	1350
050	5000	1500	055	5500	1700	060	6000	1850	065	6500	2000
070	7000	2150	075	7500	2300	080	8000	2450	085	8500	2600
090	9000	2750	095	9500	2900	100	10000	3050	105	10500	3200
110	11000	3350	115	11500	3500	120	12000	3650	125	12500	3800
130	13000	3950	135	13500	4100	140	14000	4250	145	14500	4400
150	15000	4550	155	15500	4700	160	16000	4900	165	16500	5050
170	17000	5200	175	17500	5350	180	18000	5500	185	18500	5650
190	19000	5800	195	19500	5950	200	20000	6100	205	20500	6250
210	21000	6400	215	21500	6550	220	22000	6700	225	22500	6850
230	23000	7000	235	23500	7150	240	24000	7300	245	24500	7450
250	25000	7600	255	25500	7750	260	26000	7900	265	26500	8100
270	27000	8250	275	27500	8400	280	28000	8550	285	28500	8700
290	29000	8850				300	30000	9150			
310	31000	9450				320	32000	9750			
330	33000	10050				340	34000	10350			
350	35000	10650				360	36000	10950			
370	37000	11300				380	38000	11600			
390	39000	11900				400	40000	12200			
410	41000	12500				430	43000	13100			
450	45000	13700				470	47000	14350			
490	49000	14950				510	51000	15550			
etc.	etc.	etc.				etc.	etc.	etc.			

‘*’ Magnetic track, or in polar areas at latitudes higher than 70 degrees and within such extensions to those areas as may be prescribed by the states responsible for the provision of air navigation service over such areas, grid tracks as determined by a network of lines parallel to the Greenwich Meridian superimposed on a polar stereographic chart in which the direction towards the North Pole is employed as the Grid North.

APPENDIX 4

ATS AIRSPACE CLASSES – SERVICES PROVIDED AND FLIGHT REQUIREMENTS

([SIRA.6001](#) and [SIRA.5025\(b\)](#) refers)

Class	Type of flight	Separation provided	Service provided	Speed limitation*	Radio communication requirement	Subject to an ATC clearance
A	IFR only	All aircraft	Air traffic control service	Not applicable	Yes	Yes
B	IFR	All aircraft	Air traffic control service	Not applicable	Yes	Yes
	VFR	All aircraft	Air traffic control service	Not applicable	Yes	Yes
C	IFR	IFR from IFR IFR from VFR	Air traffic control service	Not applicable	Yes	Yes
	VFR	VFR from IFR	1) Air traffic control service for separation from IFR; 2) VFR/VFR traffic information (and traffic avoidance advice on request)	250 kts IAS below 3 050 m (10 000 ft) AMSL	Yes	Yes
D	IFR	IFR from IFR	Air traffic control service, traffic information about VFR flights (and traffic avoidance advice on request)	250 kts IAS below 3 050 m (10 000 ft) AMSL	Yes	Yes
	VFR	Nil	IFR/VFR and VFR/VFR traffic information (and traffic avoidance advice on request)	250 kts IAS below 3 050 m (10 000 ft) AMSL	Yes	Yes
E	IFR	IFR from IFR	Air traffic control service and, as far as practical, traffic information about VFR flights	250 kts IAS below 3 050 m (10 000 ft) AMSL	Yes	Yes
	VFR	Nil	Traffic information as far as practical	250 kts IAS below 3 050 m (10 000 ft) AMSL	Yes	No
F	IFR	IFR from IFR as far as practical	Air traffic advisory service; flight information service if requested	250 kts IAS below 3 050 m (10 000 ft) AMSL	Yes	No
	VFR	Nil	Flight information service if requested	250 kts IAS below 3 050 m (10 000 ft) AMSL	Yes	No
G	IFR	Nil	Flight information service if requested	250 kts IAS below 3 050 m (10 000 ft) AMSL	Yes	No
	VFR	Nil	Flight information service if requested	250 kts IAS below 3 050 m (10 000 ft) AMSL	Yes	No

* When the height of the transition altitude is lower than 3 050 m (10 000 ft) AMSL, FL 100 should be used in lieu of 10 000 ft.

GM1 to Appendix 4 ATS airspace classes — services provided and flight requirements

GENERAL

The purpose of this Appendix is to show the requirements related to each specific airspace class in a concise manner. Therefore, it does not provide any specifications additional to those already expressed in the implementing rule.

