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PROCEDURES FOR AIR NAVIGATION SERVICES

Air Traffic Management

Sixteenth Edition, 2016



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INTERNATIONAL CIVIL AVIATION ORGANIZATION



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Chapter 11

AIR TRAFFIC SERVICES MESSAGES

11.1 CATEGORIES OF MESSAGES

11.1.1 General

In accordance with the requirements in Chapter 10 — *Coordination*, the messages listed below are authorized for transmission via the aeronautical fixed service (including the aeronautical telecommunication network (ATN) and the aeronautical fixed telecommunication network (AFTN), direct-speech circuits or digital data interchange between ATS units, and direct teletypewriter and computer-computer circuits), or via the aeronautical mobile service, as applicable. They are classified in categories relating to their use by the air traffic services and providing an approximate indication of their importance.

Note.— The Priority Indicator in parentheses after each type of message is that specified in Annex 10 (Volume II, Chapter 4) for application when the message is transmitted on the AFTN. The priority for all ATS interfacility data communication (AIDC) messages using the ATN shall be “normal priority flight safety messages” as determined by the ATN Internet protocol priority categorization.

11.1.2 Emergency messages

This category comprises:

- a) distress messages and distress traffic, including messages relating to a distress phase (SS);
- b) urgency messages, including messages relating to an alert phase or to an uncertainty phase (DD);
- c) other messages concerning known or suspected emergencies which do not fall under a) or b) above, and radiocommunication failure messages (FF or higher as required).

Note.— When the messages in a) and b) and, if required, in c) above are filed with the public telecommunication service, the Priority Indicator SVH, assigned to telegrams relating to the safety of life, is to be used in accordance with Article 25 of the International Telecommunication Convention, Malaga, 1973.

11.1.3 Movement and control messages

This category comprises:

- a) movement messages (FF), including:
 - filed flight plan messages
 - delay messages

- modification messages
 - flight plan cancellation messages
 - departure messages
 - arrival messages;
- b) coordination messages (FF), including:
- current flight plan messages
 - estimate messages
 - coordination messages
 - acceptance messages
 - logical acknowledgement messages;
- c) supplementary messages (FF), including:
- request flight plan messages
 - request supplementary flight plan messages
 - supplementary flight plan messages;
- d) AIDC messages, including:
- notification messages
 - coordination messages
 - transfer of control messages
 - general information messages
 - application management messages;
- e) control messages (FF), including:
- clearance messages
 - flow control messages
 - position-report and air-report messages.

11.1.4 Flight information messages

11.1.4.1 This category comprises:

- a) messages containing traffic information (FF);
- b) messages containing meteorological information (FF or GG);
- c) messages concerning the operation of aeronautical facilities (GG);
- d) messages containing essential aerodrome information (GG);
- e) messages concerning air traffic incident reports (FF).

11.1.4.2 When justified by the requirement for special handling, messages transmitted via the AFTN should be assigned the Priority Indicator DD in place of the normal Priority Indicator.

11.2 GENERAL PROVISIONS

Note.— The use in this chapter of expressions such as “originated”, “transmitted”, “addressed” or “received” does not necessarily imply that reference is made to a teletypewriter or digital data interchange for a computer-to-computer message. Except where specifically indicated, the messages described in this chapter may also be transmitted by voice, in which case the four terms above represent “initiated”, “spoken by”, “spoken to” and “listened to” respectively.

11.2.1 Origination and addressing of messages

11.2.1.1 GENERAL

Note.— Movement messages in this context comprise flight plan messages, departure messages, delay messages, arrival messages, cancellation messages and position-report messages and modification messages relevant thereto.

11.2.1.1.1 Messages for ATS purposes shall be originated by the appropriate ATS units or by aircraft as specified in Section 11.3, except that, through special local arrangements, ATS units may delegate the responsibility for originating movement messages to the pilot, the operator, or its designated representative.

11.2.1.1.2 Origination of movement, control and flight information messages for purposes other than air traffic services (e.g. operational control) shall, except as provided for in Annex 11, 2.17, be the responsibility of the pilot, the operator, or a designated representative.

11.2.1.1.3 Flight plan messages, amendment messages related thereto and flight plan cancellation messages shall, except as provided in 11.2.1.1.4, be addressed only to those ATS units which are specified in the provisions of 11.4.2. Such messages shall be made available to other ATS units concerned, or to specified positions within such units and to any other addressees of the messages, in accordance with local arrangements.

11.2.1.1.4 When so requested by the operator concerned, emergency and movement messages which are to be transmitted simultaneously to ATS units concerned, shall also be addressed to:

- a) one addressee at the destination aerodrome or departure aerodrome; and
- b) not more than two operational control units concerned;

such addressees to be specified by the operator or its designated representative.

11.2.1.1.5 When so requested by the operator concerned, movement messages transmitted progressively between ATS units concerned and relating to aircraft for which operational control service is provided by that operator shall, so far as practicable, be made available immediately to the operator or its designated representative in accordance with agreed local procedures.

11.2.1.2 USE OF THE AFTN

11.2.1.2.1 ATS messages to be transmitted via the AFTN shall contain:

- a) information in respect of the priority with which they are to be transmitted and the addressees to whom they are to be delivered, and an indication of the date and time at which they are filed with the aeronautical fixed station concerned and of the Originator Indicator (see 11.2.1.2.5);
- b) the ATS data, preceded if necessary by the supplementary address information described in 11.2.1.2.6, and prepared in accordance with Appendix 3. These data will be transmitted as the text of the AFTN message.

11.2.1.2.2 *PRIORITY INDICATOR*

This shall consist of the appropriate two-letter Priority Indicator for the message as shown in parentheses for the appropriate category of message in Section 11.1.

Note.— It is prescribed in Annex 10 (Volume II, Chapter 4) that the order of priority for the transmission of messages in the AFTN shall be as follows:

<i>Transmission Priority</i>	<i>Priority Indicator</i>
1	SS
2	DD FF
3	GG KK

11.2.1.2.3 *ADDRESS*

11.2.1.2.3.1 This shall consist of a sequence of Addressee Indicators, one for each addressee to whom the message is to be delivered.

11.2.1.2.3.2 Each Addressee Indicator shall consist of an eight-letter sequence comprising, in the following order:

- a) the ICAO four-letter location indicator assigned to the place of destination;

Note.— A list of ICAO location indicators is contained in Doc 7910 — Location Indicators.

- b) i) the ICAO three-letter designator identifying the aeronautical authority, service or aircraft operating agency addressed, or

- ii) in cases where no designator has been assigned, one of the following:

- “YXY” in the case where the addressee is a military service/organization,
- “ZZZ” in the case where the addressee is an aircraft in flight,
- “YYY” in all other cases;

Note.— A list of ICAO three-letter designators is contained in Doc 8585 — Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services.

- c) i) the letter X, or

- ii) the one-letter designator identifying the department or division of the organization addressed.

11.2.1.2.3.3 The following three-letter designators shall be used when addressing ATS messages to ATS units:

Centre in charge of a flight information region or an upper flight information region (whether ACC or FIC):

- if the message is relevant to an IFR flight ZQZ
- if the message is relevant to a VFR flight ZFZ

Aerodrome control tower	ZTZ
Air traffic services reporting office	ZPZ

Other three-letter designators for ATS units shall not be used for that purpose.

11.2.1.2.4 FILING TIME

The filing time shall consist of a six-digit date-time group indicating the date and the time of filing the message for transmission with the aeronautical fixed station concerned.

11.2.1.2.5 ORIGINATOR INDICATOR

The Originator Indicator shall consist of an eight-letter sequence, similar to an Addressee Indicator (see 11.2.1.2.3.2), identifying the place of origin and the organization originating the message.

11.2.1.2.6 SUPPLEMENTARY INFORMATION ON THE ADDRESS AND THE ORIGIN

The following supplementary information is required when, in the Indicators of the Address and/or Origin, the three-letter designators “YXY”, “ZZZ” or “YYY” (see 11.2.1.2.3.2 b) ii)) are used:

- a) the name of the organization or the identity of the aircraft concerned is to appear at the beginning of the text;
- b) the order of such insertions is to be the same as the order of the Addressee Indicators and/or the Originator Indicator;
- c) where there are more than one such insertion, the last should be followed by the word “STOP”;
- d) where there are one or more insertions in respect of Addressee Indicators plus an insertion in respect of the Originator Indicator, the word “FROM” is to appear before that relating to the Originator Indicator.

Note.— Regarding ATS messages received in teletypewriter page-copy form:

- 1) *ATS messages received via the AFTN will have been placed within a communications “envelope” (preceding and following character sequences which are necessary to ensure correct transmission via the AFTN). Even the text of the AFTN message may be received with words or groups preceding and following the ATS text.*
- 2) *The ATS message may then be located by the simple rule that it is preceded by an open bracket, e.g. ‘(’ and followed by a close bracket, e.g. ‘)’.*
- 3) *In some local cases, the teletypewriter machines in use will always print two specific symbols other than open bracket and close bracket on receipt of ATS messages constructed as prescribed in Appendix 3. Such local variants are easily learned and are of no consequence.*

11.2.2 Preparation and transmission of messages

11.2.2.1 Except as provided for in 11.2.2.2, ATS messages shall be prepared and transmitted with standard texts in a standard format and in accordance with standard data conventions, as and when prescribed in Appendix 3.

11.2.2.2 Where appropriate, the messages prescribed in Appendix 3 shall be supplemented with, and/or replaced by, AIDC messages prescribed in Appendix 6, on the basis of regional air navigation agreements.

11.2.2.2.1 Where AIDC messages are transmitted via the ATN, the messages shall utilize the packed encoding rules using *abstract syntax notation one* (ASN.1).

Note.— Provisions and information on the ASN.1 packed encoding rules and AIDC addressing rules are contained in Annex 10, Volume II, and the Manual of Technical Provisions for the Aeronautical Telecommunication Network (ATN) (Doc 9705). Guidance material concerning the operational use of AIDC messages is contained in the Manual of Air Traffic Services Data Link Applications (Doc 9694).

11.2.2.2.2 Where AIDC messages are transmitted via the AFTN, the format for the AIDC messages shall, as far as practicable, comply with the appropriate data conventions contained in Appendix 3. AIDC data fields to be transmitted via the AFTN that are inconsistent with, or additional to, the data conventions contained in Appendix 3 shall be provided for on the basis of regional air navigation agreements.

11.2.2.3 When messages are exchanged orally between the relevant ATS units, an oral acknowledgement shall constitute evidence of receipt of the message. No confirmation in written form directly between controllers shall therefore be required. The confirmation of coordination via the exchange of messages between automated systems shall be required unless special arrangements have been made between the units concerned.

Note.— See Annex 11, Chapter 6, regarding the requirement for recording of direct-speech communications.

11.3 METHODS OF MESSAGE EXCHANGE

11.3.1 The lead-time requirements of air traffic control and flow control procedures shall determine the method of message exchange to be used for the exchange of ATS data.

11.3.1.1 The method of message exchange shall also be dependent upon the availability of adequate communications channels, the function to be performed, the types of data to be exchanged and the processing facilities at the centres concerned.

11.3.2 Basic flight plan data necessary for flow control procedures shall be furnished at least 60 minutes in advance of the flight. Basic flight plan data shall be provided by either a filed flight plan or a repetitive flight plan submitted by mail in the form of a repetitive flight plan listing form or other media suitable for electronic data-processing systems.

11.3.2.1 Flight plan data submitted in advance of flight shall be updated by time, level and route changes and other essential information as may be necessary.

11.3.3 Basic flight plan data necessary for air traffic control purposes shall be furnished to the first en-route control centre at least 30 minutes in advance of the flight, and to each successive centre at least 20 minutes before the aircraft enters that centre's area of jurisdiction, in order for it to prepare for the transfer of control.

11.3.4 Except as provided for in 11.3.5, the second en-route centre and each successive centre shall be provided with current data, including updated basic flight plan data, contained in a current flight plan message or in an estimate message supplementing already available updated basic flight plan data.

11.3.5 In areas where automated systems are utilized for the exchange of flight plan data and where these systems provide data for several ACCs, approach control units and/or aerodrome control towers, the appropriate messages shall not be addressed to each individual ATS unit, but only to these automated systems.

Note.— Further processing and distribution of the data to its associated ATS units is the internal task of the receiving system.

11.3.5.1 When AIDC messages are used, the sending unit shall determine the identity of the receiving ATS unit and all messages shall contain the identification of the next ATS unit. The receiving unit shall accept only messages intended for it.

11.3.6 Movement messages

Movement messages shall be addressed simultaneously to the first en-route control centre, to all other ATS units along the route of flight which are unable to obtain or process current flight plan data, and to air traffic flow management units concerned.

11.3.7 Coordination and transfer data

11.3.7.1 Progression of a flight between successive control sectors and/or control centres shall be effected by a coordination and transfer dialogue comprising the following stages:

- a) notification of the flight in order to prepare for coordination as necessary;
- b) coordination of conditions of transfer of control by the transferring ATC unit;
- c) coordination, if necessary, and acceptance of conditions of transfer of control by the accepting ATC unit; and
- d) the transfer of control to the accepting unit.

11.3.7.2 Except as provided for in 11.3.7.3, the notification of the flight shall be by a current flight plan message containing all relevant ATS data or by an estimate message containing the proposed conditions of transfer. An estimate message shall be used only when updated basic flight plan data is already available at the receiving unit, i.e. a filed flight plan message and associated update message(s) have already been sent by the transferring unit.

11.3.7.3 Where AIDC messages are used, the notification of the flight shall be via a Notification message and/or Coordination Initial message containing all relevant ATS data.

11.3.7.4 Except as provided for in 11.3.7.5, the coordination dialogue shall be considered to be completed as soon as the proposed conditions contained in the current flight plan message, or in the estimate message or in one or more counterproposals, are accepted by an operational or logical procedure.

11.3.7.5 Where AIDC messages are used, any coordination dialogue shall be considered to be completed as soon as the Coordinate Initial message or a counterproposal (Coordinate Negotiate message) has been accepted.

11.3.7.6 Except as provided for in 11.3.7.7, unless an operational acknowledgement is received, a Logical Acknowledgement message shall be automatically transmitted by the receiving computer in order to ensure the integrity of the coordination dialogue employing computer-to-computer links. This message shall be transmitted when the transfer data has been received and processed to the point that it is considered free of syntactic and semantic errors, i.e. the message contains valid information.

11.3.7.7 Where AIDC messages are used, an Application Accept message shall be automatically transmitted by the receiving computer in order to ensure the integrity of the coordination dialogue employing computer-to-computer links. This message shall be transmitted when the coordination, general information or transfer data has been received, processed and found free of errors and, where relevant, is available for presentation at the control position.

11.3.7.8 The transfer of control shall be either explicit or, by agreement between the two units concerned, implicit, i.e. no communication need be exchanged between the transferring and accepting units.

11.3.7.9 When the transfer of control involves exchange of data, the proposal for transfer shall include information derived from an ATS surveillance system, if appropriate. Since the proposal relates to previously accepted coordination data, further coordination shall normally not be required. However, acceptance of the proposed transfer conditions shall be required.

11.3.7.10 In situations where the proposed transfer conditions are no longer acceptable to the accepting unit, further coordination shall be initiated by the accepting unit by proposing alternative acceptable conditions.

11.3.7.11 Transfer of Communication messages may be used as an alternative to Transfer of Control messages. If Transfer of Communication messages are used to instruct a flight to establish communications with the receiving unit and the transfer of control will take place at the control area boundary, or such other time or place, specified in letters of agreement, Transfer of Control messages need not be used.

11.3.7.12 If, after receipt of information derived from an ATS surveillance system, the accepting centre is unable to identify the aircraft immediately, additional communication shall ensue to obtain new surveillance information, if appropriate.

11.3.7.13 When control of the transferred aircraft has been assumed, the accepting unit shall complete the transfer of control dialogue by communicating assumption of control to the transferring unit, unless special arrangements have been made between the units concerned.

11.3.8 Supplementary data

11.3.8.1 When basic flight plan data or supplementary flight plan data are required, request messages shall be addressed to the ATS unit which is most likely to have access to the required data.

Note.— See 11.4.2.4.2 and 11.4.2.4.3 for ATS units to which request messages shall be addressed.

11.3.8.2 If the requested information is available, a filed or a supplementary flight plan message shall be transmitted.

11.4 MESSAGE TYPES AND THEIR APPLICATION

11.4.1 Emergency messages

11.4.1.1 The various circumstances surrounding each known or suspected emergency situation preclude the specification of standard message types to provide for emergency communications, except as described in 11.4.1.2, 11.4.1.3 and 11.4.1.4.

11.4.1.2 ALERTING (ALR) MESSAGES

11.4.1.2.1 When an ATS unit considers that an aircraft is in a state of emergency as defined in Annex 11, Chapter 5, an alerting message shall be transmitted to any ATS unit that may be concerned with the flight and to the associated rescue coordination centres, containing such of the information specified in Appendix 3, Section 1, as is available or can be obtained.

11.4.1.2.2 When so agreed between the ATS units concerned, a communication relating to an emergency phase and originated by a unit employing automatic data-processing equipment may take the form of a modification message (as in 11.4.2.2.4) or a coordination message (as in 11.4.2.3.4 or 11.4.2.4.4), supplemented by a verbal message giving the additional details prescribed for inclusion in an alerting message.

11.4.1.3 RADIOCOMMUNICATION FAILURE (RCF) MESSAGES

Note.— Provisions governing the action to be taken in the event of radiocommunication failure are set forth in Annex 2, 3.6.5.2, and in Chapter 15, Section 15.6 of this document.

11.4.1.3.1 When an ATS unit is aware that an aircraft in its area is experiencing radiocommunication failure, an RCF message shall be transmitted to all subsequent ATS units along the route of flight which have already received basic flight plan data (FPL or RPL) and to the aerodrome control tower at the destination aerodrome, if basic flight plan data has been previously sent.

11.4.1.3.2 If the next ATS unit has not yet received basic flight plan data because it would receive a current flight plan message in the coordination procedure, then an RCF message and a current flight plan (CPL) message shall be transmitted to this ATS unit. In turn, this ATS unit shall transmit an RCF message and a CPL message to the next ATS unit.

11.4.1.4 FREE TEXT EMERGENCY MESSAGES (AIDC, APPENDIX 6 REFERS)

11.4.1.4.1 Whenever operational information needs to be transmitted concerning an aircraft known or believed to be in a state of emergency and the information cannot be formatted to comply with any other AIDC message type, a free text emergency message shall be sent.

11.4.1.4.2 The following are some examples of circumstances which could justify the use of a free text emergency message:

- a) reports of emergency calls or emergency locator transmission reports;
- b) messages concerning unlawful interference or bomb warnings;
- c) messages concerning serious illness or disturbance among passengers;
- d) sudden alteration in flight profile due to technical or navigational failure; and
- e) communication failure.

11.4.2 Movement and control messages

11.4.2.1 GENERAL

Messages concerning the intended or actual movement of aircraft shall be based on the latest information furnished to ATS units by the pilot, the operator or its designated representative, or derived from an ATS surveillance system.

11.4.2.2 MOVEMENT MESSAGES

11.4.2.2.1 Movement messages comprise:

- filed flight plan messages (11.4.2.2.2)
- delay messages (11.4.2.2.3)
- modification messages (11.4.2.2.4)
- flight plan cancellation messages (11.4.2.2.5)
- departure messages (11.4.2.2.6)
- arrival messages (11.4.2.2.7).

11.4.2.2.2 FILED FLIGHT PLAN (FPL) MESSAGES

Note.— Instructions for the transmission of an FPL message are contained in Appendix 2.

11.4.2.2.2.1 Unless repetitive flight plan procedures are being applied or current flight plan messages are being employed, filed flight plan messages shall be transmitted for all flights for which a flight plan has been submitted with the object of being provided with air traffic control service, flight information service or alerting service along part or the whole of the route of flight.

