

COMMISSION IMPLEMENTING REGULATION (EU) 2016/1185**of 20 July 2016****amending Implementing Regulation (EU) No 923/2012 as regards the update and completion of the common rules of the air and operational provisions regarding services and procedures in air navigation (SERA Part C) and repealing Regulation (EC) No 730/2006****(Text with EEA relevance)**

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Regulation (EC) No 551/2004 of the European Parliament and of the Council of 10 March 2004 on the organisation and use of the airspace in the single European sky ⁽¹⁾, and in particular Article 4 thereof,Having regard to Regulation (EC) No 216/2008 of the European Parliament and of the Council of 20 February 2008 on common rules in the field of civil aviation and establishing a European Aviation Safety Agency and repealing Council Directive 91/670/EEC, Regulation (EC) No 1592/2002 and Directive 2004/36/EC ⁽²⁾, and in particular Article 8b(6) thereof,

Whereas:

- (1) Article 4 of Regulation (EC) No 551/2004 requires the Commission to adopt implementing rules on rules of the air and on the uniform application of airspace classification. The Union's rules of the air have been developed in two phases. In Phase I (SERA Part A), the Commission, supported by Eurocontrol, the European Aviation Safety Agency ('Agency') and the International Civil Aviation Organisation ('ICAO'), prepared the transposition into Union law of Annex 2 to the Convention on International Civil Aviation ('Chicago Convention'). In Phase II (SERA Part B), the relevant provisions from Annexes 3 and 11 to the Chicago Convention have been transposed into Union law. The outcome was Commission Implementing Regulation (EU) No 923/2012 ⁽³⁾, combining both those Parts A and B in one Union act.
- (2) Implementing Regulation (EU) No 923/2012 should now be completed by including in it the remaining relevant ICAO provisions, in particular those set out in Annex 10 to the Chicago Convention and in Document 4444 (PANS-ATM), which have a rules of the air-nature and which have not yet been transposed into Union law.
- (3) The provisions contained in this Regulation, should support and complement rules related to the provision of air traffic services contained in Annex 10 Volume II and Annex 11 to the Chicago Convention, ICAO Doc. 4444 (PANS-ATM) and the Common Requirements established in accordance with Article 8b of Regulation (EC) No 216/2008, to ensure consistency of service provision with actions of pilots and other actors under this Regulation
- (4) Implementing Regulation (EU) No 923/2012 should also be aligned with Commission Regulations (EU) No 965/2012 ⁽⁴⁾ and (EU) No 139/2014 ⁽⁵⁾, in order to ensure a consistent approach to regulating civil aviation safety.

⁽¹⁾ OJ L 96, 31.3.2004, p. 20.

⁽²⁾ OJ L 79, 19.3.2008, p. 1.

⁽³⁾ Commission Implementing Regulation (EU) No 923/2012 of 26 September 2012 laying down the common rules of the air and operational provisions regarding services and procedures in air navigation and amending Implementing Regulation (EU) No 1035/2011 and Regulations (EC) No 1265/2007, (EC) No 1794/2006, (EC) No 730/2006, (EC) No 1033/2006 and (EU) No 255/2010 (OJ L 281, 13.10.2012, p. 1).

⁽⁴⁾ Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 296, 25.10.2012, p. 1).

⁽⁵⁾ Commission Regulation (EU) No 139/2014 of 12 February 2014 laying down requirements and administrative procedures related to aerodromes pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 44, 14.2.2014, p. 1).

- (5) For the same reason, and in order to ensure a more user-friendly presentation of the applicable rules, the rules set out in Commission Regulation (EC) No 730/2006 ⁽¹⁾ should be inserted in Implementing Regulation (EU) No 923/2012.
- (6) Therefore, Implementing Regulation (EU) No 923/2012 should be amended accordingly and Regulation (EC) No 730/2006 should be repealed.
- (7) Sufficient transition time should be provided for Member States, aircraft operators, air navigation service providers and other interested parties to be able to correctly implement this Regulation, including the necessary publication of new procedures and the training of operators and affected staff. However, the provisions of this Regulation containing urgent amendments of Implementing Regulation (EU) No 923/2012 in light of recent amendments of Annexes 2 and 11 to the Chicago Convention or lessons learned from the implementation of Regulation (EU) No 923/2012 should apply already from an appropriate earlier date, taking into account the system of aeronautical information regulation and control 'AIRAC' notification dates.
- (8) The measures provided for in this Regulation are based on the opinion issued by the Agency in accordance with Articles 17(2)(b) and 19(1) of Regulation (EC) No 216/2008.
- (9) The measures provided for in this Regulation are in accordance with the opinion of the Single Sky Committee, established by Article 5 of Regulation (EC) No 549/2004 of the European Parliament and of the Council ⁽²⁾,