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APPENDIX 5

TECHNICAL SPECIFICATIONS RELATED TO AIRCRAFT

OBSERVATIONS AND REPORTS BY VOICE COMMUNICATIONS

A. REPORTING INSTRUCTIONS

1. CONTENTS OF AIR-REPORTS

1.1. Position reports and special air-reports

1.1.1. Section 1 of the model set out in point A is obligatory for position reports. Section 2 shall be added, in whole or in part, only when so requested by the operator or its designated representative, or when deemed necessary by the pilot-in-command. Section 3 shall be included in special air-reports.

1.1.2. Condition prompting the issuance of a special air-report are to be selected from the list presented in point [SIRA.12005\(a\)](#).

1.1.3. In the case of special air-reports containing information on volcanic activity, a post-flight report shall be made using the volcanic activity reporting form (Model VAR) set out in point B. All elements which are observed shall be recorded and indicated respectively in the appropriate places on the form Model VAR.

1.1.4. Special air-reports shall be issued as soon as practicable after a phenomenon calling for a special air-report has been observed.

2. DETAILED REPORTING INSTRUCTIONS

2.1. Items of an air-report shall be reported in the order in which they are listed in the model AIREP SPECIAL form.

MESSAGE TYPE DESIGNATOR. Report 'SPECIAL' for a special air -report.

MODEL AIREP SPECIAL

ITEM	PARAMETER	TRANSMIT IN TELEPHONY as appropriate
—	Message-type designator: special air-report	[AIREP] SPECIAL

Section 1	1	Aircraft identification	(<i>aircraft identification</i>)
	2	Position	POSITION (<i>latitude and longitude</i>) OVER (<i>significant point</i>) ABEAM (<i>significant point</i>) (<i>significant point</i>) (<i>bearing</i>) (<i>distance</i>)
	3	Time	(<i>time</i>)
	4	Level	FLIGHT LEVEL (<i>number</i>) or (<i>number</i>) METRES or FEET CLIMBING TO FLIGHT LEVEL (<i>number</i>) or (<i>number</i>) METRES or FEET DESCENDING TO FLIGHT LEVEL (<i>number</i>) or (<i>number</i>) METRES or FEET
	5	Next position and estimated time over	(<i>position</i>) (<i>time</i>)
	6	Ensuing significant point	(<i>position</i>) NEXT
Section 2	7	Estimated time of arrival	(<i>aerodrome</i>) (<i>time</i>)
	8	Endurance	ENDURANCE (<i>hours and minutes</i>)
Section 3	9	Phenomenon encountered or observed, prompting a special air-report: • Moderate turbulence • Severe turbulence • Moderate icing • Severe icing • Severe mountain wave • Thunderstorms without hail • Thunderstorms with hail • Heavy dust/sandstorm • Volcanic ash cloud • Pre-eruption volcanic activity or volcanic eruption Runway braking action • Good • Good to Medium • Medium • Medium to Poor • Poor • Less than Poor	TURBULENCE MODERATE TURBULENCE SEVERE ICING MODERATE ICING SEVERE MOUNTAINWAVE SEVERE THUNDERSTORMS THUNDERSTORMS WITH HAIL DUSTSTORM or SANDSTORM HEAVY VOLCANIC ASH CLOUD PRE-ERUPTION VOLCANIC ACTIVITY or VOLCANIC ERUPTION GOOD GOOD TO MEDIUM MEDIUM MEDIUM TO POOR POOR LESS THAN POOR

Section 1

Item 1 — AIRCRAFT IDENTIFICATION. Report the aircraft radiotelephony call sign as prescribed in point [SIRA.14050](#).

Item 2 — POSITION. Report position in latitude (degrees as 2 numerics or degrees and minutes as 4 numerics, followed by 'North' or 'South') and longitude (degrees as 3 numerics or degrees and minutes as 5 numerics followed by 'East' or 'West'), or as a significant point identified by a coded designator (2 to 5 characters), or as a significant point followed by magnetic bearing (3 numerics) and distance in nautical miles from the point. Precede significant point with 'ABEAM', if applicable.

Item 3 — TIME. Report time in hours and minutes UTC (4 numerics) unless reporting time in minutes past the hour (2 numerics) is prescribed on the basis of regional air navigation agreements. The time reported must be the actual time of the aircraft at the position and not the time of origination or transmission of the report. Time shall always be reported in hours and minutes UTC when issuing a special air-report.

Item 4 — FLIGHT LEVEL OR ALTITUDE. Report flight level by 3 numerics when on standard pressure altimeter setting. Report altitude in metres followed by 'METRES' or in feet followed by 'FEET' when on QNH. Report 'CLIMBING' (followed by the level) when climbing or 'DESCENDING' (followed by the level) when descending to a new level after passing the significant point.