11.4.2.2.2.2 A filed flight plan message shall be originated and addressed as follows by the ATS unit serving the departure aerodrome or, when applicable, by the ATS unit receiving a flight plan from an aircraft in flight:

- a) an FPL message shall be sent to the ACC or flight information centre serving the control area or FIR within which the departure aerodrome is situated;
- b) unless basic flight plan data are already available as a result of arrangements made for repetitive flight plans, an FPL message shall be sent to all centres in charge of each FIR or upper FIR along the route which are unable to process current data. In addition, an FPL message shall be sent to the aerodrome control tower at the destination aerodrome. If so required, an FPL message shall also be sent to flow management centres responsible for ATS units along the route;
- c) when a potential re-clearance in flight (RIF) request is indicated in the flight plan, the FPL message shall be sent to the additional centres concerned and to the aerodrome control tower of the revised destination aerodrome;
- d) where it has been agreed to use CPL messages but where information is required for early planning of traffic flow, an FPL message shall be transmitted to the ACCs concerned;
- e) for a flight along routes where flight information service and alerting service only are provided, an FPL message shall be addressed to the centre in charge of each FIR or upper FIR along the route and to the aerodrome control tower at the destination aerodrome.

11.4.2.2.2.3 In the case of a flight through intermediate stops, where flight plans for each stage of the flight are filed at the first departure aerodrome, the following procedure shall be applied:

- a) the air traffic services reporting office at the first departure aerodrome shall:
 - 1) transmit an FPL message for the first stage of flight in accordance with 11.4.2.2.2.2;
 - 2) transmit a separate FPL message for each subsequent stage of flight, addressed to the air traffic services reporting office at the appropriate subsequent departure aerodrome;

- b) the air traffic services reporting office at each subsequent departure aerodrome shall take action on receipt of the FPL message as if the flight plan has been filed locally.

11.4.2.2.2.4 When so required by agreement between the appropriate ATS authorities to assist in the identification of flights and thereby eliminate or reduce the need for interceptions in the event of deviations from assigned track, FPL messages for flights along specified routes or portions of routes in close proximity to FIR boundaries shall also be addressed to the centres in charge of each FIR or upper FIR adjacent to such routes or portions of routes.

11.4.2.2.2.5 FPL messages should be transmitted immediately after the filing of the flight plan. If a flight plan is filed more than 24 hours in advance of the estimated off-block time of the flight to which it refers, the date of the flight departure shall be inserted in Item 18 of the flight plan.

11.4.2.2.3 DELAY (DLA) MESSAGES

11.4.2.2.3.1 A DLA message shall be transmitted when the departure of an aircraft, for which basic flight plan data (FPL or RPL) has been sent, is delayed by more than 30 minutes after the estimated off-block time contained in the basic flight plan data.

11.4.2.2.3.2 The DLA message shall be transmitted by the ATS unit serving the departure aerodrome to all recipients of basic flight plan data.

Note.— See 11.4.2.3.4 concerning notification of a delayed departure of an aircraft for which a CPL message has been transmitted.

11.4.2.2.4 MODIFICATION (CHG) MESSAGES

A CHG message shall be transmitted when any change is to be made to basic flight plan data contained in previously transmitted FPL or RPL data. The CHG message shall be sent to those recipients of basic flight plan data which are affected by the change. Relevant revised basic flight plan data shall be provided to such affected entities not previously having received this.

Note.— See 11.4.2.3.4 concerning notification of a change to coordination data contained in a previously transmitted current flight plan or estimate message.

11.4.2.2.5 FLIGHT PLAN CANCELLATION (CNL) MESSAGES

A flight plan cancellation (CNL) message shall be transmitted when a flight, for which basic flight plan data has been previously distributed, has been cancelled. The ATS unit serving the departure aerodrome shall transmit the CNL message to ATS units which have received basic flight plan data.

11.4.2.2.6 DEPARTURE (DEP) MESSAGES

11.4.2.2.6.1 Unless otherwise prescribed on the basis of regional air navigation agreements, a DEP message shall be transmitted immediately after the departure of an aircraft for which basic flight plan data have been previously distributed.

11.4.2.2.6.2 The DEP message shall be transmitted by the ATS unit serving the departure aerodrome to all recipients of basic flight plan data.

Note.— See 11.4.2.3.4 concerning notification of the departure of an aircraft for which a CPL message has been transmitted.

11.4.2.2.7 ARRIVAL (ARR) MESSAGES

11.4.2.2.7.1 When an arrival report is received by the ATS unit serving the arrival aerodrome, this unit shall transmit an ARR message:

- a) for a landing at the destination aerodrome:
 - 1) to the ACC or flight information centre in whose area the arrival aerodrome is located, if required by that unit; and
 - 2) to the ATS unit, at the departure aerodrome, which originated the flight plan message, if that message included a request for an ARR message;
- b) for a landing at an alternate or other aerodrome:
 - 1) to the ACC or flight information centre in whose area the arrival aerodrome is located; and
 - 2) to the aerodrome control tower at the destination aerodrome; and
 - 3) to the air traffic services reporting office at the departure aerodrome; and
 - 4) to the ACC or flight information centre in charge of each FIR or upper FIR through which the aircraft would have passed according to the flight plan, had it not diverted.

11.4.2.2.7.2 When a controlled flight which has experienced failure of two-way communication has landed, the aerodrome control tower at the arrival aerodrome shall transmit an ARR message:

- a) for a landing at the destination aerodrome:
 - 1) to all ATS units concerned with the flight during the period of the communication failure; and
 - 2) to all other ATS units which may have been alerted;
- b) for a landing at an aerodrome other than the destination aerodrome:

to the ATS unit serving the destination aerodrome; this unit shall then transmit an ARR message to other ATS units concerned or alerted as in a) above.

11.4.2.3 COORDINATION MESSAGES (APPENDIX 3 REFERS)

Note.— The provisions governing coordination are contained in Chapter 10. Phraseology to be used in voice communication is contained in Chapter 12. See paragraph 11.4.2.5 below for the provisions governing AIDC messages, as prescribed in Appendix 6.

11.4.2.3.1 Coordination messages comprise:

- current flight plan messages (11.4.2.3.2)

- estimate messages (11.4.2.3.3)
- coordination messages (11.4.2.3.4)
- acceptance messages (11.4.2.3.5)
- logical acknowledgement messages (11.4.2.3.6).

11.4.2.3.2 *CURRENT FLIGHT PLAN (CPL) MESSAGES*

11.4.2.3.2.1 Unless basic flight plan data have already been distributed (FPL or RPL) which will be supplemented by coordination data in the estimate message, a CPL message shall be transmitted by each ACC to the next ACC and from the last ACC to the aerodrome control tower at the destination aerodrome, for each controlled flight, and for each flight provided with air traffic advisory service along routes or portions of routes where it has been determined by the appropriate ATS authority that adequate point-to-point communications exist and that conditions are otherwise suitable for forwarding current flight plan information.

11.4.2.3.2.2 When an aircraft traverses a very limited portion of a control area where, by agreement between the appropriate ATS authorities concerned, coordination of air traffic through that portion of the control area has been delegated to and is effected directly by the two centres whose control areas are separated by that portion, CPLs shall be transmitted directly between such units.

11.4.2.3.2.3 A CPL message shall be transmitted in sufficient time to permit each ATS unit concerned to receive the information at least 20 minutes before the time at which the aircraft is estimated to pass the transfer of control point or boundary point at which it comes under the control of such unit, unless another period of time has been prescribed by the appropriate ATS authority. This procedure shall apply whether or not the ATS unit responsible for origination of the message has assumed control of, or established contact with, the aircraft by the time the transmission is to be effected.

11.4.2.3.2.4 When a CPL message is transmitted to a centre which is not using automatic data-processing equipment, the period of time specified in 11.4.2.3.2.3 may be insufficient, in which case an increased lead-time shall be agreed.

11.4.2.3.2.5 A CPL message shall include only information concerning the flight from the point of entry into the next control area or advisory airspace to the destination aerodrome.

11.4.2.3.3 *ESTIMATE (EST) MESSAGES*

11.4.2.3.3.1 When basic flight plan data for a flight has been provided, an EST message shall be transmitted by each ACC or flight information centre to the next ACC or flight information centre along the route of flight.

11.4.2.3.3.2 An EST message shall be transmitted in sufficient time to permit the ATS unit concerned to receive the information at least 20 minutes before the time at which the aircraft is estimated to pass the transfer of control point or boundary point at which it comes under the control of such unit, unless another period of time has been prescribed by the appropriate ATS authority. This procedure shall apply whether or not the ACC or flight information centre responsible for origination of the message has assumed control of, or established contact with, the aircraft by the time the transmission is to be effected.

11.4.2.3.3.3 When an EST message is transmitted to a centre which is not using automatic data-processing equipment, the period of time specified in 11.4.2.3.3.2 may be insufficient, in which case an increased lead-time shall be agreed.

11.4.2.3.4 *COORDINATION (CDN) MESSAGES*

11.4.2.3.4.1 A CDN message shall be transmitted during the coordination dialogue by an accepting unit to the transferring unit when the former wishes to propose a change to coordination data as contained in a previously received CPL or EST message.

11.4.2.3.4.2 If the transferring unit wishes to propose a change to the data contained in a CDN message received from the accepting unit, a CDN message shall be transmitted to the accepting unit.

11.4.2.3.4.3 The dialogue described above is repeated until the coordination dialogue is completed by the transmission of an acceptance (ACP) message by one of the two units concerned. Normally, however, when a change is proposed to a CDN message, direct-speech circuits shall be used to resolve this issue.

11.4.2.3.4.4 After the coordination dialogue has been completed, if one of the two ATS units concerned wishes to propose or notify any change in basic flight plan data or conditions of transfer, a CDN message shall be transmitted to the other unit. This requires that the coordination dialogue be repeated.

11.4.2.3.4.5 A repeated coordination dialogue is completed by the transmission of an ACP message. Normally, in a repeated coordination dialogue, direct-speech circuits shall be used.

11.4.2.3.5 ACCEPTANCE (ACP) MESSAGES

11.4.2.3.5.1 Unless special arrangements have been made between the air traffic control units concerned in accordance with Chapter 10, 10.1.2.2.1, an ACP message shall be transmitted by an accepting unit to the transferring unit to indicate that data in a CPL or an EST message is accepted.

11.4.2.3.5.2 Either the accepting unit or the transferring unit shall transmit an ACP message to indicate that data received in a CDN message is accepted and that the coordination dialogue is completed.

11.4.2.3.6 LOGICAL ACKNOWLEDGEMENT MESSAGES (LAM)

11.4.2.3.6.1 An LAM shall be used only between ATC computers.

11.4.2.3.6.2 An ATC computer shall transmit an LAM in response to a CPL or EST or other appropriate message which is received and processed up to the point where the operational content will be received by the appropriate controller.

11.4.2.3.6.3 The transferring centre shall set an appropriate reaction time parameter when the CPL or EST message is transmitted. If the LAM is not received within the parameter time, an operational warning shall be initiated and reversion to telephone and manual mode shall ensue.

11.4.2.4 SUPPLEMENTARY MESSAGES

11.4.2.4.1 Supplementary messages comprise:

- request flight plan messages (11.4.2.4.2)
- request supplementary flight plan messages (11.4.2.4.3)
- supplementary flight plan messages (11.4.2.4.4).

11.4.2.4.2 REQUEST FLIGHT PLAN (RQP) MESSAGES

A request flight plan (RQP) message shall be transmitted when an ATS unit wishes to obtain flight plan data. This might occur upon receipt of a message concerning an aircraft for which no corresponding basic flight plan data had been previously received. The RQP message shall be transmitted to the transferring ATS unit which originated an EST message, or to the centre which originated an update message for which no corresponding basic flight plan data are available. If no message has been received at all, but an aircraft establishes radiotelephony (RTF) communications and requires air traffic services, the RQP message shall be transmitted to the previous ATS unit along the route of flight.

11.4.2.4.3 *REQUEST SUPPLEMENTARY FLIGHT PLAN (RQS) MESSAGES*

A request supplementary flight plan (RQS) message shall be transmitted when an ATS unit wishes to obtain supplementary flight plan data. The message shall be transmitted to the air traffic services reporting office at the departure aerodrome or in the case of a flight plan submitted during flight, to the ATS unit specified in the flight plan message.

11.4.2.4.4 *SUPPLEMENTARY FLIGHT PLAN (SPL) MESSAGES*

Note.— *Instructions for the transmission of an SPL are contained in Appendix 2.*

An SPL message shall be transmitted by the ATS reporting office at the departure aerodrome to ATS units requesting information additional to that already transmitted in a CPL or FPL message. When transmitted by the AFTN, the message shall be assigned the same priority indicator as that in the request message.

11.4.2.5 AIDC MESSAGES (APPENDIX 6 REFERS)

11.4.2.5.1 AIDC messages comprise:

- Notify messages (11.4.2.5.3)
- Coordinate Initial messages (11.4.2.5.4)
- Coordinate Negotiate messages (11.4.2.5.5)
- Coordinate Accept messages (11.4.2.5.6)
- Coordinate Reject messages (11.4.2.5.7)
- Coordinate Cancel messages (11.4.2.5.8)
- Coordinate Update messages (11.4.2.5.9)
- Coordinate Standby messages (11.4.2.5.10)
- Transfer Initiate messages (11.4.2.5.11)
- Transfer Conditions Proposal messages (11.4.2.5.12)
- Transfer Conditions Accept messages (11.4.2.5.13)
- Transfer Communication Request messages (11.4.2.5.14)
- Transfer Communication messages (11.4.2.5.15)
- Transfer Communication Assume messages (11.4.2.5.16)
- Transfer Control messages (11.4.2.5.17)
- Transfer Control Assume messages (11.4.2.5.18)
- General Point messages (11.4.2.5.19)
- General Executive Data messages (11.4.2.5.20)
- Free Text Emergency messages (11.4.1.4)
- Free Text General messages (11.4.2.5.21)
- Application Accept messages (11.4.2.5.22)
- Application Reject messages (11.4.2.5.23).

11.4.2.5.2 The requirements with regard to the selection of AIDC messages and the associated procedures should be established on the basis of regional air navigation agreements in order to facilitate the harmonization of ATS in adjacent airspaces.

Note.— *While the implementation of AIDC messages is intended to automate the ATC coordination process and minimize the requirement for voice coordination, it is not a complete replacement for voice, especially when a flight is in close proximity to the boundary with an adjoining unit.*

11.4.2.5.3 NOTIFY MESSAGES

11.4.2.5.3.1 Notify messages shall be transmitted in advance to the ATS unit(s) for which coordination for the flight will be required. This could include ATS units that may be affected by the flight's trajectory even though the flight may not actually enter the airspace of these ATS units. The initial Notify message shall be sent at or prior to an agreed time or distance before the common boundary with the receiving unit. This time or distance shall normally occur prior to the transmission of the initial coordination message. If an aircraft is departing an aerodrome close to the common boundary, however, adjacent units may agree that no Notify message is required and that a Coordinate Initial message will suffice.

11.4.2.5.3.2 All Notify messages shall include boundary estimate data. Route data, when included, shall as a minimum contain information from a point prior to entry into the receiving unit to the destination aerodrome.

Note 1.— The amount of route information prior to the point of entry into the airspace of the receiving units depends on the environment of the flight. Typically, more route information would be required in a procedural environment.

Note 2.— To permit the synchronization of flight data information with adjacent units, the initial Notify message may contain all flight plan data associated with the flight.

11.4.2.5.3.3 Prior to the transmission of the Coordinate Initial message, amendments to the contents of a previously transmitted Notify message shall be communicated by transmission of another Notify message containing the amended data. Amendments to the level, route or destination aerodrome, may also necessitate a change to the ATS units to which the new Notify message is sent.

11.4.2.5.3.4 If the destination of an aircraft is amended prior to the transmission of the initial Notify message, the destination aerodrome in the Notify message shall contain the amended destination. If the destination is amended after the transmission of the initial Notify message but prior to the transmission of the Coordinate Initial message, a new Notify message shall be transmitted containing the original destination in the destination aerodrome data, and the new destination as the amended destination. Subsequent AIDC messages to the same unit shall contain only the amended destination in the destination aerodrome data.

11.4.2.5.3.5 There is no operational response to a Notify message.

11.4.2.5.4 COORDINATE INITIAL MESSAGES

11.4.2.5.4.1 A Coordinate Initial message shall be transmitted by each area control centre to the next area control centre and from the last area control centre to the approach control unit serving the destination aerodrome (or aerodrome control if such a unit does not exist), for each controlled flight, and for each flight provided with air traffic advisory service, along routes or portions of routes where it has been determined by the appropriate ATS authority that conditions are suitable for forwarding coordination information. This may include ATS units that will be affected by the flight's trajectory even though the flight may not actually enter the airspace of these ATS units.

11.4.2.5.4.2 The Coordinate Initial message constitutes a proposal for coordination of a flight in accordance with the information contained in the coordination message and any previously received notification message(s) (if applicable). All Coordinate Initial messages shall include boundary estimate data. Route data, when included, shall as a minimum contain information from a point prior to entry into the next unit to the destination aerodrome.

Note 1.— The amount of route information prior to the point of entry into the airspace of the receiving ATS units depends on the environment of the flight. Typically, more route information would be required in a procedural environment.

Note 2.— To permit the synchronization of flight data information with adjacent units if a Notify message has not been previously transmitted, the Coordinate Initial message may contain all flight plan data associated with the flight.

11.4.2.5.4.3 When an aircraft traverses a very limited portion of a control area where, by agreement between the appropriate ATS authorities, coordination of air traffic through that portion of the control area has been delegated to, and is effected directly between, the two units whose control areas are separated by that portion, Coordinate Initial messages shall be transmitted directly between such units, in addition to the ATS unit whose airspace is being traversed.

11.4.2.5.4.4 A Coordinate Initial message shall be transmitted in sufficient time to permit each ATS unit concerned to receive the information at least 20 minutes before the time at which the aircraft is estimated to pass the transfer of control point or boundary point with the receiving unit, unless another period of time has been prescribed by the appropriate ATS authority. This requirement shall apply whether or not the ATS unit responsible for origination of the Coordinate Initial message has assumed control of, or established contact with, the aircraft by the time the coordination is to be effected.

11.4.2.5.4.5 When a Coordinate Initial message is transmitted to an ATS unit which is not using automatic data-processing equipment, the period of time specified in 11.4.2.5.4.4 may be insufficient, in which case an increased time parameter may be agreed upon.

11.4.2.5.4.6 The standard responses to a Coordinate Initial message are either a Coordinate Negotiate or a Coordinate Accept message. However, if a Coordinate Initial message is received proposing non-standard coordination conditions and the Coordinate Negotiate message is not an appropriate response, the Coordinate Reject message may be used to reject the Coordinate Initial message. If this occurs, local procedures shall prescribe the requirements to complete the coordination process.

11.4.2.5.5 COORDINATE NEGOTIATE MESSAGES

11.4.2.5.5.1 A Coordinate Negotiate message shall be transmitted by the receiving unit to the transferring unit during the initial coordination dialogue when the receiving unit wishes to propose an amendment to the coordination conditions contained in the Coordinate Initial message.

11.4.2.5.5.2 Normally, when further negotiation is required in response to a Coordinate Negotiate message received during the initial coordination dialogue, direct-speech circuits shall be used to resolve the issue. However, where so agreed between the two units, a Coordinate Negotiate message shall be transmitted in response. This message exchange is repeated until the coordination dialogue is completed by the transmission of a Coordinate Accept message by one of the units.

11.4.2.5.5.3 A Coordinate Negotiate message shall be transmitted after successful completion of coordination by either the transferring or receiving unit to propose an amendment to the previously agreed coordination conditions. The Coordinate Negotiate message is sent if the amendments are not in accordance with letters of agreement between the transferring and receiving units, or if Coordinate Update messages are not in use.

11.4.2.5.5.4 A Coordinate Negotiate message would not normally be transmitted after the transition to the transfer state has commenced. However, where so agreed between ATS units, a Coordinate Negotiate message shall be transmitted by the receiving ATS unit to propose a modification to the flight details after the transfer of control of the flight has been completed, but when the flight is still within proximity of the boundary between the two ATS units.

11.4.2.5.5.5 Normally, when a further change is required in response to a Coordinate Negotiate message received after the initial coordination has been successfully completed, direct-speech circuits shall be used to resolve the issue. However, where so agreed between ATS units, a Coordinate Negotiate message may be transmitted in response. This

message exchange is repeated until the negotiation dialogue is completed by the transmission of either a Coordinate Accept or Coordinate Reject message by one of the units.