HAS ADOPTED THIS REGULATION:

Article 1

Implementing Regulation (EU) No 923/2012 is amended as follows:

(1) Article 1 is amended as follows:

(a) paragraph 3 is replaced by the following:

'3. This Regulation shall also apply to the competent authorities of the Member States, air navigation service providers, aerodrome operators and ground personnel engaged in aircraft operations.';

(b) the following paragraph 4 is added:

'4. This Regulation shall not apply to model aircraft and toy aircraft. However, Member States shall ensure that national rules are established to ensure that model aircraft and toy aircraft are operated in such a manner as to minimise hazards related to civil aviation safety, to persons, property or other aircraft.'

(2) Article 2 is amended as follows:

(a) point 2 is deleted;

(b) point 25 is replaced by the following:

'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);'

(c) point 27 and 28 are replaced by the following:

'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 authorisation for an aircraft to proceed under conditions specified by an air traffic control unit;'

⁽¹⁾ Commission Regulation (EC) No 730/2006 of 11 May 2006 on airspace classification and access of flights operated under visual flight rules above flight level 195 (OJ L 128, 16.5.2006, p. 3).

⁽²⁾ Regulation (EC) No 549/2004 of the European Parliament and of the Council of 10 March 2004 laying down the framework for the creation of the single European sky (the framework Regulation) (OJ L 96, 31.3.2004, p. 1).

(d) points 33, 34, and 35 are replaced by the following:

'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;

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;';

(e) the following point 34a is inserted:

'34a. "air traffic services (ATS) surveillance service" means a service provided directly by means of an ATS surveillance system;';

(f) point 38 is replaced by the following:

'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;';

(g) the following point 48a is inserted:

'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);';

(h) point 71 is replaced by the following:

'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;';

(i) the following point 89a is inserted:

'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;';

(j) points (a), (b) and (c) of point 90 are replaced by the following:

- '(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;'

(k) the following point 94a is inserted:

- '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;'

(l) the following points 95a and 95b are inserted:

- '95a. "model aircraft" means an unmanned aircraft, other than toy aircraft, having an operating mass not exceeding limits prescribed by the competent authority, 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);'

(m) point 114 is replaced by the following:

- '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 authorised by the aerodrome control tower;'

(n) point 116 is replaced by the following:

- '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;'

(o) the following point 129a is inserted:

- '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;'

(3) Article 4 is amended as follows:

(a) in paragraph 1, the introductory phrase is replaced by the following:

'1. The competent authorities 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;'

(b) in paragraph 3, the following subparagraph is inserted at the end of that paragraph:

'This Article shall also be without prejudice to helicopter operating minima contained in the specific approvals granted by the competent authority, pursuant to Annex V to Commission Regulation (EU) No 965/2012 (*).

(*) Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 296, 25.10.2012, p. 1).';

(4) The Annex is amended in accordance with the Annex to this Regulation.

Article 2

Regulation (EC) No 730/2006 is repealed.

Article 3

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

It shall apply from 12 October 2017.

However, the following provisions shall apply from 18 August 2016:

- (1) Article 1(1);
- (2) Article 1(2)(f), (i), (j), (l) and (o);
- (3) Article 1(3);
- (4) Article 2;
- (5) points (1), (2), (3), (4), (5), (6), (8) (12), (13), (15), (16), (19), (21), (22), (26)(b), (26)(c), (27) and (28) of the Annex.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 20 July 2016.

For the Commission
The President
Jean-Claude JUNCKER

ANNEX

The Annex of Implementing Regulation (EU) No 923/2012 is amended as follows:

- (1) point SERA.2001 is replaced by the following:

‘SERA.2001 Subject

Without prejudice to SERA.1001 above, this annex addresses, in accordance with Article 1, in particular airspace users and aircraft:

- (a) operating into, within or out of the Union;
- (b) bearing the nationality and registration marks of a Member State of the Union, and operating in any airspace to the extent that they do not conflict with the rules published by the State having jurisdiction over the territory overflown.