Item 5 — NEXT POSITION AND ESTIMATED TIME OVER. Report the next reporting point and the estimated time over such reporting point, or report the estimated position that will be reached one hour later, according to the position reporting procedures in force. Use the data conventions specified in Item 2 for position. Report the estimated time over this position. Report time in hours and minutes UTC (4 numerics) unless reporting time in minutes past the hour (2 numerics) as prescribed by regional air navigation agreements.

Item 6 — ENSUING SIGNIFICANT POINT. Report the ensuing significant point following the 'next position and estimated time over'.

Section 2

Item 7 — ESTIMATED TIME OF ARRIVAL. Report the name of the aerodrome of the first intended landing, followed by the estimated time of arrival at this aerodrome in hours and minutes UTC (4 numerics).

Item 8 — ENDURANCE. Report 'ENDURANCE' followed by fuel endurance in hours and minutes (4 numerics).

Section 3

Item 9 — PHENOMENON PROMPTING A SPECIAL AIR-REPORT. Report one of the following phenomena encountered or observed:

- moderate turbulence as 'TURBULENCE MODERATE', and
- severe turbulence as 'TURBULENCE SEVERE'.

The following specifications apply:

- Moderate - Conditions in which moderate changes in aircraft attitude and/or altitude may occur but the aircraft remains in positive control at all times. Usually, small variations in airspeed. Changes in accelerometer readings of 0.5 g to 1.0 g at the aircraft's centre of gravity. Difficulty in walking. Occupants feel strain against seat belts. Loose objects move about.
- Severe - Conditions in which abrupt changes in aircraft attitude and/or altitude occur; aircraft may be out of control for short periods. Usually, large variations in airspeed. Changes in accelerometer readings greater than 1.0 g at the aircraft's centre of gravity. Occupants are forced violently against seat belts. Loose objects are tossed about.
- moderate icing as 'ICING MODERATE', severe icing as 'ICING SEVERE';

The following specifications apply:

- Moderate - Conditions in which change of heading and/or altitude may be considered desirable.
- Severe - Conditions in which immediate change of heading and/or altitude is considered essential.
- Severe mountain wave as 'MOUNTAIN WAVE SEVERE';

The following specification applies:

- Severe - Conditions in which the accompanying downdraft is 3.0 m/s (600 ft/min) or more and/or severe turbulence is encountered.
- Thunderstorm without hail as 'THUNDERSTORM', thunderstorm with hail as 'THUNDERSTORM WITH HAIL';

The following specification applies:

Only report those thunderstorms which are:

- obscured in haze, or
- embedded in cloud, or
- widespread, or
- forming a squall line.
- Heavy duststorm or sandstorm as 'DUSTSTORM HEAVY' or 'SANDSTORM HEAVY';
- Volcanic ash cloud as 'VOLCANIC ASH CLOUD';
- Pre-eruption volcanic activity or a volcanic eruption as 'PRE-ERUPTION VOLCANIC ACTIVITY' or 'VOLCANIC ERUPTION';

The following specification applies:

'Pre-eruption volcanic activity' in this context means unusual and/or increasing volcanic activity which could presage a volcanic eruption.

- Good braking action as "BRAKING ACTION GOOD"
- Good to medium braking action as "BRAKING ACTION GOOD TO MEDIUM"
- Medium braking action as "BRAKING ACTION MEDIUM"
- Medium to poor braking action as "BRAKING ACTION MEDIUM TO POOR"
- Poor braking action as "BRAKING ACTION POOR"

- Less than poor braking action as “BRAKING ACTION LESS THAN POOR”

The following specifications apply:

Good — Braking deceleration is normal for the wheel braking effort applied and directional control is normal.

Good to medium — Braking deceleration or directional control is between Good and Medium.

Medium — Braking deceleration is noticeably reduced for the wheel braking effort applied or directional control is noticeably reduced.

Medium to poor — Braking deceleration or directional control is between Medium and Poor.

Poor — Braking deceleration is significantly reduced for the wheel braking effort applied or directional control is significantly reduced.

Less than poor — Braking deceleration is minimal to non-existent for the wheel braking effort applied or directional control is uncertain.

2.2. Information recorded on the volcanic activity reporting form (Model VAR) is not for transmission by RTF but, on arrival at an aerodrome, is to be delivered without delay by the operator or a flight crew member to the aerodrome meteorological office. If such an office is not easily accessible, the completed form shall be delivered in accordance with local arrangements agreed upon between MET and ATS providers and the aircraft operator.