11.4.2.5.5.6 If a Coordinate Negotiate message is used to propose an amendment to the destination aerodrome, the Coordinate Negotiate message shall contain the original destination in the destination aerodrome data, and the new destination as the amended destination. The operational response to this Coordinate Negotiate message shall also contain the original destination in the destination aerodrome data. Provided that the amendment is accepted, subsequent AIDC messages to the same unit shall refer only to the amended destination in the destination aerodrome data.

11.4.2.5.5.7 All Coordinate Negotiate messages shall contain boundary estimate data. When agreed between the two units, a Coordinate Negotiate message shall be sent to update other flight plan data such as CNS equipment and other information. Route data, when included due to a new route needing to be coordinated, shall as a minimum contain information from a point prior to entry into the next unit to the point where the new route rejoins the previously coordinated route.

11.4.2.5.5.8 A Coordinate Negotiate message would normally be presented to the controller for manual processing.

11.4.2.5.6 COORDINATE ACCEPT MESSAGES

11.4.2.5.6.1 A Coordinate Accept message shall be transmitted by the ATS unit receiving a Coordinate Initial, Coordinate Update or Coordinate Negotiate message to indicate that the proposed coordination conditions (or revision thereto) contained in the received message are accepted.

11.4.2.5.6.2 When a Coordinate Accept message is transmitted in response to a negotiation dialogue proposing an amendment to the destination aerodrome, the Coordinate Accept message may (optionally) contain the previous destination in the destination aerodrome data.

Note.— The use of the previous destination in the destination aerodrome data of the Coordinate Accept message may be required to ensure the proper association with the Coordinate Negotiate message proposing the amendment of the destination aerodrome.

11.4.2.5.6.3 The Coordinate Accept message terminates the coordination or negotiation dialogue. There is no operational response to a Coordinate Accept message.

11.4.2.5.7 COORDINATE REJECT MESSAGES

11.4.2.5.7.1 When agreed between the two units, a Coordinate Reject message may be used to reject the coordination conditions proposed in a Coordinate Initial message if these coordination conditions are not in accordance with letters of agreement. The Coordinate Reject message may only be used as a response to a Coordinate Initial message provided that local procedures exist to complete the coordination of the flight.

11.4.2.5.7.2 A Coordinate Reject message shall be transmitted by the ATS unit receiving a Coordinate Update or Coordinate Negotiate message to indicate that the proposed revision to coordination conditions contained in the received message are not acceptable and that no counterproposal will be made by the use of a Coordinate Negotiate message.

11.4.2.5.7.3 When a Coordinate Reject message is transmitted in response to a negotiation dialogue proposing an amendment to the aerodrome, the Coordinate Reject message may (optionally) contain the previous destination in the destination aerodrome data.

Note.— The use of the previous destination in the destination aerodrome data of the Coordinate Reject message may be required to ensure the proper association with the Coordinate Negotiate message proposing the amendment of the destination aerodrome.

11.4.2.5.7.4 A Coordinate Reject message terminates the coordination or negotiation dialogue. If the Coordinate Reject was a response to a negotiation dialogue after coordination had been completed, any previously agreed coordination conditions remain valid. There is no operational response to a Coordinate Reject message.

11.4.2.5.8 COORDINATE CANCEL MESSAGES

11.4.2.5.8.1 A Coordinate Cancel message shall be transmitted by the transferring unit to the receiving unit to abrogate the existing notification or coordination of a flight in the event that it is delayed indefinitely or the route or level is amended such that the flight is no longer expected to enter the airspace of the receiving unit directly from that of the transferring unit. If the amendments to the route or level of the flight are such that it will now affect another unit the transmission of an initial Notify message and/or Coordinate Initial message to that unit may be required.

11.4.2.5.8.2 The Coordinate Cancel message may include information regarding the reason for the cancellation. This information is defined in the *Manual of Air Traffic Services Data Link Applications* (Doc 9694).

11.4.2.5.8.3 There is no operational response to a Coordinate Cancel message.

11.4.2.5.9 COORDINATE UPDATE MESSAGES

11.4.2.5.9.1 A Coordinate Update message shall be transmitted by the transferring unit to the receiving unit to propose an amendment to the previously agreed coordination conditions, provided that the proposed amendment is in accordance with letters of agreement. If the amendment is not in accordance with letters of agreement, a Coordinate Negotiate message shall be used instead. A Coordinate Update message shall not be transmitted before coordination has been successfully completed, or after the transition to the transfer state has commenced.

11.4.2.5.9.2 If the flight is greater than an agreed time or distance prior to the boundary, amendments contained in a Coordinate Update message are automatically processed by the receiving unit, and a Coordinate Accept message is transmitted automatically in response. If the flight is within this agreed time or distance prior to the boundary, a Coordinate Negotiate message shall be used.

11.4.2.5.9.3 If a Coordinate Update message is used to propose an amendment to the destination aerodrome, the Coordinate Update message shall contain the original destination in the destination aerodrome data, and the new destination as the amended destination. The operational response to this Coordinate Update message shall also contain the original destination in the destination aerodrome data. Provided that the amendment is accepted, subsequent AIDC messages to the same unit shall contain only the amended destination in the destination aerodrome data.

11.4.2.5.9.4 All Coordinate Update messages shall contain boundary estimate data. When agreed between the two units, a Coordinate Update message shall be sent to update other flight plan data such as CNS equipment and other information. Route data, when included due to a new route needing to be coordinated, shall as a minimum contain information from a point prior to entry into the next unit to the point where the new route rejoins the previously coordinated route.

11.4.2.5.10 *COORDINATE STANDBY MESSAGES*

The Coordinate Standby message shall be sent by the unit receiving a Coordinate Initial or Coordinate Negotiate message to indicate to the sending unit that their proposal has been received and will be responded to in due course. It could be used for example, if the coordination message had to be referred for manual processing or if further coordination had to be conducted with another unit.

11.4.2.5.11 *TRANSFER INITIATE MESSAGES*

11.4.2.5.11.1 The transfer of control and communication messages that are to be used in a specific ATC environment shall be agreed between the units concerned and should be agreed on a regional basis. The messages used in a high density continental environment will be different from those required in a low density remote airspace environment.

11.4.2.5.11.2 The Transfer Initiate message shall be transmitted automatically by the transferring unit at or prior to an agreed time or distance before the common boundary. This message, initiating the transfer phase, shall be sent only after coordination has been successfully completed with the receiving unit.

11.4.2.5.11.3 The Transfer Initiate message contains all executive data and may optionally include any track data relating to the flight. This information updates the receiving unit with the current control environment of the flight, e.g. current cleared flight level and any speed restrictions, rate of climb or descent, heading or direct routing that may have been assigned.

11.4.2.5.11.4 The Transfer Initiate message alleviates the requirement for the controller in the transferring unit to verbally provide this information to the controller in the receiving unit while also allowing the automatic update of the flight data held by the receiving unit.

11.4.2.5.11.5 There is no operational response to a Transfer Initiate message.

11.4.2.5.12 *TRANSFER CONDITIONS PROPOSAL MESSAGES*

11.4.2.5.12.1 The Transfer Conditions Proposal message shall be used to manually transfer a flight early, or under conditions that are not in accordance with those specified in the applicable letter of agreement (e.g. assigned speed greater than that agreed to in the letter of agreement, aircraft on heading). If a Transfer Initiate message had not previously been sent, the Transfer Conditions Proposal message initiates the transfer phase, and the transmission of the Transfer Initiate message is not required.

11.4.2.5.12.2 Subsequent amendments to the control environment of the flight are coordinated by the transmission of another Transfer Conditions Proposal message containing new executive data to the receiving unit.

11.4.2.5.12.3 The Transfer Conditions Proposal message proposes the transfer of communication and control of the flight to the controller in the accepting unit, together with updated control environment data. The message should be referred to the controller in the receiving unit for manual processing.

Note.— The terms of the transfer of control contained in the relevant letter of agreement may restrict control of the aircraft until the aircraft has reached the transfer of control point.

11.4.2.5.12.4 The operational response to a Transfer Conditions Proposal is a Transfer Conditions Accept message.

11.4.2.5.13 *TRANSFER CONDITIONS ACCEPT MESSAGES*

11.4.2.5.13.1 The Transfer Conditions Accept message is transmitted by the accepting unit to indicate that the controller has agreed to accept the transfer of communication and control of the flight in accordance with the conditions proposed in the Transfer Conditions Proposal message.

11.4.2.5.13.2 Where required, the Transfer Conditions Accept message shall include the radiotelephony frequency(ies) or channel(s) as appropriate that the flight is to be transferred to.

11.4.2.5.13.3 There is no operational response to a Transfer Conditions Accept message.

11.4.2.5.14 *TRANSFER COMMUNICATION REQUEST MESSAGES*

11.4.2.5.14.1 The Transfer Communication Request message shall be transmitted by the controller in the accepting unit to request the transfer of communication of a flight. The message shall be used when the controller in the accepting unit requires communication with the flight forthwith and indicates that the controller in the transferring unit should transmit appropriate contact instructions to the relevant aircraft. Where required, the Transfer Communication Request message shall include the radiotelephony frequency(ies) or channel(s) as appropriate that the flight is to be transferred to.

11.4.2.5.14.2 There is no operational response required for the Transfer Communication Request message, but receipt of this message would normally result in a Transfer Communication message being transmitted by the transferring unit when the flight is instructed to contact the receiving unit.

11.4.2.5.15 *TRANSFER COMMUNICATION MESSAGES*

The Transfer Communication message shall indicate that the controller in the transferring unit has instructed the flight to establish communication with the controller in the accepting unit. On receipt of this message the controller in the receiving unit shall ensure that communication is established shortly thereafter. The Transfer Communication message may optionally include any “release conditions” for the transfer of control. These release conditions may include climb, descent or turn restrictions, or a combination thereof. If a Transfer Initiate message has not been previously sent, the Transfer Communication message initiates the transfer phase.

11.4.2.5.16 *TRANSFER COMMUNICATION ASSUME MESSAGES*

The Transfer Communication Assume message shall be transmitted by the accepting unit to indicate that the flight has established communications with the appropriate controller and completes the transfer.

11.4.2.5.17 *TRANSFER CONTROL MESSAGES*

11.4.2.5.17.1 The Transfer Control message is a proposal for the transfer of control of a flight to the accepting unit. This message shall be transmitted either automatically by the transferring unit at, or prior to, an agreed time or distance before the common boundary, or manually by the controller in the transferring unit. This message, initiating the transfer phase, shall be transmitted only after coordination has been successfully completed with the receiving unit.

11.4.2.5.17.2 The operational response to a Transfer Control message is a Transfer Control Assume message.

11.4.2.5.18 *TRANSFER CONTROL ASSUME MESSAGES*

The Transfer Control Assume message shall indicate that the controller in the accepting unit has accepted control responsibility for the flight. The receipt of this message completes the transfer of control process.

11.4.2.5.19 *GENERAL POINT MESSAGES*

The General Point message shall be transmitted to draw the attention of the controller receiving the message to a flight to support voice coordination. The General Point message shall include details of a flight that may have been previously unknown to the receiving unit, to permit it to be displayed if required. This may include, for example, a flight that had planned to operate in airspace under the control of one ATS unit requesting climb or diversion into airspace controlled by another ATS unit which has no details of the flight.

11.4.2.5.20 *GENERAL EXECUTIVE DATA MESSAGES*

11.4.2.5.20.1 The General Executive Data message shall be sent after the transition to the transfer state has commenced and prior to the Transfer Control Assume or Transfer Communication Assume messages, either by the transferring unit to the receiving unit or from the receiving unit to the transferring unit, to inform the unit receiving the message of any modification to data relating to the control environment of a flight. If the General Executive Data message is sent by the transferring unit, it may include information such as the current cleared (intermediate) flight level and, if applicable, speed restrictions, climb/descent restrictions and the heading (or direct routing) assigned to the flight. If the General Executive Data message is sent by the receiving unit, it includes the radiotelephony frequency or channel as appropriate to which the flight is to be transferred.

11.4.2.5.20.2 There is no operational response required for the General Executive Data message.

11.4.2.5.21 *FREE TEXT GENERAL MESSAGES*

Note.— See 11.4.1.4 for details on Free Text Emergency messages.

The Free Text General message shall only be used to transmit operational information for which any other message type is not appropriate, and for plain-language statements. Normally free text information would be presented directly to the controller responsible — or expecting to be responsible — for the flight. When the message does not refer to a specific flight, a facility designation shall be used to allow for the information to be presented to the appropriate ATS position.

11.4.2.5.22 *APPLICATION ACCEPT MESSAGES*

Except for another application management message, or a message within which an error has been detected, the Application Accept message shall be sent by an ATS unit receiving an AIDC message that has been processed, found free of errors and is available for presentation to a control position.

11.4.2.5.23 *APPLICATION REJECT MESSAGES*

11.4.2.5.23.1 The Application Reject message shall be sent by an ATS unit receiving an AIDC message within which an error has been detected. The Application Reject message shall include a code that enables identification of the nature of the error. Regional air navigation agreement shall be the basis for specifying the codes that are available to be implemented.

Note.— Information concerning the available ATN application reject codes can be found in the Manual of Technical Provisions for the Aeronautical Telecommunication Network (ATN) (Doc 9705), Volume III, 3.2.7.1.1.

11.4.2.5.23.2 When Application Reject messages are not in use, local procedures shall ensure that the appropriate controller is alerted within a specified time parameter where no Application Accept message has been received in response to a transmitted AIDC message.

11.4.2.6 CONTROL MESSAGES

11.4.2.6.1 Control messages comprise:

- clearance messages (11.4.2.6.2)
- flow control messages (11.4.2.6.3)
- position-report and air-report messages (11.4.2.6.4).

11.4.2.6.2 CLEARANCE MESSAGES

Note.— Provisions governing clearances are contained in Chapter 4, Section 4.5. The following paragraphs set forth the contents of clearance messages together with certain procedures relating to the transmission thereof. Procedures governing the use of CPDLC for the delivery of clearances are contained in Chapter 14. Specifications regarding the intent, message attributes and display options can be found in Chapter 14, Table 14-1 to Table 14-3 and Appendix 5.

11.4.2.6.2.1 Clearances shall contain the following in the order listed:

- a) aircraft identification;
- b) clearance limit;
- c) route of flight;
- d) level(s) of flight for the entire route or part thereof and changes of levels if required;

Note.— If the clearance for the levels covers only part of the route, it is important for the air traffic control unit to specify a point to which the part of the clearance regarding levels applies whenever necessary to ensure compliance with 3.6.5.2.2 a) of Annex 2.

- e) any necessary instructions or information on other matters such as SSR transponder operation, approach or departure manoeuvres, communications and the time of expiry of the clearance.

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

11.4.2.6.2.2 Instructions included in clearances relating to levels shall consist of:

- a) cruising level(s) or, for cruise climb, a range of levels, and, if necessary, the point to which the clearance is valid with regard to the level(s);

Note.— See 11.4.2.6.2.1 d) and associated Note.

- b) levels at which specified significant points are to be crossed, when necessary;
- c) the place or time for starting climb or descent, when necessary;
- d) the rate of climb or descent, when necessary;
- e) detailed instructions concerning departure or approach levels, when necessary.

11.4.2.6.2.3 It is the responsibility of the aeronautical station or aircraft operator who has received the clearance to transmit it to the aircraft at the specified or expected delivery time, and to notify the air traffic control unit promptly if it is not delivered within a specified period of time.

11.4.2.6.2.4 Personnel receiving clearances for transmission to aircraft shall transmit such clearances in the exact phraseology in which they are received. In those cases where the personnel transmitting the clearances to the aircraft do not form part of the air traffic services, it is essential that appropriate arrangements be made to meet this requirement.

11.4.2.6.2.5 Level restrictions issued by ATC in air-ground communications shall be repeated in conjunction with subsequent level clearances in order to remain in effect.

Note.— See also Chapter 6, 6.3.2.4 and 6.5.2.4, regarding level restrictions published as elements of SIDs and STARs.

11.4.2.6.3 FLOW CONTROL MESSAGES

Note 1.— Provisions governing the control of air traffic flow are set forth in Annex 11, 3.7.5 and in Chapter 3, 3.2.5.2 of this document. Attention is drawn, however, to the guidance material contained in the Manual on Collaborative Air Traffic Flow Management (ATFM) (Doc 9971).

Note 2.— Format and data conventions for automated interchange of flow control messages have not yet been developed.

11.4.2.6.4 POSITION-REPORT AND AIR-REPORT MESSAGES

Note.— Provisions governing position reporting are set forth in Annex 2, 3.6.3 and 5.3.3, and in Chapter 4, Sections 4.11 and 4.12 of this document.

11.4.2.6.4.1 The format and data conventions to be used in position-report and special air-report messages are those specified on the model AIREP SPECIAL form at Appendix 1, using:

- a) for position-report messages: Section 1;
- b) for special air-report messages: Section 1 followed by Sections 2 and/or 3 as relevant.

11.4.2.6.4.2 Where special air-report messages transmitted by voice communications are subsequently forwarded by automatic data-processing equipment which cannot accept the special air-report message type designator ARS, the use of a different message-type designator shall be permitted by regional air navigation agreement and should be reflected in the *Regional Supplementary Procedures* (Doc 7030) provided that:

- a) the data transmitted accord with that specified in the special air-report format; and
- b) measures are taken to ensure that special air-report messages are forwarded to the appropriate meteorological unit and to other aircraft likely to be affected.

11.4.3 Flight information messages

11.4.3.1 MESSAGES CONTAINING TRAFFIC INFORMATION

Note.— Provisions governing the issuance of traffic information are set forth in Annex 11, 4.2.2 b) and Notes 1 and 2 and in Chapter 5, Section 5.10, and Chapter 7, Section 7.4.1 of this document.

11.4.3.1.1 MESSAGES CONTAINING TRAFFIC INFORMATION TO AIRCRAFT OPERATING OUTSIDE CONTROLLED AIRSPACE

11.4.3.1.1.1 Due to the factors influencing the nature of the flight information services, and particularly the question of provision of information on possible collision hazards to aircraft operating outside controlled airspace, it is not possible to specify standard texts for these messages.

11.4.3.1.1.2 Where such messages are transmitted they shall, however, contain sufficient data on the direction of flight and the estimated time, level and point at which the aircraft involved in the possible collision hazard will pass, overtake or approach each other. This information shall be given in such a way that the pilot of each aircraft concerned is able to appreciate clearly the nature of the hazard.

11.4.3.1.2 MESSAGES CONTAINING ESSENTIAL TRAFFIC INFORMATION TO IFR FLIGHTS OUTSIDE CONTROLLED AIRSPACE

Whenever such messages are transmitted they shall contain the following text:

- a) identification of the aircraft to which the information is transmitted;
- b) the words TRAFFIC IS or ADDITIONAL TRAFFIC IS;
- c) direction of flight of aircraft concerned;
- d) type of aircraft concerned;
- e) cruising level of aircraft concerned and ETA for the significant point nearest to where the aircraft will cross levels.

11.4.3.1.3 MESSAGES CONTAINING ESSENTIAL LOCAL TRAFFIC INFORMATION

Whenever such messages are transmitted they shall contain the following text:

- a) identification of the aircraft to which the information is transmitted;
- b) the words TRAFFIC IS or ADDITIONAL TRAFFIC IS, if necessary;
- c) description of the essential local traffic in terms that will facilitate recognition of it by the pilot, e.g. type, speed category and/or colour of aircraft, type of vehicle, number of persons;
- d) position of the essential local traffic relative to the aircraft concerned, and direction of movement.