This annex addresses also the actions of the Competent Authorities of the Member States, Air Navigation Service Providers (ANSP), aerodrome operators and the relevant ground personnel engaged in aircraft operations.’;

- (2) point SERA.3215(a) is amended as follows:

- (a) point (2) is replaced by the following:

‘(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) point (3) is deleted;

- (3) in point SERA.4001(d), the introductory phrase is replaced by the following:

‘Unless a shorter period of time has been prescribed by the competent authority for domestic VFR flights, a flight plan for any flight planned to operate across international borders or to be provided with air traffic control service or air traffic advisory service shall be submitted at least 60 minutes before departure, or, if submitted during flight, at a time which will ensure its receipt by the appropriate ATS unit at least 10 minutes before the aircraft is estimated to reach.’;

- (4) in point SERA.5001, Table S5-1, the footnote (***) to the table, point (b) is replaced by the following:

‘(b) helicopters may be permitted to operate in less than 1 500 m but not less than 800 m flight visibility, if manoeuvred at a speed that will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision.’;

- (5) point SERA.5005 is amended as follows:

- (a) point (c) is amended as follows:

- (i) points (3)(ii) and (3)(iii) are replaced by the following:

‘(ii) the reduced flight visibility provisions specified in Table S5-1(a) and (b) shall not apply;

(iii) in airspace classes B, C, D, E, F and G, at and below 900 m (3 000 ft) AMSL or 300 m (1 000 ft) above terrain, whichever is the higher, the pilot shall maintain continuous sight of the surface; and’;

- (ii) point (3)(iv) is deleted;

- (iii) point (3)(v) is replaced by the following:

‘(v) for mountainous area, higher VMC visibility and distance from cloud minima may be prescribed by the competent authority.’;

- (iv) point (4) is deleted;

(b) point (d) is replaced by the following:

'(d) VFR flights shall not be operated:

(1) at transonic and supersonic speeds unless authorised by the competent authority;

(2) above FL 195. Exceptions to this requirement are the following:

(i) an airspace reservation has been established, where practical, by the Member States, in which VFR flights may be allowed; or

(ii) airspace up to and including flight level 285, when VFR traffic in that airspace has been authorised by the responsible ATS unit in accordance with the authorisation procedures established by the Member States and published in the relevant aeronautical information publication.;

(6) point SERA.5010 is replaced by the following:

'Special VFR flights may be authorised to operate within a control zone, subject to an ATC clearance. Except when permitted by the competent authority for helicopters in special cases such as, but not limited to, police, medical, search and rescue operations and fire-fighting flights, the following additional conditions shall be applied:

(a) such special VFR flights may be conducted during day only, unless otherwise permitted by the competent authority;

(b) by the pilot:

(1) clear of cloud and with the surface in sight;

(2) the flight visibility is not less than 1 500 m or, for helicopters, not less than 800 m;

(3) 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

(c) an air traffic control unit shall not issue a special VFR clearance to aircraft to 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:

(1) the ground visibility is less than 1 500 m or, for helicopters, less than 800 m;

(2) the ceiling is less than 180 m (600 ft).;

(7) in point SERA.5015(c), the following point (3) is added:

'(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.;

(8) point SERA.6001 is replaced by the following:

'SERA.6001 Classification of airspaces

(a) Member States shall designate airspace in accordance with the following airspace classification 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 competent authority 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 competent authority 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 IFR 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 competent authority 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 IFR flights participating in the advisory service and all IFR flights shall be capable of establishing air-ground voice communications. A speed limitation of 250 kts IAS applies to all flights below 3 050 m (10 000 ft) AMSL, except where approved by the competent authority 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. All IFR flights shall be capable of establishing air-ground voice communications. A speed limitation of 250 kts IAS applies to all flights below 3 050 m (10 000 ft) AMSL, except where approved by the competent authority for aircraft types, which for technical or safety reasons cannot maintain this speed. ATC clearance is not required.
 - (8) Implementation of Class F shall be considered as a temporary measure until such time as it can be replaced by an alternative classification.
- (b) The designation of the airspace classification shall be appropriate to the needs of the Member States, except that all airspace above FL 195 shall be classified as Class C airspace.;
- (9) the following point SERA.7002 is inserted:

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

- (a) 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.;

(10) the following point SERA.8012 is inserted:

‘SERA.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.;

(11) point SERA.8015 is amended as follows:

(a) point (a) is replaced by the following:

‘(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) point (d)(3) is replaced by the following:

‘(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.;

(c) the following points (ea), (eb) and (ec) are added:

‘(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 conditions 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

Conditional phrases, such as 'behind landing aircraft' or 'after departing aircraft', shall not be used for movements affecting the active runway(s), except when the aircraft or vehicles concerned are seen by the appropriate controller and pilot. The aircraft or vehicle causing the condition in the clearance issued shall be the first aircraft/vehicle to pass in front of the other aircraft concerned. In all cases, a conditional clearance shall be given in the following order and consist of:

- (1) the call sign;
 - (2) the condition;
 - (3) the clearance; and
 - (4) a brief reiteration of the condition.;
- (12) point SERA.8020(a)(3) is replaced by the following:
- '(3) Deviation from the requirements in point (1) shall be notified to the appropriate ATS unit.;
- (13) point SERA.8020(b)(3) is replaced by the following:
- '(3) Change in time estimate: if the time estimate for the next applicable reporting point, flight information region boundary or destination aerodrome, whichever comes first, is found to be in error in excess of 2 minutes from that notified to ATS or such other period of time as prescribed by the competent authority, a revised estimated time shall be notified as soon as possible to the appropriate ATS unit.;
- (14) in point SERA.8025, the following points (2) and (3) are added:
- (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.;

(15) point SERA.8035(b) is replaced by the following:

‘(b) The Member States shall comply with the appropriate provisions on communication failures as have been adopted under the Chicago Convention. The Commission shall take the necessary measures for the transposition of those provisions into Union law so as to establish common European procedures on communication failures by 31 December 2017 at the latest.’;

(16) point SERA.9010 is amended as follows:

(a) points (b)(12) and (b)(13) are replaced by the following:

‘(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;

_____ (*) 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.’;

(b) points (c)(12) and (c)(13) are replaced by the following:

‘(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;

_____ (*) 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.’;

(c) points (d)(11) and (d)(12) are replaced by the following:

‘(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;

_____ (*) 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.’;

(17) in point SERA.10001, the following points (b) and (c) are added:

‘(b) Unless otherwise prescribed by the competent authority, aircraft equipped with suitable two-way radio-communications shall report during the period 20 to 40 minutes following the time of the 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”.

(c) The “Operations normal” message shall be transmitted air-ground to an appropriate ATS unit.’;

- (18) points SERA.11001 (a) and (b) and SERA.11005 (a) are deleted and SERA.11001 and SERA.11005 are replaced by the following:

‘SERA.11001 General

- (c) 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.
- (d) 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.

SERA.11005 Unlawful interference

- (aa) 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 minimise conflict with other aircraft.
- (ab) 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 competent authority, unless considerations aboard the aircraft dictate otherwise.
- (b) 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.
- (c) 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.’;

- (19) point SERA.11010 is amended as follows:

- (a) the title is replaced by the following:

‘SERA.11010 Strayed or unidentified aircraft’;

- (b) point (a)(3)(i) is replaced by the following:

‘(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’;

- (20) the following points SERA.11012 and SERA.11013 are inserted:

‘SERA.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 with SERA.14095, shall indicate that by using the radiotelephony distress signal (MAYDAY), preferably spoken three times, followed by the nature of the distress condition (FUEL).

SERA.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 coordinate applicable sector capacities with adjacent ACCs, as appropriate.;

(21) the following point SERA.11014 is inserted:

‘SERA.11014 ACAS resolution advisory (RA)

- (a) ACAS II shall be used during flight, except as provided in the minimum equipment list specified in Commission Regulation (EU) No 965/2012 (*) 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 jeopardise 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.

(*) Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 296, 25.10.2012, p. 1).;

(22) in point SERA.11015(e), Table S11-3 is amended as follows:

- (a) the text in the cell ‘Meaning’ corresponding to phrase ‘WILCO’, is replaced by the following:

‘Understood, will comply’;

- (b) in the cell below the phrase ‘WILCO’, the phrase ‘Will comply’ is deleted;

(23) in point SERA.12005, the following point (c) is added:

- (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.;

(24) point SERA.12020(a)(2) is replaced by the following:

- (2) the associated meteorological watch office (MWO) in accordance with point 3 of Appendix 5; and;

(25) the following Sections 13 and 14 are added:

SECTION 13

SSR Transponder

SERA.13001 Operation of an SSR transponder

- (a) When an aircraft carries a serviceable SSR transponder, the pilot shall operate the transponder at all times during flight, regardless of whether the aircraft is within or outside airspace where SSR is used for ATS purposes.
- (b) Pilots shall not operate the IDENT feature unless requested by ATS.
- (c) Except for flight in airspace designated by the competent authority for mandatory operation of transponder, aircraft without sufficient electrical power supply are exempted from the requirement to operate the transponder at all times.