3. FORWARDING OF METEOROLOGICAL INFORMATION RECEIVED BY VOICE COMMUNICATIONS

When receiving special air-reports, ATS units shall forward these air-reports without delay to the associated meteorological watch office (MWO). In order to ensure assimilation of air-reports in ground-based automated systems, the elements of such reports shall be transmitted using the data conventions specified below and in the order prescribed.

- ADDRESSEE. Record the station called and, when necessary, relay required.
- MESSAGE TYPE DESIGNATOR. Record ‘ARS’ for a special air-report.
- AIRCRAFT IDENTIFICATION. Record the aircraft identification using the data convention specified for Item 7 of the flight plan, without a space between the operator's designator and the aircraft registration or flight identification, if used.

Section 1

Item 0 — POSITION. Record position in latitude (degrees as 2 numerics or degrees and minutes as 4 numerics, followed, without a space, by N or S) and longitude (degrees as 3 numeric or degrees and minutes as 5 numerics, followed without a space by E or W), or as a significant point identified by a code designator (2 to 5 characters), or as a significant point followed by magnetic bearing (3 numeric) and distance in nautical miles (3 numeric) from the point. Precede significant point with ‘ABEAM’, if applicable.

Item 1 — TIME. Record time in hours and minutes UTC (4 numeric).

Item 2 — FLIGHT LEVEL OR ALTITUDE. Record ‘F’ followed by 3 numeric (e.g. ‘F310’) when a flight level is reported. Record altitude in metres followed by ‘M’ or in feet followed by ‘FT’

when an altitude is reported. Record 'ASC' (level) when climbing or 'DES' (level) when descending.

Section 3

Item 9 — PHENOMENON PROMPTING A SPECIAL AIR-REPORT. Record the phenomenon reported as follows:

- moderate turbulence as 'TURB MOD',
- severe turbulence as 'TURB SEV',
- moderate icing as 'ICE MOD',
- severe icing as 'ICE SEV',
- severe mountain wave as 'MTW SEV',
- thunderstorm without hail as 'TS',
- thunderstorm with hail as 'TSGR',
- heavy duststorm or sandstorm as 'HVY SS',
- volcanic ash cloud as 'VA CLD',
- pre-eruption volcanic activity or a volcanic eruption as 'VA',
- hail as 'GR',
- cumulonimbus clouds as 'CB'.
- TIME TRANSMITTED. Record only when Section 3 is transmitted.

4. SPECIFIC PROVISIONS RELATED TO REPORTING WIND SHEAR AND VOLCANIC ASH

4.1. Reporting of wind shear

4.1.1. When reporting aircraft observations of wind shear encountered during the climb-out and approach phases of flight, the aircraft type shall be included.

4.1.2. Where wind shear conditions in the climb-out or approach phases of flight were reported or forecast but not encountered, the pilot -in-command shall advise the appropriate ATS unit as soon as practicable unless the pilot -in- command is aware that the appropriate ATS unit has already been so advised by a preceding aircraft.

4.2. Post-flight reporting of volcanic activity

4.2.1. On arrival of a flight at an aerodrome, the completed report of volcanic activity shall be delivered by the aircraft operator or a flight crew member, without delay, to the aerodrome meteorological office, or if such office is not easily accessible to arriving flight crew members, the completed form shall be dealt with in accordance with local arrangements agreed upon between MET and ATS providers and the aircraft operator.

4.2.2. The completed report of volcanic activity received by an aerodrome meteorological office shall be transmitted without delay to the meteorological watch office responsible for the provision of meteorological watch for the flight information region in which the volcanic activity was observed.

B. SPECIAL AIR-REPORT OF VOLCANIC ACTIVITY FORM (MODEL VAR)

MODEL VAR: to be used for post-flight reporting

VOLCANIC ACTIVITY REPORT

Air- reports are critically important in assessing the hazards which volcanic ash cloud presents to aircraft operations.