11.4.3.2 MESSAGES CONTAINING METEOROLOGICAL INFORMATION

Note.— Provisions governing the making and reporting of aircraft observations are contained in Annex 3. Provisions concerning the contents and transmission of air-reports are contained in Chapter 4, Section 4.12 of this document, and the special air-report of volcanic activity form used for reports of volcanic activity is shown in Appendix 1 to this document. The transmission by ATS units, to meteorological offices, of meteorological information received from aircraft in flight is governed by provisions in Chapter 4, Section 4.12.6 of this document. Provisions governing the transmission by ATS units of meteorological information to aircraft are set forth in Annex 11, 4.2 and in this document (see Chapter 4, 4.8.3 and 4.10.4; Chapter 6, Sections 6.4 and 6.6; Chapter 7, 7.4.1; and Chapter 9, 9.1.3). The written forms of SIGMET and AIRMET messages and other plain-language meteorological messages are governed by the provisions of Annex 3.

11.4.3.2.1 Information to a pilot changing from IFR flight to VFR flight where it is likely that flight in VMC cannot be maintained shall be given in the following manner:

“INSTRUMENT METEOROLOGICAL CONDITIONS REPORTED (or forecast) IN THE VICINITY OF (location)”.

11.4.3.2.2 Meteorological information concerning the meteorological conditions at aerodromes, to be transmitted to aircraft by the ATS unit concerned, in accordance with Annex 11, Chapter 4 and this document, Chapter 6, Sections 6.4 and 6.6 and Chapter 7, Section 7.4.1, shall be extracted by the ATS unit concerned from the following meteorological messages, provided by the appropriate meteorological office, supplemented for arriving and departing aircraft, as appropriate, by information from displays relating to meteorological sensors (in particular, those related to the surface wind and runway visual range) located in the ATS units:

- a) local meteorological routine and special reports;
- b) METAR/SPECI, for dissemination to other aerodromes beyond the aerodrome of origin (mainly intended for flight planning, VOLMET broadcasts and D-VOLMET).

11.4.3.2.3 The meteorological information referred to in 11.4.3.2.2 shall be extracted, as appropriate, from meteorological reports providing information on the following elements:

- a) mean surface wind direction and speed and significant variations therefrom;

Note.— Information on surface wind direction provided to ATS units by the associated meteorological office is referenced to degrees true North. Information on surface wind direction obtained from the ATS surface wind indicator and passed to pilots by ATS units is given in degrees magnetic.

- b) visibility, including significant directional variations;
- c) runway visual range (RVR);
- d) present weather;
- e) amount and height of base of low cloud;
- f) air temperature and dew-point temperature;
- g) altimeter setting(s); and
- h) supplementary information.

Note. — Provisions relating to meteorological information to be provided in accordance with 11.4.3.2.3 are contained in Annex 3 — Meteorological Service for International Air Navigation, Chapter 4 and Appendix 3.

11.4.3.3 MESSAGES CONCERNING THE OPERATION OF AERONAUTICAL FACILITIES

Note.— *General provisions concerning this subject are set forth in Annex 11, 4.2.*

Messages concerning the operation of aeronautical facilities shall be transmitted to aircraft from whose flight plan it is apparent that the operation of the flight may be affected by the operating status of the operating facility concerned. They shall contain appropriate data on the service status of the facility in question, and, if the facility is out of operation, an indication when the normal operating status will be restored.

11.4.3.4 MESSAGES CONTAINING INFORMATION ON AERODROME CONDITIONS

Note.— *Provisions regarding the issuance of information on aerodrome conditions are contained in Chapter 7, 7.5.*

11.4.3.4.1 Whenever information is provided on aerodrome conditions, this shall be done in a clear and concise manner so as to facilitate appreciation by the pilot of the situation described. It shall be issued whenever deemed necessary by the controller on duty in the interest of safety, or when requested by an aircraft. If the information is provided on the initiative of the controller, it shall be transmitted to each aircraft concerned in sufficient time to enable the pilot to make proper use of the information.

11.4.3.4.2 Whenever information is provided concerning runway surface conditions that may adversely affect aircraft braking action, the following terms shall be used, as necessary:

COMPACTED SNOW

DRY

DRY SNOW

DRY SNOW ON TOP OF COMPACTED SNOW

DRY SNOW ON TOP OF ICE

FROST

ICE

SLUSH

STANDING WATER

WATER ON TOP OF COMPACTED SNOW

WET

WET ICE

WET SNOW

WET SNOW ON TOP OF COMPACTED SNOW

WET SNOW ON TOP OF ICE

11.4.3.4.3 Appropriate ATS units shall have available for transmission to aircraft, upon request, the runway condition report (RCR) information. This shall be passed to aircraft in the order of the direction of landing or take-off.

11.4.3.5 MESSAGES CONCERNING AIR TRAFFIC INCIDENT REPORTS

When an aircraft involved in an incident has a destination outside the area of responsibility of the ATS unit where the incident occurred, the ATS unit at the destination aerodrome should be notified and requested to obtain the pilot's report. The following information should be included in the message:

- a) type of incident (AIRPROX, procedure or facility);
 - b) identification of the aircraft concerned;
 - c) time and position at time of incident;
 - d) brief details of incident.
-

Appendix 1

INSTRUCTIONS FOR AIR-REPORTING BY VOICE COMMUNICATIONS

1. Reporting instructions
2. Special air-report of volcanic activity form (Model VAR)
3. Examples

1. 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: <ul style="list-style-type: none"> • Moderate turbulence • Severe turbulence • Moderate icing • Severe icing • Severe mountainwave • Thunderstorms without hail • Thunderstorms with hail • Heavy dust/sandstorm • Volcanic ash cloud • Pre-eruption volcanic activity or volcanic eruption Runway braking action <ul style="list-style-type: none"> • Good • Good to Medium • Medium • Medium to Poor • Poor • Less than Poor 	TURBULENCE MODERATE TURBULENCE SEVERE ICING MODERATE ICING SEVERE MOUNTAINWAVE SEVERE THUNDERSTORMS THUNDERSTORMS WITH HAIL DUSTSTORM or SANDSTORM HEAVY VOLCANIC ASH CLOUD PRE-ERUPTION VOLCANIC ACTIVITY or VOLCANIC ERUPTION GOOD GOOD TO MEDIUM MEDIUM MEDIUM TO POOR POOR LESS THAN POOR

1. Position reports and special air-reports

1.1 Section 1 is obligatory for position reports and special air-reports, although Items 5 and 6 thereof may be omitted when prescribed in *Regional Supplementary Procedures*; 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.

1.2 Special air-reports shall be made whenever any of the phenomena listed under Item 15 are observed or encountered. Items 1 to 4 of Section 1 and the appropriate phenomenon specified in Section 3, Item 15, are required from all aircraft. The phenomena listed under "SST" shall be reported only by supersonic transport at transonic and supersonic cruising levels.

1.3 In the case of special air-reports containing information on volcanic activity, a post-flight report shall be made on the volcanic activity reporting form (Model VAR). All elements which are observed shall be recorded and indicated respectively in the appropriate places on the form Model VAR.

1.4 Special air-reports shall be made as soon as practicable after a phenomenon calling for a special air-report has been observed.

1.5 If a phenomenon warranting the making of a special air-report is observed at or near the time or place where a routine air-report is to be made, a special air-report shall be made instead.

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 Annex 10, Volume II, Chapter 5.

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 (e.g. "4620North07805West", "4620North07800West", "4600North07800West", LN ("LIMA NOVEMBER"), "MAY", "HADDY" or "DUB 180 DEGREES 40 MILES"). Precede significant point by "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 making a special air-report.

Item 4 — FLIGHT LEVEL OR ALTITUDE. Report flight level by 3 numerics (e.g. "FLIGHT LEVEL 310"), 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 on the basis of 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”
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 mountainwave as “MOUNTAINWAVE 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 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.

Note.— In case of volcanic ash cloud, pre-eruption volcanic activity or volcanic eruption, in accordance with Chapter 4, 4.12.3, a post-flight report shall also be made on the special air-report of volcanic activity form (Model VAR).

- Good braking action as “BRAKING ACTION GOOD”

- Good to medium braking action as "BRAKING ACTION GOOD TO MEDIUM"
- Medium braking action as "BRAKING ACTION MEDIUM"
- Medium to poor braking action as "BRAKING ACTION MEDIUM TO POOR"
- Poor braking action as "BRAKING ACTION POOR"
- Less than poor braking action as "BRAKING ACTION LESS THAN POOR"

The following specifications apply:

Good — Braking deceleration is normal for the wheel braking effort applied and directional control is normal.

Good to medium — Braking deceleration or directional control is between Good and Medium.

Medium — Braking deceleration is noticeably reduced for the wheel braking effort applied or directional control is noticeably reduced.

Medium to poor — Braking deceleration or directional control is between Medium and Poor.

Poor — Braking deceleration is significantly reduced for the wheel braking effort applied or directional control is significantly reduced.

Less than poor — Braking deceleration is minimal to non-existent for the wheel braking effort applied or directional control is uncertain.

2.2 Information recorded on the volcanic activity reporting form (Model VAR) is not for transmission by RTF but, on arrival at an aerodrome, is to be delivered without delay by the operator or a flight crew member to the aerodrome meteorological office. If such an office is not easily accessible, the completed form shall be delivered in accordance with local arrangements made between the meteorological and ATS authorities and the operator.

3. Forwarding of meteorological information received by voice communications

When receiving special air-reports, air traffic services 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 station called and, when necessary, relay required.
- MESSAGE TYPE DESIGNATOR. Record "ARS" for a special air-report.

Note.— Where air-reports are handled by automatic data processing equipment which cannot accept this message-type designator, in accordance with Chapter 11, 11.4.2.6.5.2, the use of a different message-type designator is permitted by regional air navigation agreement.

- 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 (e.g. New Zealand 103 as ANZ103).

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 (e.g. 4620N07805W, 4620N078W, 46N078W, LN, MAY, HADDY or DUB180040). Precede significant point by "ABM" (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 3

Item 9 — PHENOMENON PROMPTING A SPECIAL AIR-REPORT. Record the phenomenon reported as follows:

- moderate turbulence as "TURB MOD"
- severe turbulence as "TURB SEV"
- moderate icing as "ICE MOD"
- severe icing as "ICE SEV"
- severe mountainwave as "MTW SEV"
- thunderstorm without hail as "TS"
- thunderstorm with hail as "TSGR"
- heavy sandstorm as "HVV SS"
- heavy duststorm as "HVV DS"
- 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.

2. 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.)						

3. Examples

AS SPOKEN IN RADIOTELEPHONY

AS RECORDED BY THE AIR TRAFFIC SERVICES UNIT AND FORWARDED TO THE METEOROLOGICAL OFFICE CONCERNED

I.-¹ AIREP SPECIAL CLIPPER WUN ZERO WUN POSITION FIFE ZERO FOWer FIFE NORTH ZERO TOO ZERO WUN FIFE WEST WUN FIFE TREE SIX FLIGHT LEVEL TREE WUN ZERO CLIMBING TO FLIGHT LEVEL TREE FIFE ZERO THUNDERSTORMS WITH HAIL

I.- ARS PAA101 5045N02015W 1536 F310 ASC F350 TSGR

II.-² SPECIAL NIUGINI TOO SEVen TREE OVER MADANG ZERO AIT FOWer SIX WUN NINer TOUSAND FEET TURBULENCE SEVERE

II.- ARS ANG273 MD 0846 19000FT TURB SEV

1. A special air-report which is required because of the occurrence of widespread thunderstorms with hail.

2. A special air-report which is required because of severe turbulence. The aircraft is on QNH altimeter setting.

Appendix 2

FLIGHT PLAN

1. ICAO model flight plan form
2. Instructions for the completion of the flight plan form
3. Instructions for the transmission of a filed flight plan (FPL) message
4. Instructions for the transmission of a supplementary flight plan (SPL) message
5. Example of a completed flight plan form
6. ICAO model repetitive flight plan (RPL) listing form
7. Instructions for the completion of the repetitive flight plan (RPL) listing form
8. Example of a completed repetitive flight plan (RPL) listing form

1. ICAO model flight plan form

FLIGHT PLAN PLAN DE VOL			
PRIORITY Priorité <<< FF >>>	ADDRESSEE(S) Destinataire(s)		
FILING TIME Heure de dépôt		ORIGINATOR Expéditeur	
SPECIFIC IDENTIFICATION OF ADDRESSEE(S) AND/OR ORIGINATOR Identification précise du(des) destinataire(s) et/ou de l'expéditeur			
3 MESSAGE TYPE Type de message <<< (FPL	7 AIRCRAFT IDENTIFICATION Identification de l'aéronef	8 FLIGHT RULES Règles de vol	TYPE OF FLIGHT Type de vol
9 NUMBER Nombre	TYPE OF AIRCRAFT Type d'aéronef	WAKE TURBULENCE CAT. Cat. de turbulence de sillage	10 EQUIPMENT Équipement
13 DEPARTURE AERODROME Aérodrome de départ		TIME Heure	
15 CRUISING SPEED Vitesse croisière	LEVEL Niveau	ROUTE Route	
16 DESTINATION AERODROME Aérodrome de destination		TOTAL EET Durée totale estimée HR MIN	ALTN AERODROME Aérodrome de dégivement
18 OTHER INFORMATION Renseignements divers		2ND ALTN AERODROME 2 ^e aérodrome de dégivement	
SUPPLEMENTARY INFORMATION (NOT TO BE TRANSMITTED IN FPL MESSAGES) Renseignements complémentaires (À NE PAS TRANSMETTRE DANS LES MESSAGES DE PLAN DE VOL DÉPOSÉ)			
19 ENDURANCE Autonomie E / HR MIN	PERSONS ON BOARD Personnes à bord P /	EMERGENCY RADIO Radio de secours R / UHF U VHF V ELT E	
SURVIVAL EQUIPMENT/Équipement de survie S / P		JACKETS/Gilets de sauvetage J / L	
DINGHIES/Canots D /	POLAR Polaire P	DESERT Désert D	MARITIME Maritime M
NUMBER Nombre D /	CAPACITY Capacité C /	COVER Couverture C /	COLOUR Couleur C /
AIRCRAFT COLOUR AND MARKINGS Couleur et marques de l'aéronef			
REMARKS Remarques N /			
PILOT-IN-COMMAND Pilote commandant de bord C /			
FILED BY / Déposé par		SPACE RESERVED FOR ADDITIONAL REQUIREMENTS Espace réservé à des fins supplémentaires	

2. Instructions for the completion of the flight plan form

2.1 General

Adhere closely to the prescribed formats and manner of specifying data.

Commence inserting data in the first space provided. Where excess space is available, leave unused spaces blank.

Insert all clock times in 4 figures UTC.

Insert all estimated elapsed times in 4 figures (hours and minutes).

Shaded area preceding Item 3 — to be completed by ATS and COM services, unless the responsibility for originating flight plan messages has been delegated.

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

2.2 Instructions for insertion of ATS data

Complete Items 7 to 18 as indicated hereunder.

Complete also Item 19 as indicated hereunder, when so required by the appropriate ATS authority or when otherwise deemed necessary.

Note 1.— Item numbers on the form are not consecutive, as they correspond to Field Type numbers in ATS messages.

Note 2.— Air traffic services data systems may impose communications or processing constraints on information in filed flight plans. Possible constraints may, for example, be limits with regard to item length, number of elements in the route item or total flight plan length. Significant constraints are documented in the relevant Aeronautical Information Publication.

ITEM 7: AIRCRAFT IDENTIFICATION (MAXIMUM 7 CHARACTERS)

INSERT one of the following aircraft identifications, not exceeding 7 alphanumeric characters and without hyphens or symbols:

- a) the ICAO designator for the aircraft operating agency followed by the flight identification (e.g. KLM511, NGA213, JTR25) when in radiotelephony the call sign to be used by the aircraft will consist of the ICAO telephony designator for the operating agency followed by the flight identification (e.g. KLM511, NIGERIA 213, JESTER 25);

OR b) the nationality or common mark and registration mark of the aircraft (e.g. EIAKO, 4XB CD, N2567GA), when:

- 1) in radiotelephony the call sign to be used by the aircraft will consist of this identification alone (e.g. CGAJS), or preceded by the ICAO telephony designator for the aircraft operating agency (e.g. BLIZZARD CGAJS);

- 2) the aircraft is not equipped with radio.

Note 1.— Standards for nationality, common and registration marks to be used are contained in Annex 7, section 3.

Note 2.— Provisions for the use of radiotelephony call signs are contained in Annex 10, Volume II, Chapter 5. ICAO designators and telephony designators for aircraft operating agencies are contained in Doc 8585 — Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services.

**ITEM 8: FLIGHT RULES AND TYPE OF
FLIGHT (ONE OR TWO CHARACTERS)**

Flight rules

INSERT one of the following letters to denote the category of flight rules with which the pilot intends to comply:

- I if it is intended that the entire flight will be operated under the IFR
- V if it is intended that the entire flight will be operated under the VFR
- Y if the flight initially will be operated under the IFR, followed by one or more subsequent changes of flight rules or
- Z if the flight initially will be operated under the VFR, followed by one or more subsequent changes of flight rules

Specify in Item 15 the point or points at which a change of flight rules is planned.

Type of flight

INSERT one of the following letters to denote the type of flight when so required by the appropriate ATS authority:

- S if scheduled air service
- N if non-scheduled air transport operation
- G if general aviation
- M if military
- X if other than any of the defined categories above.

Specify status of a flight following the indicator STS in Item 18, or when necessary to denote other reasons for specific handling by ATS, indicate the reason following the indicator RMK in Item 18.

**ITEM 9: NUMBER AND TYPE OF AIRCRAFT
AND WAKE TURBULENCE CATEGORY**

Number of aircraft (1 or 2 characters)

INSERT the number of aircraft, if more than one.

Type of aircraft (2 to 4 characters)

INSERT the appropriate designator as specified in Doc 8643, *Aircraft Type Designators*,

OR, if no such designator has been assigned, or in case of formation flights comprising more than one type,

INSERT ZZZZ, and *SPECIFY* in Item 18, the (numbers and) type(s) of aircraft preceded by TYP/ .

Wake turbulence category (1 character)
--

INSERT an oblique stroke followed by one of the following letters to indicate the wake turbulence category of the aircraft:

J — SUPER, to indicate an aircraft type specified as such in Doc 8643, *Aircraft Type Designators*;

H — HEAVY, to indicate an aircraft type with a maximum certificated take-off mass of 136 000 kg or more, with the exception of aircraft types listed in Doc 8643 in the SUPER (J) category;

M — MEDIUM, to indicate an aircraft type with a maximum certificated take-off mass of less than 136 000 kg but more than 7 000 kg;

L — LIGHT, to indicate an aircraft type with a maximum certificated take-off mass of 7 000 kg or less.

ITEM 10: EQUIPMENT AND CAPABILITIES
--

Capabilities comprise the following elements:

- a) presence of relevant serviceable equipment on board the aircraft;
- b) equipment and capabilities commensurate with flight crew qualifications; and
- c) where applicable, authorization from the appropriate authority.

Radiocommunication, navigation and approach aid equipment and capabilities
--

INSERT one letter as follows:

N if no COM/NAV/approach aid equipment for the route to be flown is carried, or the equipment is unserviceable,

OR S if standard COM/NAV/approach aid equipment for the route to be flown is carried and serviceable (*see Note 1*),

AND/OR

INSERT one or more of the following letters to indicate the serviceable COM/NAV/approach aid equipment and capabilities available:

A	GBAS landing system	J6	CPDLC FANS 1/A
B	LPV (APV with SBAS)		SATCOM (MTSAT)
C	LORAN C	J7	CPDLC FANS 1/A SATCOM (Iridium)
D	DME		
E1	FMC WPR ACARS	K	MLS
E2	D-FIS ACARS	L	ILS
E3	PDC ACARS	M1	ATC SATVOICE (INMARSAT)
F	ADF	M2	ATC SATVOICE (MTSAT)
G	GNSS. If any portion of the flight is planned to be conducted under IFR, it refers to GNSS receivers that comply with the requirements of Annex 10, Volume I (See Note 2)	M3	ATC SATVOICE (Iridium)
		O	VOR
		P1	CPDLC RCP 400 (See Note 7)
		P2	CPDLC RCP 240 (See Note 7)
		P3	SATVOICE RCP 400 (See Note 7)
		P4-P9	Reserved for RCP
H	HF RTF	R	PBN approved (See Note 4)
I	Inertial Navigation	T	TACAN
J1	CPDLC ATN VDL Mode 2 (See Note 3)	U	UHF RTF
J2	CPDLC FANS 1/A HFDL	V	VHF RTF
J3	CPDLC FANS 1/A VDL Mode A	W	RVSM approved
J4	CPDLC FANS 1/A VDL Mode 2	X	MNPS approved
J5	CPDLC FANS 1/A SATCOM (INMARSAT)	Y	VHF with 8.33 kHz channel spacing capability
		Z	Other equipment carried or other capabilities (See Note 5)

Any alphanumeric characters not indicated above are reserved.