SERA.13005 SSR transponder Mode A code setting

- (a) To indicate that it is in a specific contingency situation, the pilot of an aircraft equipped with SSR shall:
 - (1) select Code 7700 to indicate a state of emergency unless ATC has previously directed the pilot to operate the transponder on a specified code. In the latter case, a pilot may nevertheless select Code 7700 whenever there is a specific reason to believe that this would be the best course of action;
 - (2) select Code 7600 to indicate a state of radio-communication failure;
 - (3) attempt to select Code 7500 to indicate a state of unlawful interference. If circumstances so warrant, Code 7700 should be used instead.
- (b) Except in the cases described in (a) above, the pilot shall:
 - (1) select codes as instructed by the ATS unit; or
 - (2) in the absence of ATS instructions related to code setting, select code 2000 or another code as prescribed by the competent authority; or
 - (3) when not receiving air traffic services, select code 7000 in order to improve the detection of suitably equipped aircraft unless otherwise prescribed by the competent authority.

- (c) 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.

SERA.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) Unless otherwise prescribed by the competent authority, verification of the pressure-altitude-derived level information displayed to the controller shall be effected 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.

SERA.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 or, when no flight plan has been filed, the aircraft registration.
- (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 the aircraft identification on the situation display; and
 - (3) notify the next control position and any other unit concerned using Mode S for identification purposes that the aircraft identification transmitted by the aircraft is erroneous.

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

- (a) In case of a transponder failure after departure, ATC units shall attempt to provide for continuation of the flight to the destination aerodrome in accordance with the flight plan. Pilots may, however, be expected to comply with specific restrictions.
- (b) In the case of a transponder which has failed and cannot be restored before departure, pilots shall:
- (1) inform ATS as soon as possible, preferably before submission of a flight plan;
 - (2) insert in Item 10 of the ICAO flight plan form under SSR the character 'N' for complete unserviceability of the transponder or, in case of partial transponder failure, insert the character corresponding to the remaining transponder capability; and
 - (3) comply with any published procedures for requesting an exemption from the requirements to carry a functioning SSR transponder.

SECTION 14

Voice communication procedures**SERA.14001 General**

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

SERA.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 PAN MEDICAL
(c) Communications relating to direction finding	—
(d) Flight safety messages	—
(e) Meteorological messages	—
(f) Flight regularity messages	—

- (b) Distress messages and distress traffic shall be handled in accordance with the provisions of point SERA.14095.
- (c) Urgency messages and urgency traffic, including messages preceded by the medical transports signal, shall be handled in accordance with the provisions of point SERA.14095.

SERA.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.

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

- (a) The air-ground radiotelephony communications shall be conducted in the English language or in the language normally used by the station on the ground.

- (b) The English language shall be available, on request of any aircraft, at all stations on the ground serving designated aerodromes and routes used by international air services. Unless otherwise prescribed by the competent authority for specific cases, the English language shall be used for communications between the ATS unit and aircraft, at aerodromes with more than 50 000 international IFR movements per year. Member States, where at the date of entry into force of this Regulation, the English language is not the only language used for communications between the ATS unit and aircraft at such aerodromes, may decide not to apply the requirement to use the English language and inform the Commission accordingly. In that case, those Member States shall, by 31 December 2017 at the latest, conduct a study on the possibility to require the use of the English language for communications between the ATS unit and aircraft at those aerodromes for reasons of safety, so as to avoid incursions of aircraft on an occupied runway or other safety risks, while taking into account the applicable provisions of Union and national law on the use of languages. They shall make that study public and communicate its conclusions to the Agency and the Commission.
- (c) The languages available at a given station on the ground shall form part of the Aeronautical Information Publications and other published aeronautical information concerning such facilities.

SERA.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	GOLF
H	Hotel	HO <u>TELL</u>
I	India	<u>IN</u> DEE AH
J	Juliett	<u>JEW</u> LEE <u>ETT</u>
K	Kilo	<u>KEY</u> LOH

Letter	Word	Approximate pronunciation (Latin alphabet representation)
L	Lima	<u>LEE</u> MAH
M	Mike	MIKE
N	November	NO <u>VEM</u> BER
O	Oscar	<u>OSS</u> CAH
P	Papa	PAH <u>PAH</u>
Q	Quebec	KEH <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 emphasised are underlined.

SERA.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.

SERA.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.

SERA.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.

SERA.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 1 000 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 transmission of other information than those described in point (a)(1) shall be transmitted by pronouncing each digit separately, except that all numbers containing 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” or “ELEVEN 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.

SERA.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

SERA.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."

Phrase	Meaning
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	"Authorised to proceed under the conditions specified."
CONFIRM	"I request verification of: (<i>clearance, instruction, action, information</i>)."
CONTACT	"Establish communications with..."
CORRECT	"True" or "Accurate".
CORRECTION	"An error has been made in this transmission (<i>or message indicated</i>). The correct version is..."
DISREGARD	"Ignore."
HOW DO YOU READ	"What is the readability of my transmission?" (see point SERA.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."