OPERATOR:			A/C IDENTIFICATION: (as indicated on flight plan)		
PILOT- IN- COMMAND:					
DEP FROM:	DATE:	TIME; UTC:	ARR AT:	DATE:	TIME; UTC:
ADDRESSEE			AIREP SPECIAL		
Items 1-8 are to be reported immediately to the ATS unit that you are in contact with.					
1) AIRCRAFT IDENTIFICATION			2) POSITION		
3) TIME			4) FLIGHT LEVEL OR ALTITUDE		
5) VOLCANIC ACTIVITY OBSERVED AT (position or bearing, estimated level of ash cloud and distance from aircraft)					
6) AIR TEMPERATURE			7) SPOT WIND		
8) SUPPLEMENTARY INFORMATION			Other _____		
SO ₂ DETECTED			yes ☐ no ☐		
Ash encountered			yes ☐ no ☐ (brief description of activity especially vertical and lateral extent of ash cloud and, where possible, horizontal movement, rate of growth, etc.)		
After landing complete items 9-16 then fax form to: (Fax number to be provided by the meteorological authority based on local arrangements between the meteorological authority and the operator concerned.)					
9) DENSITY OF ASH CLOUD		☐ (a) Wispy	☐ (b) Moderate dense	☐ (c) Very dense	
10) COLOUR OF ASH CLOUD		☐ (a) White	☐ (b) Light grey	☐ (c) Dark grey	
		☐ (d) black	☐ (e) other _____		
11) ERUPTION		☐ (a) continuous	☐ (b) intermittent	☐ (c) not visible	
12) POSITION OF ACTIVITY		☐ (a) Summit	☐ (b) side	☐ (c) Single	
		☐ (d) Multiple	☐ (e) Not observed		
13) OTHER OBSERVED FEATURES OF ERUPTION		☐ (a) Lightning	☐ (b) Glow	☐ (c) Large rocks	
		☐ (d) Ash fallout	☐ (e) Mushroom cloud	☐ (f) All	
14) EFFECT ON AIRCRAFT		☐ (a) Communication	☐ (b) Navigation systems	☐ (c) Engines	
		☐ (d) Pitot static	☐ (e) Windscreen	☐ (f) Windows	
15) OTHER EFFECTS		☐ (a) Turbulence	☐ (b) St. Elmo's Fire	☐ (c) Other fumes	
16) OTHER INFORMATION (Any information considered useful.)					

GM1 to Appendix 5 (2 — Section 1) DETAILED REPORTING INSTRUCTIONS

POSITION

Example

‘4620North07805West’, ‘4620North07800West’, ‘4600North07800West’, LN (‘LIMA NOVEMBER’), ‘MAY’, ‘HADDY’ or ‘DUB 180 DEGREES 40 MILES’

GM1 to Appendix 5 (2 — Section 1) DETAILED REPORTING INSTRUCTIONS

FLIGHT LEVEL OR ALTITUDE

Example:

‘FLIGHT LEVEL 310’

GM1 to Appendix 5 (2 — Section 3) DETAILED REPORTING INSTRUCTIONS

PHENOMENON PROMPTING A SPECIAL AIR-REPORT - VOLCANIC ASH CLOUD, PRE-ERUPTION VOLCANIC ACTIVITY, OR VOLCANIC ERUPTION

In case of volcanic ash cloud, pre-eruption volcanic activity, or volcanic eruption, in accordance with [SIRA.12005](#), a post-flight report should also be made on the special air-report of volcanic activity form (Model VAR).

GM1 to Appendix 5 (3) FORWARDING OF METEOROLOGICAL INFORMATION RECEIVED BY VOICE COMMUNICATIONS

AIRCRAFT IDENTIFICATION

Example:

‘New Zealand 103’ as ‘ANZ103’

GM1 to Appendix 5 (3 — Section 1) FORWARDING OF METEOROLOGICAL INFORMATION RECEIVED BY VOICE COMMUNICATIONS

POSITION

Example:

‘4620N07805W’, ‘4620N078W’, ‘46N078W’, ‘LN’, ‘MAY’, ‘HADDY’ or ‘DUB180040’.

GM1 to Appendix 5 (1.1.4 and 2.1) SPECIAL AIR-REPORTS

Examples of special air reports by voice communication

AS SPOKEN IN RADIOTELEPHONY	AS RECORDED BY THE AIR TRAFFIC SERVICES UNIT AND FORWARDED TO THE METEOROLOGICAL OFFICE CONCERNED
I.- *AIREP SPECIAL CLIPPER WUN ZERO WUN POSITION FIFE ZERO FOWEr FIFE NORTH ZERO TOO ZERO WUN FIFE WEST WUN FIFE TREE SIX FLIGHT LEVEL TREE WUN ZERO CLIMBING TO FLIGHT LEVEL TREE FIFE ZERO THUNDERSTORMS WITH HAIL	I.- ARS PAA101 5045N02015W 1536 F310 ASC F350 TSGR
II.- **SPECIAL NIUGINI TOO SEVen TREES OVER MADANG ZERO AIT FOWEr SIX WUN NINer TOUSAND FEET TURBULENCE SEVERE	II.- ARS ANG273 MD 0846 19000FT TURB SEV

*A special air-report which is required because of the occurrence of widespread thunderstorms with hail.

**A special air-report which is required because of severe turbulence. The aircraft is on QNH altimeter setting