Note 1.— If the letter S is used, standard equipment is considered to be VHF RTF, VOR and ILS, unless another combination is prescribed by the appropriate ATS authority.

Note 2.— If the letter G is used, the types of external GNSS augmentation, if any, are specified in Item 18 following the indicator NAV/ and separated by a space.

Note 3.— See RTCA/EUROCAE Interoperability Requirements Standard for ATN Baseline 1 (ATN B1 INTEROP Standard – DO-280B/ED-110B) for data link services air traffic control clearance and information/air traffic control communications management/air traffic control microphone check.

Note 4.— If the letter R is used, the performance-based navigation levels that can be met are specified in Item 18 following the indicator PBN/. Guidance material on the application of performance-based navigation to a specific route segment, route or area is contained in the Performance-based Navigation (PBN) Manual (Doc 9613).

Note 5.— If the letter Z is used, specify in Item 18 the other equipment carried or other capabilities, preceded by COM/ , NAV/ and/or DAT, as appropriate.

Note 6.— Information on navigation capability is provided to ATC for clearance and routing purposes.

Note 7.— Guidance material on the application of performance-based communication, which prescribes RCP to an air traffic service in a specific area, is contained in the Performance-based Communication and Surveillance (PBCS) Manual (Doc 9869).

Surveillance equipment
and capabilities

INSERT N if no surveillance equipment for the route to be flown is carried, or the equipment is unserviceable,
OR

INSERT one or more of the following descriptors, to a maximum of 20 characters, to describe the serviceable surveillance equipment and/or capabilities on board:

SSR Modes A and C

- A Transponder — Mode A (4 digits — 4 096 codes)
- C Transponder — Mode A (4 digits — 4 096 codes) and Mode C

SSR Mode S

- E Transponder — Mode S, including aircraft identification, pressure-altitude and extended squitter (ADS-B) capability
- H Transponder — Mode S, including aircraft identification, pressure-altitude and enhanced surveillance capability
- I Transponder — Mode S, including aircraft identification, but no pressure-altitude capability
- L Transponder — Mode S, including aircraft identification, pressure-altitude, extended squitter (ADS-B) and enhanced surveillance capability
- P Transponder — Mode S, including pressure-altitude, but no aircraft identification capability
- S Transponder — Mode S, including both pressure altitude and aircraft identification capability
- X Transponder — Mode S with neither aircraft identification nor pressure-altitude capability

Note.— *Enhanced surveillance capability is the ability of the aircraft to down-link aircraft derived data via a Mode S transponder.*

ADS-B

- B1 ADS-B with dedicated 1 090 MHz ADS-B “out” capability
- B2 ADS-B with dedicated 1 090 MHz ADS-B “out” and “in” capability
- U1 ADS-B “out” capability using UAT
- U2 ADS-B “out” and “in” capability using UAT
- V1 ADS-B “out” capability using VDL Mode 4
- V2 ADS-B “out” and “in” capability using VDL Mode 4

ADS-C

- D1 ADS-C with FANS 1/A capabilities
- G1 ADS-C with ATN capabilities

Alphanumeric characters not indicated above are reserved.

Example: ADE3RV/HB2U2V2G1

Note 1.— *The RSP specification(s), if applicable, will be listed in Item 18 following the indicator SUR/. Guidance material on the application of performance-based surveillance, which prescribes RSP to an air traffic service in a specific area, is contained in the Performance-based Communication and Surveillance (PBCS) Manual (Doc 9869).*

Note 2.— Additional surveillance equipment or capabilities will be listed in Item 18 following the indicator SUR/, as required by the appropriate ATS authority.

**ITEM 13: DEPARTURE AERODROME
AND TIME (8 CHARACTERS)**

INSERT the ICAO four-letter location indicator of the departure aerodrome as specified in Doc 7910, *Location Indicators*,

OR, if no location indicator has been assigned,

INSERT ZZZZ and *SPECIFY*, in Item 18, the name and location of the aerodrome preceded by DEP/ ,

OR, the first point of the route or the marker radio beacon preceded by DEP/..., if the aircraft has not taken off from the aerodrome,

OR, if the flight plan is received from an aircraft in flight,

INSERT AFIL, and *SPECIFY*, in Item 18, the ICAO four-letter location indicator of the location of the ATS unit from which supplementary flight plan data can be obtained, preceded by DEP/ .

THEN, WITHOUT A SPACE,

INSERT for a flight plan submitted before departure, the estimated off-block time (EOBT),

OR, for a flight plan received from an aircraft in flight, the actual or estimated time over the first point of the route to which the flight plan applies.

ITEM 15: ROUTE

INSERT the *first cruising speed* as in (a) and the *first cruising level* as in (b), without a space between them.

THEN, following the arrow, *INSERT* the route description as in (c).

(a) Cruising speed (maximum 5 characters)

INSERT the *True airspeed* for the first or the whole cruising portion of the flight, in terms of:

Kilometres per hour, expressed as K followed by 4 figures (e.g. K0830), *or*

Knots, expressed as N followed by 4 figures (e.g. N0485), *or*

True Mach number, when so prescribed by the appropriate ATS authority, to the nearest hundredth of unit Mach, expressed as M followed by 3 figures (e.g. M082).

(b) Cruising level (maximum 5 characters)

INSERT the planned cruising level for the first or the whole portion of the route to be flown, in terms of:

Flight level, expressed as F followed by 3 figures (e.g. F085; F330), *or*

**Standard metric level in tens of metres*, expressed as S followed by 4 figures (e.g. S1130), *or*

Altitude in hundreds of feet, expressed as A followed by 3 figures (e.g. A045; A100), *or*

Altitude in tens of metres, expressed as M followed by 4 figures (e.g. M0840), *or*

for uncontrolled VFR flights, the letters VFR.

(c) Route (including changes of speed, level and/or flight rules)

Flights along designated ATS routes

INSERT, if the departure aerodrome is located on or connected to the ATS route, the designator of the first ATS route,

OR, if the departure aerodrome is not on or connected to the ATS route, the letters DCT followed by the point of joining the first ATS route, followed by the designator of the ATS route.

THEN

INSERT each point at which either a change of speed and/or level is planned to commence, or a change of ATS route, and/or a change of flight rules is planned,

Note.— When a transition is planned between a lower and upper ATS route and the routes are oriented in the same direction, the point of transition need not be inserted.

FOLLOWED IN EACH CASE

by the designator of the next ATS route segment, even if the same as the previous one,

OR by DCT, if the flight to the next point will be outside a designated route, unless both points are defined by geographical coordinates.

Flights outside designated ATS routes

INSERT points normally not more than 30 minutes flying time or 370 km (200 NM) apart, including each point at which a change of speed or level, a change of track, or a change of flight rules is planned.

OR, when required by appropriate ATS authority(ies),

DEFINE the track of flights operating predominantly in an east-west direction between 70°N and 70°S by reference to significant points formed by the intersections of half or whole degrees of latitude with meridians spaced at

* When so prescribed by the appropriate ATS authorities.

intervals of 10 degrees of longitude. For flights operating in areas outside those latitudes the tracks shall be defined by significant points formed by the intersection of parallels of latitude with meridians normally spaced at 20 degrees of longitude. The distance between significant points shall, as far as possible, not exceed one hour's flight time. Additional significant points shall be established as deemed necessary.

For flights operating predominantly in a north-south direction, define tracks by reference to significant points formed by the intersection of whole degrees of longitude with specified parallels of latitude which are spaced at 5 degrees.

INSERT DCT between successive points unless both points are defined by geographical coordinates or by bearing and distance.

USE ONLY the conventions in (1) to (5) below and *SEPARATE* each sub-item by a space.

(1) ATS route (2 to 7 characters)

The coded designator assigned to the route or route segment including, where appropriate, the coded designator assigned to the standard departure or arrival route (e.g. BCN1, BI, R14, UB10, KODAP2A).

Note.— *Provisions for the application of route designators are contained in Annex 11, Appendix 1.*

(2) Significant point (2 to 11 characters)

The coded designator (2 to 5 characters) assigned to the point (e.g. LN, MAY, HADDY),

or, if no coded designator has been assigned, one of the following ways:

— *Degrees only* (7 characters):

2 figures describing latitude in degrees, followed by “N” (North) or “S” (South), followed by 3 figures describing longitude in degrees, followed by “E” (East) or “W” (West). Make up the correct number of figures, where necessary, by insertion of zeros, e.g. 46N078W.

— *Degrees and minutes* (11 characters):

4 figures describing latitude in degrees and tens and units of minutes followed by “N” (North) or “S” (South), followed by 5 figures describing longitude in degrees and tens and units of minutes, followed by “E” (East) or “W” (West). Make up the correct number of figures, where necessary, by insertion of zeros, e.g. 4620N07805W.

— *Bearing and distance from a reference point*:

The identification of the reference point, followed by the bearing from the point in the form of 3 figures giving degrees magnetic, followed by the distance from the point in the form of 3 figures expressing nautical miles. In areas of high latitude where it is determined by the appropriate authority that reference to degrees magnetic is impractical, degrees true may be used. Make up the correct number of figures, where necessary, by insertion of zeros — e.g. a point 180° magnetic at a distance of 40 nautical miles from VOR “DUB” should be expressed as DUB180040.

- (3) Change of speed or level
(maximum 21 characters)

The point at which a change of speed (5% TAS or 0.01 Mach or more) or a change of level is planned to commence, expressed exactly as in (2) above, followed by an oblique stroke and both the cruising speed and the cruising level, expressed exactly as in (a) and (b) above, without a space between them, even when only one of these quantities will be changed.

Examples: LN/N0284A045
 MAY/N0305F180
 HADDY/N0420F330
 4602N07805W/N0500F350
 46N078W/M082F330
 DUB180040/N0350M0840

- (4) Change of flight rules
(maximum 3 characters)

The point at which the change of flight rules is planned, expressed exactly as in (2) or (3) above as appropriate, followed by a space and one of the following:

VFR if from IFR to VFR
 IFR if from VFR to IFR

Examples: LN VFR
 LN/N0284A050 IFR

- (5) Cruise climb (maximum 28 characters)

The letter C followed by an oblique stroke; THEN the point at which cruise climb is planned to start, expressed exactly as in (2) above, followed by an oblique stroke; THEN the speed to be maintained during cruise climb, expressed exactly as in (a) above, followed by the two levels defining the layer to be occupied during cruise climb, each level expressed exactly as in (b) above, or the level above which cruise climb is planned followed by the letters PLUS, without a space between them.

Examples: C/48N050W/M082F290F350
 C/48N050W/M082F290PLUS
 C/52N050W/M220F580F620.

**ITEM 16: DESTINATION AERODROME AND
TOTAL ESTIMATED ELAPSED TIME,
DESTINATION ALTERNATE AERODROME(S)**

Destination aerodrome and total
estimated elapsed time (8 characters)

INSERT the ICAO four-letter location indicator of the destination aerodrome as specified in Doc 7910, *Location Indicators*,

OR, if no location indicator has been assigned,

INSERT ZZZZ and *SPECIFY* in Item 18 the name and location of the aerodrome, preceded by DEST/ .

THEN WITHOUT A SPACE

INSERT the total estimated elapsed time.

Note.— *For a flight plan received from an aircraft in flight, the total estimated elapsed time is the estimated time from the first point of the route to which the flight plan applies to the termination point of the flight plan.*

Destination alternate aerodrome(s)

INSERT the ICAO four-letter location indicator(s) of not more than two destination alternate aerodromes, as specified in Doc 7910, *Location Indicators*, separated by a space,

OR, if no location indicator has been assigned to the destination alternate aerodrome(s),

INSERT ZZZZ and *SPECIFY* in Item 18 the name and location of the destination alternate aerodrome(s), preceded by ALTN/ .

ITEM 18: OTHER INFORMATION

Note.— *Use of indicators not included under this item may result in data being rejected, processed incorrectly or lost.*

Hyphens or oblique strokes should only be used as prescribed below.

INSERT 0 (zero) if no other information,

OR, any other necessary information in the sequence shown hereunder, in the form of the appropriate indicator selected from those defined hereunder followed by an oblique stroke and the information to be recorded:

STS/ Reason for special handling by ATS, e.g. a search and rescue mission, as follows:

ALTRV:	for a flight operated in accordance with an altitude reservation;
ATFMX:	for a flight approved for exemption from ATFM measures by the appropriate ATS authority;
FFR:	fire-fighting;
FLTCK:	flight check for calibration of nav aids;
HAZMAT:	for a flight carrying hazardous material;
HEAD:	a flight with Head of State status;
HOSP:	for a medical flight declared by medical authorities;
HUM:	for a flight operating on a humanitarian mission;
MARSA:	for a flight for which a military entity assumes responsibility for separation of military aircraft;
MEDEVAC:	for a life critical medical emergency evacuation;
NONRVSM:	for a non-RVSM capable flight intending to operate in RVSM airspace;
SAR:	for a flight engaged in a search and rescue mission; and
STATE:	for a flight engaged in military, customs or police services.

Other reasons for special handling by ATS shall be denoted under the designator RMK/.

PBN/ Indication of RNAV and/or RNP capabilities. Include as many of the descriptors below, as apply to the flight, up to a maximum of 8 entries, i.e. a total of not more than 16 characters.

	RNAV SPECIFICATIONS
A1	RNAV 10 (RNP 10)
B1	RNAV 5 all permitted sensors
B2	RNAV 5 GNSS
B3	RNAV 5 DME/DME
B4	RNAV 5 VOR/DME
B5	RNAV 5 INS or IRS
B6	RNAV 5 LORANC
C1	RNAV 2 all permitted sensors
C2	RNAV 2 GNSS
C3	RNAV 2 DME/DME
C4	RNAV 2 DME/DME/IRU
D1	RNAV 1 all permitted sensors
D2	RNAV 1 GNSS
D3	RNAV 1 DME/DME
D4	RNAV 1 DME/DME/IRU
	RNP SPECIFICATIONS
L1	RNP 4
O1	Basic RNP 1 all permitted sensors
O2	Basic RNP 1 GNSS
O3	Basic RNP 1 DME/DME
O4	Basic RNP 1 DME/DME/IRU
S1	RNP APCH
S2	RNP APCH with BARO-VNAV
T1	RNP AR APCH with RF (special authorization required)
T2	RNP AR APCH without RF (special authorization required)

Combinations of alphanumeric characters not indicated above are reserved.

NAV/ Significant data related to navigation equipment, other than specified in PBN/, as required by the appropriate ATS authority. Indicate GNSS augmentation under this indicator, with a space between two or more methods of augmentation, e.g. NAV/GBAS SBAS.

COM/ Indicate communication equipment and capabilities not specified in Item 10 a).

DAT/ Indicate data communication equipment and capabilities not specified in 10 a).

SUR/ Indicate surveillance equipment and capabilities not specified in Item 10 b). Indicate as many RSP specification(s) as apply to the flight, using designator(s) with no space. Multiple RSP specifications are separated by a space. Example: RSP180 RSP400.

DEP/ Name and location of departure aerodrome, if ZZZZ is inserted in Item 13, or the ATS unit from which supplementary flight plan data can be obtained, if AFIL is inserted in Item 13. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location as follows:
With 4 figures describing latitude in degrees and tens and units of minutes followed by “N” (North) or “S” (South), followed by 5 figures describing longitude in degrees and tens and units of minutes, followed by “E” (East) or “W” (West). Make up the correct number of figures, where necessary, by insertion of zeros, e.g. 4620N07805W (11 characters).

OR, Bearing and distance from the nearest significant point, as follows:

The identification of the significant point followed by the bearing from the point in the form of 3 figures giving degrees magnetic, followed by the distance from the point in the form of 3 figures expressing nautical miles. In areas of high latitude where it is determined by the appropriate authority that reference to degrees magnetic is impractical, degrees true may be used. Make up the correct number of figures, where necessary, by insertion of zeros, e.g. a point of 180° magnetic at a distance of 40 nautical miles from VOR “DUB” should be expressed as DUB180040.

OR, The first point of the route (name or LAT/LONG) or the marker radio beacon, if the aircraft has not taken off from an aerodrome.

DEST/ Name and location of destination aerodrome, if ZZZZ is inserted in Item 16. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described under DEP/ above.

DOF/ The date of flight departure in a six-figure format (YYMMDD, where YY equals the year, MM equals the month and DD equals the day).

REG/ The nationality or common mark and registration mark of the aircraft, if different from the aircraft identification in Item 7.

EET/ Significant points or FIR boundary designators and accumulated estimated elapsed times from take-off to such points or FIR boundaries, when so prescribed on the basis of regional air navigation agreements, or by the appropriate ATS authority.

Examples: EET/CAP0745 XYZ0830
EET/EINN0204

SEL/ SELCAL Code, for aircraft so equipped.

TYP/ Type(s) of aircraft, preceded if necessary without a space by number(s) of aircraft and separated by one space, if ZZZZ is inserted in Item 9.

Example: TYP/2F15 5F5 3B2

CODE/ Aircraft address (expressed in the form of an alphanumeric code of six hexadecimal characters) when required by the appropriate ATS authority. Example: "F00001" is the lowest aircraft address contained in the specific block administered by ICAO.

DLE/ Enroute delay or holding, insert the significant point(s) on the route where a delay is planned to occur, followed by the length of delay using four-figure time in hours and minutes (hhmm).

Example: DLE/MDG0030

OPR/ ICAO designator or name of the aircraft operating agency, if different from the aircraft identification in item 7.

ORGN/ The originator's 8 letter AFTN address or other appropriate contact details, in cases where the originator of the flight plan may not be readily identified, as required by the appropriate ATS authority.

Note.— In some areas, flight plan reception centres may insert the ORGN/ identifier and originator's AFTN address automatically.

PER/ Aircraft performance data, indicated by a single letter as specified in the *Procedures for Air Navigation Services — Aircraft Operations* (PANS-OPS, Doc 8168), *Volume I — Flight Procedures*, if so prescribed by the appropriate ATS authority.

ALTN/ Name of destination alternate aerodrome(s), if ZZZZ is inserted in Item 16. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described in DEP/ above.

RALT/ ICAO four letter indicator(s) for en-route alternate(s), as specified in Doc 7910, *Location Indicators*, or name(s) of en-route alternate aerodrome(s), if no indicator is allocated. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described in DEP/ above.

TALT/ ICAO four letter indicator(s) for take-off alternate, as specified in Doc 7910, *Location Indicators*, or name of take-off alternate aerodrome, if no indicator is allocated. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described in DEP/ above.

RIF/ The route details to the revised destination aerodrome, followed by the ICAO four-letter location indicator of the aerodrome. The revised route is subject to reclearance in flight.

Examples: RIF/DTA HEC KLAX
RIF/ESP G94 CLA YPPH

RMK/ Any other plain-language remarks when required by the appropriate ATS authority or deemed necessary.

ITEM 19: SUPPLEMENTARY INFORMATION

Endurance

After E/ *INSERT* a 4-figure group giving the fuel endurance in hours and minutes.

Persons on board

After P/ *INSERT* the total number of persons (passengers and crew) on board, when required by the appropriate ATS authority. *INSERT* TBN (to be notified) if the total number of persons is not known at the time of filing.