Phrase	Meaning
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	(a) <i>As a request</i> : "Communication is difficult. Please send every word, or group of words, twice." (b) <i>As information</i> : "Since communication is difficult, every word, or group of words, in this message will be sent twice."

SERA.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 SERA.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.

SERA.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 call 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. For transfers of communication within one ATS unit, the call sign of the ATS unit may be omitted, when so authorised by the competent authority.
- (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 SERA.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.

SERA.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 competent authority.

SERA.14065 Radiotelephony procedures for air-ground voice communication channel changeover

- (a) Unless otherwise prescribed by the ANSP responsible for the provision of services and approved by the competent authority, the initial call to an ATS unit 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” if that aircraft has been so identified by the competent authority;
 - (3) level, including passing and cleared levels, if not maintaining the cleared level;
 - (4) speed, if assigned by ATC; and
 - (5) additional elements, as required by the ANSP responsible for the provision of services and approved by the competent authority.
- (b) Pilots shall provide level information at the nearest full 30 m or 100 ft as indicated on the pilot’s altimeter.
- (c) Initial call to aerodrome control tower

For aircraft being provided with aerodrome control service, the initial call shall contain:

- (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” if that aircraft has been so identified by the competent authority;
- (3) position; and

- (4) additional elements, as required by the ANSP responsible for the provision of services and approved by the competent authority.

SERA.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

SERA.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.

SERA.14080 Communications watch/Hours of service

- (a) During flight, aircraft shall maintain watch as required by the competent authority 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 aircraft 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 the competent authority.
- (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.

SERA.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.

SERA.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.

SERA.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

- (1) For aircraft in the heavy wake turbulence category, the word "Heavy" shall be included immediately after the aircraft call sign in the initial radiotelephony contact between such aircraft and ATS units.
- (2) For specific aircraft in the heavy wake turbulence category, as identified by the competent authority, the word "Super" shall be included 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).

SERA.14095 Distress and urgency radiotelephony communication 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 ATS unit controlling the communications when, after the reception of the message prescribed in point (b)(5)(i), it is authorised to do so by the competent authority.
- (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 recognised 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.;

(26) Appendix 1 is amended as follows:

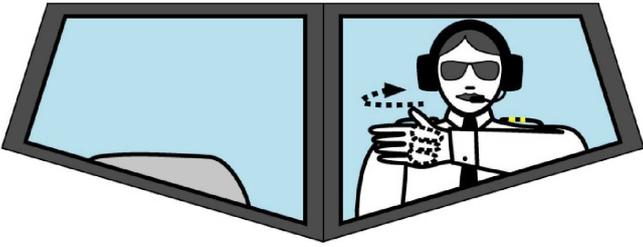
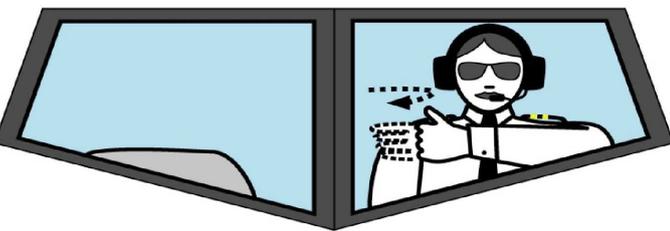
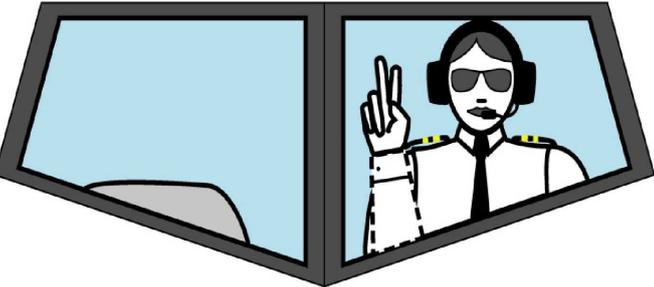
- (a) point 1.1.2 is replaced by the following:

'1.1.2. The telecommunication transmission procedures for the distress and urgency signals shall be in accordance with Section 14.;

(b) in point 3.2.4.1, the text is replaced by the following:

'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.';

(c) points 4.2.1.1, 4.2.1.2 and 4.2.1.3 are replaced by the following illustration:

	<p>(a) Brakes engaged: raise arm and hand, with fingers extended, horizontally in front of face, then clench fist.</p>
	<p>(b) Brakes released: raise arm, with fist clenched, horizontally in front of face, then extend fingers.</p>
	<p>(c) Insert chocks: arms extended, palms outwards, move hands inwards to cross in front of face.</p>
	<p>(d) Remove chocks: hands crossed in front of face, palms outwards, move arms outwards.</p>
	<p>(e) Ready to start engine(s): Raise the appropriate number of fingers on one hand indicating the number of the engine to be started.;</p>

(27) in Appendix 2, point 5.1.3 is replaced by the following:

‘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.’;

(28) in Appendix 4, the table is amended as follows:

(a) in column ‘Service provided’, in the cell for airspace class C, VFR type of flight, point (2) is replaced by the following:

‘(2) Air traffic control service, VFR/VFR traffic information (and traffic avoidance advice on request),’

(b) in column ‘Service provided’, in the cell for airspace class D, the text concerning VFR type of flight is replaced by the following:

‘Air traffic control service, IFR/VFR and VFR/VFR traffic information (and traffic avoidance advice on request);’

(29) Appendix 5 is replaced by the following:

‘Appendix 5

Technical specifications related to aircraft observations and reports by voice communications

A. REPORTING INSTRUCTIONS

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) (bearing) (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) (time)</i>
	6 Ensuing significant point	<i>(position)</i> NEXT
Section 2	7 Estimated time of arrival	<i>(aerodrome) (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	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

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 and special air-reports, although Items 5 and 6 thereof may be omitted. 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 SERA.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.

Section 1

Item 1 — AIRCRAFT IDENTIFICATION. Report the aircraft radiotelephony call sign as prescribed in point SERA.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.

- 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 numerics or degrees and minutes as 5 numerics, followed without a space by E or W), 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 (3 numerics) from the point. Precede significant point with "ABEAM", if applicable.

Item 1 — TIME. Record time in hours and minutes UTC (4 numerics).

Item 2 — FLIGHT LEVEL OR ALTITUDE. Record 'F' followed by 3 numerics (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 2

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 <input type="checkbox"/>	no <input type="checkbox"/>			
Ash encountered	yes <input type="checkbox"/>	no <input type="checkbox"/>	(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	<input type="checkbox"/> (a) Wispy	<input type="checkbox"/> (b) Moderate dense	<input type="checkbox"/> (c) Very dense		
10) COLOUR OF ASH CLOUD	<input type="checkbox"/> (a) White	<input type="checkbox"/> (b) Light grey	<input type="checkbox"/> (c) Dark grey		
	<input type="checkbox"/> (d) black	<input type="checkbox"/> (e) other _____			
11) ERUPTION	<input type="checkbox"/> (a) continuous	<input type="checkbox"/> (b) intermittent	<input type="checkbox"/> (c) not visible		
12) POSITION OF ACTIVITY	<input type="checkbox"/> (a) Summit	<input type="checkbox"/> (b) side	<input type="checkbox"/> (c) Single		
	<input type="checkbox"/> (d) Multiple	<input type="checkbox"/> (e) Not observed			
13) OTHER OBSERVED FEATURES OF ERUPTION	<input type="checkbox"/> (a) Lightning	<input type="checkbox"/> (b) Glow	<input type="checkbox"/> (c) Large rocks		
	<input type="checkbox"/> (d) Ash fallout	<input type="checkbox"/> (e) Mushroom cloud	<input type="checkbox"/> (f) All		
14) EFFECT ON AIRCRAFT	<input type="checkbox"/> (a) Communication	<input type="checkbox"/> (b) Navigation systems	<input type="checkbox"/> (c) Engines		
	<input type="checkbox"/> (d) Pitot static	<input type="checkbox"/> (e) Windscreen	<input type="checkbox"/> (f) Windows		
15) OTHER EFFECTS	<input type="checkbox"/> (a) Turbulence	<input type="checkbox"/> (b) St. Elmo's Fire	<input type="checkbox"/> (c) Other fumes		
16) OTHER INFORMATION (Any information considered useful.)					