Emergency and survival equipment

- R/ (RADIO) *CROSS OUT* U if UHF on frequency 243.0 MHz is not available. *CROSS OUT* V if VHF on frequency 121.5 MHz is not available. *CROSS OUT* E if emergency locator transmitter (ELT) is not available.
- S/ (SURVIVAL EQUIPMENT) *CROSS OUT* all indicators if survival equipment is not carried. *CROSS OUT* P if polar survival equipment is not carried. *CROSS OUT* D if desert survival equipment is not carried. *CROSS OUT* M if maritime survival equipment is not carried. *CROSS OUT* J if jungle survival equipment is not carried.
- J/ (JACKETS) *CROSS OUT* all indicators if life jackets are not carried. *CROSS OUT* L if life jackets are not equipped with lights. *CROSS OUT* F if life jackets are not equipped with fluorescein. *CROSS OUT* U or V or both as in R/ above to indicate radio capability of jackets, if any.
- D/ (DINGHIES) *CROSS OUT* indicators D and C if no dinghies are carried, or *INSERT* number of dinghies carried; and
(NUMBER)
- (CAPACITY) *INSERT* total capacity, in persons, of all dinghies carried; and
- (COVER) *CROSS OUT* indicator C if dinghies are not covered; and
- (COLOUR) *INSERT* colour of dinghies if carried.
- A/ (AIRCRAFT COLOUR AND MARKINGS) *INSERT* colour of aircraft and significant markings.
- N/ (REMARKS) *CROSS OUT* indicator N if no remarks, or *INDICATE* any other survival equipment carried and any other remarks regarding survival equipment.
- C/ (PILOT) *INSERT* name of pilot-in-command.

2.3 Filed by

INSERT the name of the unit, agency or person filing the flight plan.

2.4 Acceptance of the flight plan

Indicate acceptance of the flight plan in the manner prescribed by the appropriate ATS authority.

2.5 Instructions for insertion of COM data

Items to be completed

COMPLETE the top two shaded lines of the form, and *COMPLETE* the third shaded line only when necessary, in accordance with the provisions in PANS-ATM, Chapter 11, 11.2.1.2, unless ATS prescribes otherwise.

3. Instructions for the transmission of a filed flight plan (FPL) message

Correction of obvious errors

Unless otherwise prescribed, *CORRECT* obvious format errors and/or omissions (i.e. oblique strokes) to ensure adherence as specified in Section 2.

Items to be transmitted

TRANSMIT items as indicated hereunder, unless otherwise prescribed:

- a) the items in the shaded lines, above Item 3;
- b) commencing with <<≡ (FPL of Item 3:

all symbols and data in the unshaded boxes down to the)<<≡ at the end of Item 18,

additional alignment functions as necessary to prevent the inclusion of more than 69 characters in any line of Items 15 or 18. The alignment function is to be inserted only in lieu of a space so as not to break up a group of data,

letter shifts and figure shifts (not preprinted on the form) as necessary;

- c) the AFTN Ending, as described below:

End-of-Text Signal

- a) one LETTER SHIFT
- b) two CARRIAGE RETURNS, one LINE FEED

Page-feed Sequence

Seven LINE FEEDS

End-of-Message Signal

Four of the letter N.

4. Instructions for the transmission of a supplementary flight plan (SPL) message

Items to be transmitted

Transmit items as indicated hereunder, unless otherwise prescribed:

- a) AFTN Priority Indicator, Addressee Indicators <<≡, Filing Time, Originator Indicator <<≡ and, if necessary, specific identification of addressees and/or originator;

- b) commencing with <<≡ (SPL:

all symbols and data in the unshaded areas of boxes 7, 13, 16 and 18, except that the ‘)’ at the end of box 18 is *not* to be transmitted, and then the symbols in the unshaded area of box 19 down to and including the)<<≡ of box 19,

additional alignment functions as necessary to prevent the inclusion of more than 69 characters in any line of Items 18 and 19. The alignment function is to be inserted only in lieu of a space so as not to break up a group of data,

letter shifts and figure shifts (not preprinted on the form) as necessary;

- c) the AFTN Ending, as described below:

End-of-Text Signal

- a) one LETTER SHIFT
 b) two CARRIAGE RETURNS, one LINE FEED

Page-feed Sequence

Seven LINE FEEDS

End-of-Message Signal

Four of the letter N.

5. Example of a completed flight plan form

FLIGHT PLAN PLAN DE VOL			
PRIORITY Priorité <<< FF >>>	ADDRESSEE(S) Destinataire(s) EHAA ZQZX EBURZQZX EDDYZQZX LFFFZQZX LFRR ZQZX LFBZQZX LECMZQZX LPPCZQZX		
FILING TIME Heure de dépôt 1,9 0,8 3,6	ORIGINATOR Expéditeur E H A M Z P Z X		
SPECIFIC IDENTIFICATION OF ADDRESSEE(S) AND/OR ORIGINATOR Identification précise du(des) destinataire(s) et/ou de l'expéditeur			
3 MESSAGE TYPE Type de message <<< (FPL) >>>	7 AIRCRAFT IDENTIFICATION Identification de l'aéronef — A C F 4 0 2	8 FLIGHT RULES Règles de vol — I	TYPE OF FLIGHT Type de vol N <<<
9 NUMBER Nombre —	TYPE OF AIRCRAFT Type d'aéronef E, A, 3, 0	WAKE TURBULENCE CAT. Cat. de turbulence de sillage / H	10 EQUIPMENT Équipement — S / C <<<
13 DEPARTURE AERODROME Aérodrome de départ — E H A M		TIME Heure 0,9 4,0 <<<	
15 CRUISING SPEED Vitesse croisière — K, 0, 8, 3, 0			
LEVEL Niveau F, 2, 9, 0		ROUTE Route LEK2B LEK UA6 XMM/MO78 F330	
UA6 PON URION CHW UA5 NTS DCT 4611N00412W DCT STG UA5 FTM FATIM1A			
16 DESTINATION AERODROME Aérodrome de destination — L, P, P, T			
TOTAL EET Durée totale estimée HR MIN 0,2 3,0		ALTN AERODROME Aérodrome de dégagement — L, P, P, R	2ND ALTN AERODROME 2 ^e aérodrome de dégagement — <<<
18 OTHER INFORMATION Renseignements divers — REG / FBVGA SEL / EJFL EET / LPPCO158			
) <<<			
SUPPLEMENTARY INFORMATION (NOT TO BE TRANSMITTED IN FPL MESSAGES) Renseignements complémentaires (À NE PAS TRANSMETTRE DANS LES MESSAGES DE PLAN DE VOL DÉPOSÉ)			
19 ENDURANCE Autonomie — E / HR MIN 0,3 4,5	PERSONS ON BOARD Personnes à bord — P / 3,0,0		EMERGENCY RADIO Radio de secours — R / UHF VHF ELT U V E
SURVIVAL EQUIPMENT/Équipement de survie — S / POLAR DESERT MARITIME JUNGLE R P D M J DINGHIES/Canots			
JACKETS/Gilets de sauvetage — J / LIGHT FLUORES L F UHF VHF Lampes Fluores			
NUMBER Nombre — D / 1,1	CAPACITY Capacité — 3,3,0	COVER Couverture — C	COLOUR Couleur — YELLOW
AIRCRAFT COLOUR AND MARKINGS Couleur et marques de l'aéronef A / WHITE			
REMARKS Remarques — N			
PILOT-IN-COMMAND Pilote commandant de bord C / DENKE			
FILED BY / Déposé par			
AIR CHARTER INT.		SPACE RESERVED FOR ADDITIONAL REQUIREMENTS Espace réservé à des fins supplémentaires	

REPETITIVE FLIGHT PLAN LISTING

A OPERATOR				B ADDRESSEE(S)				C DEPARTURE AERODROME(S)			D	E	F					
											DATE ----- yyymmdd	SERIAL NO. -----	PAGE OF -- / --					
											G SUPPLEMENTARY DATA (Item 19) AT:							
H	I	J	K							L	M	N	O			P	Q	
	VALID FROM	VALID UNTIL	DAYS OF OPERATION							AIRCRAFT IDENTIFICATION (Item 7)	TYPE OF AIRCRAFT AND WAKE TURBULENCE CATEGORY (Item 9)	DEPARTURE AERODROME AND TIME (Item 13)	CRUISING		ROUTE (Item 15)		DESTINATION AERODROME AND TOTAL ESTIMATED ELAPSED TIME (Item 16)	REMARKS
+ -	yyymmdd	yyymmdd	1	2	3	4	5	6	7				SPEED	LEVEL	ROUTE			

6. ICAO model repetitive flight plan (RPL) listing form

7. Instructions for the completion of the repetitive flight plan (RPL) listing form

7.1 General

List only flight plans that will operate in accordance with IFR. (Flight rules I in FPL format).

It is assumed that all aircraft are operating as scheduled flights (Type of flight S in FPL format), otherwise *notify* in Q (Remarks).

It is assumed that all aircraft operating on RPLs are equipped with 4 096-code transponders with Modes A and C. Otherwise, *notify* in Q (Remarks).

List flight plans in *alphabetical order of the location indicator of the departure aerodrome*.

List flight plans for each departure aerodrome in chronological order of estimated off-block times.

Adhere closely to the data conventions as indicated for the Flight Plan Form (Appendix 3, 1.6) unless otherwise specifically indicated in 7.4.

Insert all clock times in 4 figures UTC.

Insert all estimated elapsed times in 4 figures (hours and minutes).

Insert data on a separate line for each segment of operations with one or more stops, i.e. from any departure aerodrome to the next destination aerodrome even though call sign or flight number is the same for multiple segments.

Clearly identify additions and deletions in accordance with Item H at 7.4. Subsequent listings shall list the corrected and added data, and deleted flight plans shall be omitted.

Number pages by indicating number of page and total number of pages in submission.

Utilize more than one line for any RPL where the space provided for items O and Q on one line is not sufficient.

7.2 A flight shall be cancelled as follows:

- a) indicate a minus sign in Item H followed by all other items of the cancelled flight;
- b) insert a subsequent entry denoted by a plus sign in Item H and the date of the last flight in Item J, with all other items of the cancelled flight unchanged.

7.3 Modification to a flight shall be made as follows:

- a) carry out the cancellation as indicated in 7.2; and
- b) insert a third entry giving the new flight plan(s) with the appropriate items modified as necessary, including the new validity dates in Items I and J.

Note.— *All entries related to the same flight will be inserted in succession in the order specified above.*

7.4 Instructions for insertion of RPL data

Complete Items A to Q as indicated hereunder.

ITEM A: OPERATOR

INSERT name of operator.

ITEM B: ADDRESSEE(S)

INSERT name of agency(ies) designated by States to administer RPLs for FIRs or areas of responsibility concerned with the route of flight.

ITEM C: DEPARTURE AERODROME(S)

INSERT location indicator(s) of departure aerodrome(s).

ITEM D: DATE

INSERT on each page of submission the date (year, month, day) in a 6-figure group that the listing was submitted.

ITEM E: SERIAL NO.

INSERT serial number of submission (2 numerics) indicating last two digits of year, a dash, and the sequential no. of the submission for the year indicated (start with numeral 1 each new year).

ITEM F: PAGE OF

INSERT page number and total number of pages submitted.

ITEM G: SUPPLEMENTARY DATA AT

INSERT name and appropriate contact details of entity where information normally provided under Item 19 of the FPL is kept readily available and can be supplied without delay.

ITEM H: ENTRY TYPE

INSERT a minus sign (–) for each flight plan that is to be deleted from the listing.

INSERT a plus sign (+) for each initial listing and, in the case of subsequent submissions, for each flight plan not listed in the previous submission.

Note.— No information is required under this item for any flight plan which is unchanged from the previous submission.

ITEM I: VALID FROM

INSERT first date (year, month, day) upon which the flight is scheduled to operate.

ITEM J: VALID UNTIL

INSERT last date (year, month, day) upon which the flight is scheduled to operate as listed, or UFN if the duration is unknown.

ITEM K: DAYS OF OPERATION

INSERT number corresponding to the day of the week in the appropriate column;
Monday = 1 through Sunday = 7.

INSERT 0 for each day of non-operation in the appropriate column.

ITEM L: AIRCRAFT IDENTIFICATION

(Item 7 of the ICAO flight plan)

INSERT aircraft identification to be used for the flight.

**ITEM M: TYPE OF AIRCRAFT AND
WAKE TURBULENCE CATEGORY**

(Item 9 of the ICAO flight plan)

INSERT appropriate ICAO designator as specified in Doc 8643 — *Aircraft Type Designators*.

INSERT J, H, M or L indicator as appropriate:

J — SUPER, to indicate an aircraft type specified as such in Doc 8643, *Aircraft Type Designators*;

H — HEAVY to indicate an aircraft type with a maximum certificated take-off mass of 136 000 kg or more, with the exception of aircraft types listed in Doc 8643 in the SUPER (J) category;

M — MEDIUM to indicate an aircraft type with a maximum certificated take-off mass of less than 136 000 kg but more than 7 000 kg;

L — LIGHT to indicate an aircraft type with a maximum certificated take-off mass of 7 000 kg or less.

ITEM N: DEPARTURE AERODROME AND TIME

(Item 13 of the ICAO flight plan)

INSERT location indicator of the departure aerodrome.

INSERT the off-block time, i.e. the estimated time that the aircraft will commence movement associated with departure.

ITEM O: ROUTE

(Item 15 of the ICAO flight plan)

(a) Cruising speed

INSERT the true airspeed for the first or whole cruising portion of the flight in accordance with Item 15 (a) of the ICAO flight plan.

(b) Cruising level

INSERT the planned cruising level for the first or whole portion of the route in accordance with Item 15 (b) of the ICAO flight plan.

(c) Route

INSERT the entire route in accordance with Item 15 (c) of the ICAO flight plan.

**ITEM P: DESTINATION AERODROME AND
TOTAL ESTIMATED ELAPSED TIME**

(Item 16 of the ICAO flight plan)

INSERT location indicator of the destination aerodrome.

INSERT the total estimated elapsed time.

ITEM Q: REMARKS

INSERT items of information as required by the appropriate ATS authority, items normally notified in Item 18 of the ICAO flight plan and any other information pertinent to the flight of concern to ATS.

REPETITIVE FLIGHT PLAN LISTING

8. Example of a completed repetitive flight plan (RPL) listing form

A OPERATOR				B ADDRESSEE(S)									C DEPARTURE AERODROME(S)						D	E	F	
BRITISHAIRWAYS				UK STORED FLIGHT PLAN OFFICE EGTKZBZX Chef de la Subdivision informatique 9 rue de Champagne 91205 Athismons France									EGLL						DATE 800305 ----- yymmdd	SERIAL NO. 80 - 12 -- --	PAGE OF 3 / 3 --/--	
G SUPPLEMENTARY DATA (Item 19) AT:																						
BAW Briefing Office																						
H	I	J	K							L	M			N		O				P		Q
+ -	VALID FROM	VALID UNTIL	DAYS OF OPERATION							AIRCRAFT IDENTIFICATION (Item 7)	TYPE OF AIRCRAFT AND WAKE TURBULENCE CATEGORY (Item 9)	DEPARTURE AERODROME AND TIME (Item 13)	CRUISING		ROUTE (Item 15)				DESTINATION AERODROME AND TOTAL ESTIMATED ELAPSED TIME (Item 16)	REMARKS		
	yymmdd	yymmdd	1	2	3	4	5	6	7				SPEED	LEVEL	ROUTE							
+	800401	811031	1	2	3	4	5	6	7	BAW004	HS21	M	EGLL	0700	N0440	F210	A1E UA1E DPE UA16 MAN	LFPG	0045			
+	800401	800731	1	2	3	4	5	6	7	BAW032	HS21	M	EGLL	1800	N0440	F210	A1E UA1E DPE UA16 MAN	LFPG	0045			
+	800801	811031	1	0	3	0	5	0	7	BAW032	HS21	M	EGLL	1800	N0440	F210	A1E UA1E DPE UA16 MAN	LFPG	0045			
+	800601	800930	0	0	0	0	0	0	7	BAW082	HS21	M	EGLL	1805	N0450	F270	A1S UA1S RBT UA3 MTL					
																	UA3W STP DCT GL	LFMN	0130			
-	800103	800930	0	0	0	0	0	6	7	BAW092	B737	M	EGLL	1810	N0430	F190	A1E UA1E DPE UA16 MAN	LFPG	0400	CHARTERED ACFT		
+	800103	800315	0	0	0	0	0	6	7	BAW092	B737	M	EGLL	1810	N0430	F190	A1E UA1E DPE UA16 MAN	LFPG	0400	CHARTERED ACFT		

Appendix 3

AIR TRAFFIC SERVICES MESSAGES

1. Message contents, formats and data conventions
2. Examples of ATS messages

1. Message contents, formats and data conventions

Note.— To facilitate description of the content and format of air traffic services messages, both for interchange between units without automatic data processing equipment and for interchange between air traffic control computers, the elements of data to be included in the message are grouped into “fields”. Each field contains a single element or a group of related elements.

1.1 The standard types of message

The standard types of message established for the interchange of ATS data, together with the associated message type designators, are as follows:

<i>Message category</i>	<i>Message type</i>	<i>Message type designator</i>
Emergency	Alerting	ALR
	Radiocommunication failure	RCF
Filed flight plan and associated update	Filed flight plan	FPL
	Modification	CHG
	Cancellation	CNL
	Delay	DLA
	Departure	DEP
	Arrival	ARR
Coordination	Current flight plan	CPL
	Estimate	EST
	Coordination	CDN
	Acceptance	ACP
	Logical acknowledgement	LAM
Supplementary	Request flight plan	RQP
	Request supplementary flight plan	RQS
	Supplementary flight plan	SPL

1.2 The standard types of field

The standard fields of data permitted in ATS messages are as shown in the following table. The numbers in column 1 correspond with those in the reference table on page A3-35.

<i>Field type</i>	<i>Data</i>
3	Message type, number and reference data
5	Description of emergency
7	Aircraft identification and SSR mode and code
8	Flight rules and type of flight
9	Number and type of aircraft and wake turbulence category
10	Equipment and capabilities
13	Departure aerodrome and time
14	Estimate data

<i>Field type</i>	<i>Data</i>
15	Route
16	Destination aerodrome and total estimated elapsed time, destination alternate aerodrome(s)
17	Arrival aerodrome and time
18	Other information
19	Supplementary information
20	Alerting search and rescue information
21	Radio failure information
22	Amendment

1.3 Composition of the standard types of message

The composition of each standard type of message, expressed as a standardized sequence of fields of data, shall be as prescribed in the reference table on page A3-35. Each message shall contain all the fields prescribed.

1.4 Composition of the standard types of field

The composition of each standard type of field, expressed as a standardized sequence of elements of data, or in some cases as a simple element, shall be as prescribed in the field tables on pages A3-6 to A3-34.

Note.— Each type of field contains at least one mandatory element and, except in Field Type 9, this is the first or only element in the field. The rules for the inclusion or omission of conditional elements are indicated in the field tables.

1.5 Structuring and punctuation

1.5.1 The beginning of the ATS data shall be indicated on page copy by an open bracket ‘(’, which constitutes the Start-of-ATS-Data Signal. This signal shall be used only as the printed character immediately preceding the message type designator.

Note.— In teletypewriter operation using International Telegraph Alphabet No. 2, the open bracket is transmitted as the Figures Case of Signal No. 11. On some teletypewriter machines, this will print as a symbol other than ‘(’, but this variation will be local and of no consequence. Where higher level codes are employed, the character printing as ‘(’ is used.

1.5.2 The beginning of each field, other than the first, shall be indicated by a single hyphen ‘-’, which constitutes the Start-of-Field Signal. This signal shall be used only as the printed character preceding the first element of ATS data in each field.

Note.— In teletypewriter operation using International Telegraph Alphabet No. 2, the single hyphen is transmitted as the Figures Case of Signal No. 1. On some teletypewriter machines, this will print as a symbol other than ‘-’, but this variation will be local and of no consequence. Where higher level codes are employed, the character printing as ‘-’ is used.

1.5.3 Elements within a field shall be separated by an oblique stroke ‘/’ (see Note 1), or a space (sp.) (see Note 2) only where so prescribed in the field tables on pages A3-6 to A3-34.

Note 1.— In teletypewriter operation using International Telegraph Alphabet No. 2, the oblique stroke is transmitted as the Figures Case of Signal No. 24. On some teletypewriter machines, this will print as a symbol other than ‘/’, but this variation will be local and of no consequence. Where higher level codes are employed, the character printing as ‘/’ is used.

Note 2.— In teletypewriter operation using International Telegraph Alphabet No. 2, the space is transmitted as Signal No. 31. Where higher level codes are employed, the character which causes a space on page copy is to be used.

1.5.4 The end of the ATS data shall be indicated by a close bracket ')', which constitutes the End-of-ATS-Data Signal. This signal shall be used only as the printed character immediately following the last field in the message.

Note.— In teletypewriter operation using International Telegraph Alphabet No. 2, the close bracket is transmitted as Signal No. 12. On some teletypewriter machines, this will print as a symbol other than ')', but this variation will be local and of no consequence. Where higher level codes are employed, the character printing as ') is to be used.

1.5.5 When the standard ATS messages are prepared in teletypewriter form, an Alignment Function (two Carriage Returns followed by one Line Feed) shall be inserted:

- a) prior to each of the fields so annotated in the reference table on page A3-35;
- b) in Fields Type 5 (Description of emergency), 15 (Route), 18 (Other information), 19 (Supplementary information), 20 (Alerting search and rescue information), 21 (Radio failure information) and 22 (Amendment), whenever it is necessary to begin a new line on page copy (see Note). In such cases, the Alignment Function shall be inserted between two data elements and shall not divide an element.

Note.— Annex 10, Volume II, prescribes that a line of teletypewriter copy shall not contain more than 69 characters.

1.6 Data conventions

1.6.1 Most of the conventions to be used in the expression of ATS data in the messages are prescribed in the field tables on pages A3-6 to A3-34, but the conventions for the expression of level, position and route data are given below to simplify the field tables.

1.6.2 The expression of level data

Four alternative conventions are available for the expression of level data:

- a) "F" followed by 3 decimal numerics: indicates a flight level number, i.e. Flight Level 330 is expressed as "F330";
- b) "S" followed by 4 decimal numerics: indicates standard metric level in tens of metres, i.e. Standard Metric Level 11 300 metres (Flight Level 370) is expressed as "S1130";
- c) "A" followed by 3 decimal numerics: indicates altitude in hundreds of feet, i.e. an altitude of 4 500 feet is expressed as "A045";
- d) "M" followed by 4 decimal numerics: indicates altitude in tens of metres, i.e. an altitude of 8 400 metres is expressed as "M0840".

1.6.3 The expression of position or route

The following alternative data conventions shall be used for the expression of position or route:

- a) from 2 to 7 characters, being the coded designator assigned to an ATS route to be flown;
- b) from 2 to 5 characters, being the coded designator assigned to an en-route point;
- c) 4 numerics describing latitude in degrees and tens and units of minutes, followed by “N” (meaning “North”) or “S” (South), followed by 5 numerics describing longitude in degrees and tens and units of minutes, followed by “E” (East) or “W” (West). The correct number of numerics is to be made up, where necessary, by the insertion of zeros, e.g. “4620N07805W”;
- d) 2 numerics describing latitude in degrees, followed by “N” (North) or “S” (South), followed by 3 numerics describing longitude in degrees, followed by “E” (East) or “W” (West). Again, the correct number of numerics is to be made up, where necessary, by the insertion of zeros, e.g. “46N078W”;
- e) 2 to 5 characters being the coded identification of a significant point, followed by 3 decimal numerics giving the bearing from the point in degrees magnetic followed by 3 decimal numerics giving the distance from the point in nautical miles. In areas of high latitude where it is determined by the appropriate authority that reference to degrees magnetic is impractical, degrees true may be used. The correct number of numerics is to be made up, where necessary, by the insertion of zeros, e.g. a point at 180° magnetic at a distance of 40 nautical miles from VOR “FOJ” would be expressed as “FOJ180040”.

1.7 The detail of the fields

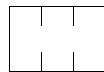
1.7.1 The elements of data prescribed or permitted to be included in each type of field, together with a prescription of the conditions or options permitted, are shown on pages A3-6 to A3-34.

1.7.2 A key appears at the right-hand side of each of the field pages; this key permits the sequence of fields in each type of message to be followed.

1.7.3 The first field in each message type is Field Type 3; on the page describing Field Type 3 a key indicates the field type number of the next field for each message. On subsequent field pages, the field type number of the previous field is shown to permit back reference also. The Start-of-ATS-Data Signal ‘(’ is used in the key to indicate that there is no previous type of field; the End-of-ATS-Data Signal ‘)’ is used to indicate that there is no next type of field.

1.7.4 On the field pages,

elements with a fixed number of characters are shown diagrammatically as (three characters in this example)



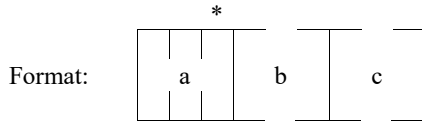
elements of variable length are shown as



1.8 Accuracy in the preparation of ATS messages

Where the standard ATS messages are transmitted by teletypewriter channels in areas where ATC computers are known to be in use, the formats and data conventions prescribed in the field tables on pages A3-6 to A3-34 shall be adhered to rigorously.

Field Type 3 — Message type, number and reference data



OPEN BRACKET

(a) *Message type designator*

3 LETTERS as follows:

ALR	Alerting
RCF	Radiocommunication failure
FPL	Filed flight plan
CHG	Modification
CNL	Cancellation
DLA	Delay
DEP	Departure
ARR	Arrival
CPL	Current flight plan
EST	Estimate
CDN	Coordination
ACP	Acceptance
LAM	Logical acknowledgement
RQP	Request flight plan
RQS	Request supplementary flight plan
SPL	Supplementary flight plan

* Unless instructed otherwise, this field shall contain only the single element (a). Elements (b) or (b) and (c) are for use when messages are generated by, and/or exchanged between, the computer systems of ATS units.

(b) *Message number*

1 to 4 LETTER(S)	identifying the sending ATS unit, followed by
OBLIQUE STROKE (/)	followed by
1 to 4 LETTER(S)	identifying the receiving ATS unit, followed by
3 DECIMAL NUMERICS	giving the serial number of this message in the sequence of messages transmitted by this unit to the indicated receiving ATS unit.

FIELD TYPE 3

<i>Previous type of field or symbol</i>	<i>This type of field is used in</i>	<i>Next type of field or symbol</i>
(	ALR	5
(	RCF	7
(	FPL	7
(	CHG	7
(	CNL	7
(	DLA	7
(	DEP	7
(	ARR	7
(	CPL	7
(	EST	7
(	CDN	7
(	ACP	7
(	LAM)
(	RQP	7
(	RQS	7
(	SPL	7

Field Type 3 (cont.)

(c) *Reference data*

1 to 4 LETTER(S) followed by OBLIQUE STROKE (/) followed by 1 to 4 LETTER(S) followed by 3 DECIMAL NUMERICS, giving the “message number” contained in element (b) of the operational message which began the sequence of messages of which this message is a part.

Examples: (FPL
(CNL
(CHGA/B234A/B231
(CPLA/B002

Field Type 5 — Description of emergency

Format: —

a

 /

b

 /

c

FIELD TYPE 5

SINGLE HYPHEN

<p>(a) <i>Phase of emergency</i></p> <p>or INCERFA if an uncertainty phase, or ALERFA if an alert phase, DETRESFA if a distress phase</p> <p>has been declared in respect of the aircraft concerned.</p>
--

<i>Previous type of field or symbol</i>	<i>This type of field is used in</i>	<i>Next type of field or symbol</i>
3	ALR	7

OBLIQUE STROKE

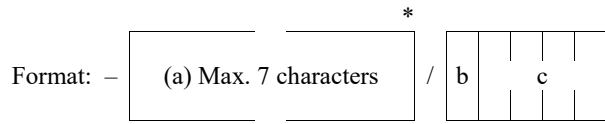
<p>(b) <i>Originator of message</i></p> <p>8 LETTERS, being the 4-letter ICAO location indicator plus the 3-letter designator of the ATS unit originating the message followed by the letter X or, if applicable, the one-letter designator identifying the division of the ATS unit originating the message.</p>

OBLIQUE STROKE

<p>(c) <i>Nature of emergency</i></p> <p>SHORT PLAIN-LANGUAGE TEXT, as necessary to explain the nature of the emergency, with natural spaces between the words.</p>

Example: —ALERFA/EINNZQZX/REPORT OVERDUE

Field Type 7 — Aircraft identification and SSR mode and code



SINGLE HYPHEN

(a) *Aircraft identification*

NOT MORE THAN 7 CHARACTERS, being the aircraft identification shown in the filed flight plan and composed as specified in Appendix 2, Section 2.

* This field may be terminated here in messages relating to flights operating within areas where SSR is not used, or when the SSR code information is not known or would not be meaningful to the accepting unit.

OBLIQUE STROKE

(b) *SSR mode*

LETTER A giving the SSR mode related to (c).

(c) *SSR code*

4 NUMERICS giving the SSR code assigned to the aircraft by ATS and transmitted in the mode given in (b).

Examples: —BAW902
—SAS912/A5100

FIELD TYPE 7

<i>Previous type of field or symbol</i>	<i>This type of field is used in</i>	<i>Next type of field or symbol</i>
5 3	ALR RCF	8 21
3 3 3 3 3 3	FPL CHG CNL DLA DEP ARR	8 13 13 13 13 13
3 3 3 3	CPL EST CDN ACP	8 13 13 13
3 3 3	RQP RQS SPL	13 13 13

Field Type 8 — Flight rules and type of flight

Format: —

*	
a	b

SINGLE HYPHEN

(a) *Flight rules*

1 LETTER as follows:

I if it is intended that the entire flight will be operated under the IFR
 V if it is intended that the entire flight will be operated under the VFR
 Y if the flight initially will be operated under the IFR, followed by one or more subsequent changes of flight rules
 Z if the flight initially will be operated under the VFR, followed by one or more subsequent changes of flight rules

Note.— If the letter Y or Z is used, the point or points at which a change of flight rules is planned is to be shown as indicated in Field Type 15.

* This field shall be terminated here unless indication of the type of flight is required by the appropriate ATS authority.

(b) *Type of flight*

1 LETTER as follows:

S if scheduled air transport
 N if non-scheduled air transport
 G if general aviation
 M if military
 X other flights

Examples: —V
 —IS

FIELD TYPE 8

<i>Previous type of field or symbol</i>	<i>This type of field is used in</i>	<i>Next type of field or symbol</i>
7	ALR	9
7	FPL	9
7	CPL	9

Field Type 9 — Number and type of aircraft and wake turbulence category

FIELD TYPE 9

Format: —

a	b
---	---

 /

c

Previous type of field or symbol	This type of field is used in	Next type of field or symbol
8	ALR	10
8	FPL	10
8	CPL	10

SINGLE HYPHEN

(a) *Number of aircraft (if more than one)*

Note.— This element is included only in the case of formation flights.

1 OR 2 NUMERICS giving the number of aircraft in the flight.

(b) *Type of aircraft*

2 to 4 CHARACTERS, being the appropriate designator chosen from Doc 8643, *Aircraft Type Designators*, or

ZZZZ if no designator has been assigned or if there is more than one type of aircraft in the flight.

Note.— If the letters ZZZZ are used, the type(s) of aircraft is (are) to be shown in the Other Information Field (see Field Type 18).

OBLIQUE STROKE

(c) *Wake turbulence category*

1 LETTER to indicate wake turbulence category of the aircraft:

J — Super
 H — Heavy
 M — Medium
 L — Light

Examples: —DC3/M
 —B707/M
 —2FK27/M
 —ZZZZ/L
 —3ZZZZ/L
 —B747/H

Field Type 10 — Equipment and capabilities

FIELD TYPE 10

Format: — [a] / [b]

SINGLE HYPHEN

Previous type of field or symbol	This type of field is used in	Next type of field or symbol
9	ALR	13
9	FPL	13
9	CPL	13

(a) *Radiocommunication, navigation and approach aid equipment and capabilities*

1 LETTER as follows:

N no COM/NAV/approach aid equipment for the route to be flown is carried, or the equipment is unserviceable

OR S Standard COM/NAV/approach aid equipment for the route to be flown is carried and serviceable (*see Note 1*)

AND/OR ONE OR MORE OF THE FOLLOWING LETTERS to indicate the serviceable COM/NAV/approach aid equipment and capabilities

A	GBAS landing system	J7	CPDLC FANS 1/A
B	LPV (APV with SBAS)		SATCOM (Iridium)
C	LORAN C	K	MLS
D	DME	L	ILS
E1	FMC WPR ACARS	M1	ATC SATVOICE
E2	D-FIS ACARS		(INMARSAT)
E3	PDC ACARS	M2	ATC SATVOICE (MTSAT)
F	ADF	M3	ATC SATVOICE (Iridium)
G	GNSS. If any portion of the flight is planned to be conducted under IFR, it refers to GNSS receivers that comply with the requirements of Annex 10, Volume I (<i>See Note 2</i>)	O	VOR
		P1	CPDLC RCP 400 (<i>see Note 7</i>)
		P2	CPDLC RCP 240 (<i>see Note 7</i>)
		P3	SATVOICE RCP 400 (<i>see Note 7</i>)
		P4–P9	Reserved for RCP
H	HF RTF	R	PBN approved (<i>see Note 4</i>)
I	Inertial navigation	T	TACAN
J1	CPDLC ATN VDL Mode 2 (<i>see Note 3</i>)	U	UHF RTF
		V	VHF RTF
J2	CPDLC FANS 1/A HFDL	W	RVSM approved
J3	CPDLC FANS 1/A VDL Mode A	X	MNPS approved
J4	CPDLC FANS 1/A VDL Mode 2	Y	VHF with 8.33 kHz channel spacing capability
J5	CPDLC FANS 1/A SATCOM (INMARSAT)	Z	Other equipment carried or other capabilities (<i>see Note 5</i>)
J6	CPDLC FANS 1/A SATCOM (MTSAT)		

Note 1.— If the letter S is used, standard equipment is considered to be VHF RTF, VOR and ILS, unless another combination is prescribed by the appropriate ATS authority.

Note 2.— If the letter G is used, the types of external GNSS augmentation, if any, are specified in Item 18 following the indicator NAV/ separated by a space.

Note 3.— See RTCA/EUROCAE Interoperability Requirements Standard for ATN Baseline 1 (ATN B1 INTEROP Standard – DO-280B/ED-110B) for data link services air traffic control clearance and information/air traffic control communications management/air traffic control microphone check.

Note 4.— If the letter R is used, the performance-based navigation levels that can be met are specified in Item 18 following the indicator PBN/. Guidance material on the application of performance-based navigation to a specific route segment, route or area is contained in the Performance-based Navigation (PBN) Manual (Doc 9613).

Field Type 10 (cont.)

Note 5.— If the letter Z is used, specify in Item 18 the other equipment carried or other capabilities, preceded by COM/, NAV/ and/or DAT, as appropriate.

Note 6.— Information on navigation capability is provided to ATC for clearance and routing purposes.

Note 7.— Guidance material on the application of performance-based communication, which prescribes RCP to an air traffic service in a specific area, is contained in the Performance-based Communication and Surveillance (PBCS) Manual (Doc 9869).

OBLIQUE STROKE

(b) *Surveillance equipment and capabilities*

INSERT N if no surveillance equipment for the route to be flown is carried, or the equipment is unserviceable,

OR

ONE OR MORE of the following descriptors, to a maximum of 20 characters, to describe the serviceable surveillance equipment and/or capabilities on board:

SSR Modes A and C

- A Transponder — Mode A (4 digits — 4 096 codes)
- C Transponder — Mode A (4 digits — 4 096 codes) and Mode C

SSR Modes S

- E Transponder — Mode S, including aircraft identification, pressure-altitude and extended squitter (ADS-B) capability
- H Transponder — Mode S, including aircraft identification, pressure-altitude and enhanced surveillance capability
- I Transponder — Mode S, including aircraft identification, but no pressure-altitude capability
- L Transponder — Mode S, including aircraft identification, pressure-altitude, extended squitter (ADS-B) and enhanced surveillance capability
- P Transponder — Mode S, including pressure-altitude, but no aircraft identification capability
- S Transponder — Mode S, including both pressure-altitude and aircraft identification capability
- X Transponder — Mode S with neither aircraft identification nor pressure-altitude capability

Note.— Enhanced surveillance capability is the ability of the aircraft to down-link aircraft derived data via a Mode S transponder.

ADS-B

- B1 ADS-B with dedicated 1 090 MHz ADS-B “out” capability
- B2 ADS-B with dedicated 1 090 MHz ADS-B “out” and “in” capability
- U1 ADS-B “out” capability using UAT
- U2 ADS-B “out” and “in” capability using UAT
- V1 ADS-B “out” capability using VDL Mode 4
- V2 ADS-B “out” and “in” capability using VDL Mode 4

Field Type 10 (cont.)

ADS-C

D1 ADS-C with FANS 1/A capabilities

G1 ADS-C with ATN capabilities

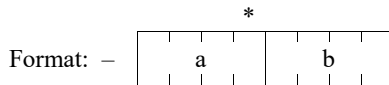
Alphanumeric characters not indicated above are reserved.

Note 1.— The RSP specification(s), if applicable, will be listed in Item 18 following the indicator SUR/. Guidance material on the application of performance-based surveillance, which prescribes RSP to an air traffic service in a specific area, is contained in the Performance-based Communication and Surveillance (PBCS) Manual (Doc 9869).

Note 2.— Additional surveillance equipment or capabilities will be listed in Item 18 following the indicator SUR/, as required by the appropriate authority.

Examples: –S/A
 –SCI/CB1
 –SAFR/SV1

Field Type 13 — Departure aerodrome and time



SINGLE HYPHEN

(a) *Departure aerodrome*

4 LETTERS, being

the ICAO four-letter location indicator allocated to the departure aerodrome, as specified in Doc 7910, *Location Indicators*, or

ZZZZ if no ICAO location indicator has been allocated (*see Note 1*) or if the departure aerodrome is not known, or

AFIL if the flight plan has been filed in the air (*see Note 2*).

Note 1.— If ZZZZ is used, the name and location of the departure aerodrome is to be shown in the Other Information Field (see Field Type 18) if this Field Type is contained in the message.

Note 2.— If AFIL is used, the ATS unit from which supplementary flight data can be obtained is to be shown in the Other Information Field (Field Type 18).

* This field shall be terminated here in message types CPL, EST, CDN and ACP. It shall be terminated here in message type RQP if the estimated off-block time is not known.

(b) *Time*

4 NUMERICS giving

the estimated off-block time (EOBT) at the aerodrome in (a) in FPL, ARR, CHG, CNL, DLA and RQS messages and in RQP message, if known, or

the actual time of departure from the aerodrome in (a) in ALR, DEP and SPL messages, or

the actual or estimated time of departure from the first point shown in the Route Field (see Field Type 15) in FPL messages derived from flight plans filed in the air, as shown by the letters AFIL in (a).

Examples: —EHAM0730
—AFIL1625

FIELD TYPE 13

<i>Previous type of field or symbol</i>	<i>This type of field is used in</i>	<i>Next type of field or symbol</i>
10	ALR	15
10	FPL	15
7	CHG	16
7	CNL	16
7	DLA	16
7	DEP	16
7	ARR	(16)** 17
10	CPL	14
7	EST	14
7	CDN	16
7	ACP	16
7	RQP	16
7	RQS	16
7	SPL	16

** Only in case of a diversionary landing

Field Type 14 — Estimate data

FIELD TYPE 14

Format: —

a

 /

b	c	*	d	e
---	---	---	---	---

Previous type of field or symbol	This type of field is used in	Next type of field or symbol
13	CPL	15
13	EST	16

SINGLE HYPHEN

(a) *Boundary point (see Note 1)*

The BOUNDARY POINT expressed either by a designator consisting of 2 to 5 characters, in geographical coordinates, in abbreviated geographical coordinates, or by bearing and distance from a significant point.

Note 1.— This point may be an agreed point located close to, rather than on, the FIR boundary.

Note 2.— See 1.6 for data conventions.

OBLIQUE STROKE

(b) *Time at boundary point*

4 NUMERICS giving the estimated time at the boundary point.

(c) *Cleared level*

F followed by 3 NUMERICS, or	} See data conventions in 1.6 of this Appendix.
S followed by 4 NUMERICS, or	
A followed by 3 NUMERICS, or	
M followed by 4 NUMERICS	

giving the cleared level at which the aircraft will cross the boundary point, if in level cruising flight, or the cleared level to which it is proceeding, if climbing or descending at the boundary point.