(30) the supplement to the Annex is amended as follows:

(a) the table referring to ICAO Annex 2 is amended as follows:

(i) the title is replaced by the following:

‘ICAO Annex 2

Differences between this Regulation and the International Standards contained in Annex 2 to the Convention on International Civil Aviation, as amended.’;

(ii) the cells relating to ‘Difference A2-04’ are replaced by the following:

‘Difference A2-04	
ICAO Annex 2 Chapter 3 3.3.1.2.	<p>ICAO Annex 2, 3.3.1.2 is replaced with point SERA.4001(b) of Implementing Regulation (EU) No 923/2012. The differences between that ICAO Standard and that Union regulation are as follows:</p> <ul style="list-style-type: none"> — With regards to VFR flights planned to operate across international borders, the Union regulation (point SERA.4001(b)(5)) differs from the ICAO Standard in Annex 2, 3.3.1.2(e) with the addition of the underlined text, as follows: <i>‘any flight across international borders, <u>unless otherwise prescribed by the States concerned.</u>’</i> — With regard to VFR and IFR flights planned to operate at night, the following requirement is added to point SERA.4001(b)(6) of that Union regulation: <i>“(6) any flight planned to operate at night, if leaving the vicinity of an aerodrome”</i>

(b) the cells relating to ‘Difference A2-06’ are deleted,

(c) the following new tables referring to ICAO Annex 3 and ICAO Annex 10 are inserted below the table referring to ICAO Annex 2:

‘ICAO Annex 3

Differences between this Regulation and the International Standards contained in Annex 3 to the Convention on International Civil Aviation, as amended.

Difference A3-01	
ICAO Annex 3 Chapter 5	<p>New provision. Point SERA.12005 of Implementing Regulation (EU) No 923/2012 specifies:</p> <p>(b) Competent authorities shall prescribe as necessary other conditions which shall be reported by all aircraft when encountered or observed.</p>

ICAO Annex 10

Differences between this Regulation and the International Standards contained in Annex 10 to the Convention on International Civil Aviation, as amended.

Difference A10-01	
ICAO Annex 10 Volume II Chapter 5 5.2.1.4.1	<p>ICAO Annex 10, Volume II, Chapter 5.2.1.4.1 is transposed in point SERA.14035 of Implementing Regulation (EU) No 923/2012 with some differences. The differences between that ICAO Standard and that Union Regulation are as follows:</p> <p>SERA.14035 Transmission of numbers in radiotelephony</p> <p>(a) Transmission of numbers</p> <p>(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.</p> <p>(i) Flight levels shall be transmitted by pronouncing each digit separately <u>except for the case of flight levels in whole hundreds.</u></p> <p>(ii) The altimeter setting shall be transmitted by pronouncing each digit separately <u>except for the case of a setting of 1 000 hPa which shall be transmitted as "ONE THOUSAND".</u></p> <p>(iii) All numbers used in the transmission of transponder codes shall be transmitted by pronouncing each digit separately <u>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".</u></p> <p>(2) All numbers used in transmission of other information than those described in point (a)(1) shall be transmitted by pronouncing each digit separately, except that all numbers containing 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".</p> <p>(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.</p> <p>(4) When providing information regarding 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" or "ELEVEN O'CLOCK".</p> <p>(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".</p> <p>(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.</p>

Difference A10-02	
ICAO Annex 10 Volume II Chapter 5 5.2.1.7.3.2.3	ICAO Annex 10, Volume II, Chapter 5.2.1.7.3.2.3 is transposed in point SERA.14055 of Implementing Regulation (EU) No 923/2012 with a difference. The difference between that ICAO Standard and that EU Regulation is as follows: SERA.14055 Radiotelephony procedures (b) (2) The reply to the above calls shall use the call 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. <u>For transfers of communication within one ATS unit, the call sign of the ATS unit may be omitted, when so authorised by the competent authority.</u>

(d) the table referring to ICAO Annex 11 is amended as follows:

(i) the title is replaced by the following:

'ICAO Annex 11

Differences between this Regulation and the International Standards contained in Annex 11 to the Convention on International Civil Aviation, as amended.;

(ii) the cells relating to Difference A11-06 are replaced by the following:

'Difference A11-06	
ICAO Annex 11 Chapter 3	New provision. Point SERA.5010 of Implementing Regulation (EU) No 923/2012 specifies: SERA.5010 Special VFR in control zones Special VFR flights may be authorised to operate within a control zone, subject to an ATC clearance. Except when permitted by the competent authority for helicopters in special cases such as, but not limited to, medical flights, search and rescue operations and fire-fighting, the following additional conditions shall be applied: (a) such flights may be conducted during day only, unless otherwise permitted by the competent authority; (b) (b) by the pilot: (1) clear of cloud and with the surface in sight; (2) the flight visibility is not less than 1 500 m or, for helicopters, not less than 800 m; (3) 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 (c) an air traffic control unit shall not issue a Special VFR clearance to aircraft to 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: (b) by ATC: (1) during day only, unless otherwise permitted by the competent authority; (2) (1) the ground visibility is not less than 1 500 m or, for helicopters, not less than 800 m; (2) the ceiling is less than 180 m (600 ft).'