* This field will be terminated here if the aircraft will cross the boundary point in level cruising flight.

*Field Type 14 (cont.)***(d)** *Supplementary crossing data*

A LEVEL, expressed as in (c), at or above which or at or below which (see (e)) the aircraft will cross the boundary point.

(e) *Crossing condition*

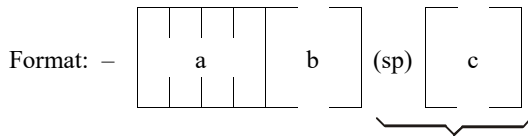
1 LETTER as follows:

A if the aircraft will cross the boundary point at or above the level in (d),
or

B if the aircraft will cross the boundary point at or below the level in (d).

Examples: -LN/1746F160
-CLN/1831F240F180A
-5420N05000W/0417F290
-LNX/1205F160F200B
-ZD126028/0653F130

Field Type 15 — Route



See Note in margin.

FIELD TYPE 15

<i>Previous type of field or symbol</i>	<i>This type of field is used in</i>	<i>Next type of field or symbol</i>
13	ALR	16
13	FPL	16
14	CPL	16

SINGLE HYPHEN

(a) *Cruising speed or Mach number*

The true airspeed for the first or the whole cruising portion of the flight, in terms of:

K followed by 4 NUMERICS giving the true airspeed in kilometres per hour, or

N followed by 4 NUMERICS giving the true airspeed in knots, or

when so prescribed by the appropriate ATS authority, M followed by 3 NUMERICS giving the true Mach number to the nearest hundredth of unit Mach.

(b) *Requested cruising level*

F followed by 3 NUMERICS, or

S followed by 4 NUMERICS, or

A followed by 3 NUMERICS, or

M followed by 4 NUMERICS, or

VFR.



See data conventions in 1.6 of this Appendix.

SPACE

followed by a string of elements/groups of elements of the following seven types separated by SPACES, in whatever sequence is necessary to describe the route in an unambiguous manner (see Appendix 2, Section 2).

Note.— Further element groups of elements (c) should be added, as necessary, each to be preceded by a space.

*Field Type 15 (cont.)**(c1) Standard departure route*

The designator for the standard departure route from the aerodrome of departure to the first significant point on the defined route to be flown.

Note 1.— See data convention in 1.6.3 a) of this Appendix.

Note 2.— Element (c1) may be followed by (c3) or (c4).

Note 3.— Standard departure route need be included only where appropriate.

(c2) ATS route designator

Note 1.— See data convention in 1.6.3 a) of this Appendix.

Note 2.— Element (c2) may be followed by (c3) or (c4) only.

(c3) Significant point

Note.— See alternative data conventions in 1.6.3 b), c), d) and e) of this Appendix.

(c4) Significant point/cruising speed and cruising level

SIGNIFICANT POINT (as in element (c3))

OBLIQUE STROKE

CRUISING SPEED OR MACH NUMBER (as in element (a))

REQUESTED CRUISING LEVEL (as in element (b)).

Field Type 15 (cont.)

(c5) *Indicator*

VFR	if a change to VFR is to be made at the preceding point, or
IFR	if a change to IFR is to be made at the preceding point, or
DCT	if the flight to the next point will be outside a designated route, unless both points are defined by geographical coordinates or by bearing and distance.
T	if the route description is truncated at the preceding point and the remainder is to be sought in a previously transmitted FPL or other data.

Note 1.— Element (c5) may follow (c3) or (c4) and (c6) only.

Note 2.— When used, T must conclude the Route Field.

(c6) *Cruise climb*

The letter C followed by an oblique stroke; then the point at which cruise climb is planned to start, expressed exactly as in (c3) above, followed by an oblique stroke; then the speed to be maintained during cruise climb expressed exactly as in (a) above followed by *the two levels* defining the layer to be occupied during cruise climb; each level expressed as in (b) above, or the level above which cruise climb is planned, followed by the letters PLUS, without a space between them.

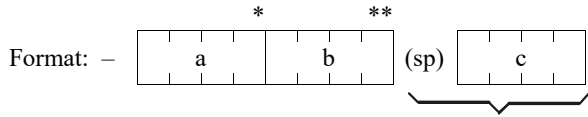
(c7) *Standard arrival route*

The designator for the standard arrival route from the point of leaving the defined route to the point at which the approach procedure is initiated.

Note.— Standard arrival route need only be included where appropriate.

Examples: -K0410S1500 A4 CCV R11
 -K0290A120 BR 614
 -N0460F290 LEK2B LEK UA6 FNE UA6 XMM/M078F330 UA6N PON UR10N
 CHW UA5 NTS DCT 4611N00412W DCT STG UA5 FTM FATIM1A
 -M082F310 BCN1G BCN UG1 52N015W 52N020W 52N030W 50N040W
 49N050W DCT YQX
 -N0420F310 R10 UB19 CGC UA25 DIN/N0420F330 UR14 IBY UR1 MID

Field Type 16 — Destination aerodrome and total estimated elapsed time, destination alternate aerodrome(s)



See Note in margin on page A3-22.

SINGLE HYPHEN

(a) *Destination aerodrome*

4 LETTERS, being

the ICAO four-letter location indicator allocated to the destination aerodrome, as specified in Doc 7910, *Location Indicators*, or

ZZZZ if no ICAO location indicator has been allocated.

Note.— If ZZZZ is used, the name and location of the destination aerodrome is to be shown in the Other Information Field (see Field Type 18).

* This field is to be terminated here in all message types other than ALR, FPL and SPL.

(b) *Total estimated elapsed time*

4 NUMERICS, giving

the total estimated elapsed time.

** This field may be terminated here in FPL messages when so agreed between the ATS units concerned or prescribed on the basis of regional air navigation agreements.

FIELD TYPE 16

Previous type of field or symbol	This type of field is used in	Next type of field or symbol
15	ALR	18
15	FPL	18
13	CHG	18
13	CNL	18
13	DLA	18
13	DEP	18
13	ARR***	17
15	CPL	18
14	EST)
13	CDN	22
13	ACP)
13	RQP	18
13	RQS	18
13	SPL	18

*** Only in case of a diversionary landing

Field Type 16 (cont.)

SPACE

(c) *Destination alternate aerodrome(s)*

4 LETTERS, being

the ICAO four-letter location indicator allocated to an alternate aerodrome, as specified in Doc 7910, *Location Indicators*, or

ZZZZ if no ICAO location indicator has been allocated.

Note.— If ZZZZ is used, the name and location of the destination alternate aerodrome is to be shown in the Other Information Field (see Field Type 18).

Note.— One further element of (c) should be added, as necessary, preceded by a space.

Examples: –EINN0630
 –EHAM0645 EBBR
 –EHAM0645 EBBR EDDL

Field Type 17 — Arrival aerodrome and time

Format: –

a	b
---	---

 (sp)

c

SINGLE HYPHEN

(a) *Arrival aerodrome*

4 LETTERS, being

the ICAO four-letter location indicator allocated to the arrival aerodrome, as specified in Doc 7910, *Location Indicators*, or

ZZZZ if no ICAO location indicator has been allocated.

(b) *Time of arrival*

4 NUMERICS, giving

the actual time of arrival.

* This field is to be terminated here if an ICAO location indicator has been allocated to the arrival aerodrome.

SPACE

(c) *Arrival aerodrome*

Name of arrival aerodrome, if ZZZZ is inserted in (a).

Examples: –EHAM1433
–ZZZZ1620 DEN HELDER

FIELD TYPE 17

<i>Previous type of field or symbol</i>	<i>This type of field is used in</i>	<i>Next type of field or symbol</i>
13 (16)**	ARR)

** Only in case of a diversionary landing

Field Type 18 — Other information

FIELD TYPE 18

Note.— Use of indicators not included under this item may result in data being rejected, processed incorrectly or lost.

Hyphens or oblique strokes should only be used as prescribed below.

Format: – A

– ^{or} (sp) (sp) * (sp)
 (* additional elements as necessary)

Previous type of field or symbol	This type of field is used in	Next type of field or symbol
16	ALR	19
16	FPL)
16	CPL)
16	SPL	19

SINGLE HYPHEN

(a) 0 (zero) if no other information

OR

Any other necessary information in the sequence shown hereunder, in the form of the appropriate abbreviation selected from those defined hereunder followed by an oblique stroke and the information to be recorded:

STS/	Reason for special handling by ATS, e.g. a search and rescue mission, as follows: ALTRV: for a flight operated in accordance with an altitude reservation; ATFMX: for a flight approved for exemption from ATFM measures by the appropriate ATS authority; FFR: fire-fighting; FLTCK: flight check for calibration of nav aids; HAZMAT: for a flight carrying hazardous material; HEAD: a flight with Head of State status; HOSP: for a medical flight declared by medical authorities; HUM: for a flight operating on a humanitarian mission; MARSAS: for a flight for which a military entity assumes responsibility for separation of military aircraft; MEDEVAC: for a life critical medical emergency evacuation; NONRVSM: for a non-RVSM capable flight intending to operate in RVSM airspace; SAR: for a flight engaged in a search and rescue mission; and STATE: for a flight engaged in military, customs or police services.
Other reasons for special handling by ATS shall be denoted under the designator RMK/.	
PBN/	Indication of RNAV and/or RNP capabilities. Include as many of the descriptors below, as apply to the flight, up to a maximum of 8 entries, i.e. a total of not more than 16 characters.

Field Type 18 (cont.)

RNAV SPECIFICATIONS	
A1	RNAV 10 (RNP 10)
B1	RNAV 5 all permitted sensors
B2	RNAV 5 GNSS
B3	RNAV 5 DME/DME
B4	RNAV 5 VOR/DME
B5	RNAV 5 INS or IRS
B6	RNAV 5 LORANC
C1	RNAV 2 all permitted sensors
C2	RNAV 2 GNSS
C3	RNAV 2 DME/DME
C4	RNAV 2 DME/DME/IRU
D1	RNAV 1 all permitted sensors
D2	RNAV 1 GNSS
D3	RNAV 1 DME/DME
D4	RNAV 1 DME/DME/IRU
RNP SPECIFICATIONS	
L1	RNP 4
O1	Basic RNP 1 all permitted sensors
O2	Basic RNP 1 GNSS
O3	Basic RNP 1 DME/DME
O4	Basic RNP 1 DME/DME/IRU
S1	RNP APCH
S2	RNP APCH with BAR-VNAV
T1	RNP AR APCH with RF (special authorization required)
T2	RNP AR APCH without RF (special authorization required)

Combinations of alphanumeric characters not indicated above are reserved.

NAV/ Significant data related to navigation equipment, other than specified in PBN/, as required by the appropriate ATS authority. Indicate GNSS augmentation under this indicator, with a space between two or more methods of augmentation, e.g. NAV/GBAS SBAS.

COM/ Indicate communication equipment and capabilities not specified in Item 10 a).

DAT/ Indicate data communication equipment and capabilities not specified in 10 a).

SUR/ Indicate surveillance equipment and capabilities not specified in Item 10 b). Indicate as many RSP specification(s) as apply to the flight, using designator(s) with no space. Multiple RSP specifications are separated by a space. Example: RSP180 RSP400.

Field Type 18 (cont.)

DEP/	<p>Name and location of departure aerodrome, if ZZZZ is inserted in Item 13, or the ATS unit from which supplementary flight plan data can be obtained, if AFIL is inserted in Item 13. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location as follows:</p> <p>With 4 figures describing latitude in degrees and tens and units of minutes followed by “N” (North) or “S” (South), followed by 5 figures describing longitude in degrees and tens and units of minutes, followed by “E” (East) or “W” (West). Make up the correct number of figures, where necessary, by insertion of zeros, e.g. 4620N07805W (11 characters).</p>
OR	<p>Bearing and distance from the nearest significant point, as follows:</p> <p>The identification of the significant point followed by the bearing from the point in the form of 3 figures giving degrees magnetic, followed by the distance from the point in the form of 3 figures expressing nautical miles. In areas of high latitude where it is determined by the appropriate authority that reference to degrees magnetic is impractical, degrees true may be used. Make up the correct number of figures, where necessary, by insertion of zeros, e.g. a point of 180° magnetic at a distance of 40 nautical miles from VOR “DUB” should be expressed as DUB180040.</p>
OR	<p>The first point of the route (name or LAT/LONG) or the marker radio beacon, if the aircraft has not taken off from an aerodrome.</p>
DEST/	<p>Name and location of destination aerodrome, if ZZZZ is inserted in Item 16. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described under DEP/ above.</p>
DOF/	<p>The date of flight departure in a six-figure format (YYMMDD, where YY equals the year, MM equals the month and DD equals the day).</p>
REG/	<p>The nationality or common mark and registration mark of the aircraft, if different from the aircraft identification in Item 7.</p>
EET/	<p>Significant points or FIR boundary designators and accumulated estimated elapsed times from take-off to such points or FIR boundaries, when so prescribed on the basis of regional air navigation agreements, or by the appropriate ATS authority.</p> <p>Examples: –EET/CAP0745 XYZ0830 –EET/EINN0204</p>
SEL/	<p>SELCAL Code, for aircraft so equipped.</p>

Field Type 18 (cont.)

TYP/	Type(s) of aircraft preceded if necessary without a space by number(s) of aircraft and separated by one space if ZZZZ is inserted in Item 9. Example: –TYP/2F15 5F5 3B2
------	--

CODE/	Aircraft address (expressed in the form of an alphanumeric code of six hexadecimal characters) when required by the appropriate ATS authority. Example: “F00001” is the lowest aircraft address contained in the specific block administered by ICAO.
-------	--

Field Type 18 (cont.)

DLE/	En-route delay or holding, insert the significant point(s) on the route where a delay is planned to occur, followed by the length of delay using four-figure time in hours and minutes (hhmm). Example: –DLE/MDG0030
------	---

OPR/	ICAO designator or name of the aircraft operating agency, if different from the aircraft identification in item 7.
------	--

ORGN/	The originator’s eight-letter AFTN address or other appropriate contact details, in cases where the originator of the flight plan may not be readily identified, as required by the appropriate ATS authority. <i>Note.— In some areas, flight plan reception centres may insert the ORGN/ identifier and originator’s AFTN address automatically.</i>
-------	---

PER/	Aircraft performance data, indicated by a single letter as specified in the <i>Procedures for Air Navigation Services — Aircraft Operations</i> (PANS-OPS, Doc 8168), <i>Volume I — Flight Procedures</i> , if so prescribed by the appropriate ATS authority.
------	--

ALTN/	Name of destination alternate aerodrome(s), if ZZZZ is inserted in Item 16. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described in DEP/ above.
-------	---

RALT/	ICAO four-letter indicator(s) for en-route alternate(s), as specified in Doc 7910, <i>Location Indicators</i> , or name(s) of en-route alternate aerodrome(s), if no indicator is allocated. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described in DEP/ above.
-------	--

TALT/	ICAO four-letter indicator(s) for take-off alternate, as specified in Doc 7910, <i>Location Indicators</i> , or name of take-off alternate aerodrome, if no indicator is allocated. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described in DEP/ above.
-------	---

Field Type 18 (cont.)

RIF/ The route details to the revised destination aerodrome, followed by the ICAO four-letter location indicator of the aerodrome. The revised route is subject to reclearance in flight.

Examples: -RIF/DTA HEC KLAX
-RIF/ESP G94 CLA YPPH

RMK/ Any other plain-language remarks when required by the appropriate ATS authority or deemed necessary, by the pilot-in-command for the provision of air traffic services.

Examples: -0
-STS/MEDEVAC
-EET/015W0315 020W0337 030W0420 040W0502

Field Type 19 — Supplementary information

FIELD TYPE 19

Format: — [] (sp) [] (sp) * (sp) []
 (* additional elements as necessary)

<i>Previous type of field or symbol</i>	<i>This type of field is used in</i>	<i>Next type of field or symbol</i>
18	ALR	20
18	SPL)

This field consists of such supplementary information as is available, organized into a string of elements separated by spaces.

The permissible elements in their proper sequence are:

SINGLE HYPHEN

- (a) E/ followed by 4 NUMERICS giving the fuel endurance in hours and minutes.
- (b) P/ followed by 1, 2 or 3 NUMERICS giving the total number of persons on board, when so prescribed by the appropriate ATS authority.
- (c) R/ followed by one or more of the following, without spaces:
 - U if frequency 243.0 MHz (UHF) is available,
 - V if frequency 121.5 MHz (VHF) is available,
 - E if emergency locator transmitter (ELT) is available.
- (d) S/ followed by one or more of the following, without spaces:
 - P if polar survival equipment is carried,
 - D if desert survival equipment is carried,
 - M if maritime survival equipment is carried,
 - J if jungle survival equipment is carried.
- (e) J/ followed by one or more of the following, without spaces:
 - L if the life jackets are equipped with lights,
 - F if they are equipped with fluorescein, followed by space followed by
 - U if any life jacket radio is equipped with UHF on frequency 243.0 MHz,
 - V if any life jacket radio is equipped with VHF on frequency 121.5 MHz.

Field Type 19 (cont.)

(f) D/ followed by one or more of the following, separated by spaces:
2 NUMERICS giving the number of dinghies carried,
3 NUMERICS giving the total capacity, in persons carried, of all dinghies.
C if dinghies are covered.
The colour of the dinghies (e.g. RED).

(g) A/ followed by one or more of the following, separated by spaces:
The colour of the aircraft.
Significant markings (this may include the aircraft registration).

(h) N/ followed by plain language indicating any other survival equipment carried and any other useful remarks.

(i) C/ followed by the name of the pilot-in-command.

Example: -E/0745 P/6 R/VE S/M J/L D/2 8 C YELLOW
A/YELLOW RED TAIL N145E C/SMITH

Field Type 20 — Alerting search and rescue information

FIELD TYPE 20

Format: – [] (sp) [] (sp) * (sp) []
 (*EIGHT elements in all)

Previous type of field or symbol	This type of field is used in	Next type of field or symbol
19	ALR)

This field consists of the following specified sequence of elements separated by spaces. Any information not available should be shown as “NIL” or “NOT KNOWN” and not simply omitted.

SINGLE HYPHEN

- (a) *Identity of operator*
 The ICAO two-letter designator of the aircraft operating agency or, if this has not been assigned, the name of the operator.
- (b) *Unit which made last contact*
 6 LETTERS consisting of the 4-letter ICAO location indicator followed by the 2-letter designator which together identify the ATS unit which made the last two-way contact or, if these are not available, some other description of the unit.
- (c) *Time of last two-way contact*
 4 NUMERICS giving the time of the last two-way contact.
- (d) *Frequency of last contact*
 NUMERICS as necessary giving the transmitting/receiving frequency of the last contact.
- (e) *Last reported position*
 The last reported position expressed in one of the data conventions of 1.6 of this Appendix followed by the time over that position.

Field Type 20 (cont.)

(f) *Method of determining last known position*

Plain-language text as necessary.

(g) *Action taken by reporting unit*

Plain-language text as necessary.

(h) *Other pertinent information*

Plain-language text as necessary.

Example: -USAF LGGGZAZX 1022 126.7 GN 1022
 PILOT REPORT OVER NDB ATS UNITS
 ATHENS FIR ALERTED NIL

Field Type 21 — Radio failure information

FIELD TYPE 21

Format: – [] (sp) [] (sp) * (sp) []
 (*SIX elements in all)

Previous type of field or symbol	This type of field is used in	Next type of field or symbol
7	RCF)

This field consists of the following specified sequence of elements preceded by a single hyphen and separated by spaces. Any information not available is to be shown as “NIL” or “NOT KNOWN” and not simply omitted.

SINGLE HYPHEN

- (a) *Time of last two-way contact*
 4 NUMERICS giving the time of the last two-way contact with the aircraft.
- (b) *Frequency of last contact*
 NUMERICS as necessary giving the transmitting/receiving frequency of the last two-way contact with the aircraft.
- (c) *Last reported position*
 The last reported position expressed in one of the data conventions of 1.6 of this Appendix.
- (d) *Time at last reported position*
 4 NUMERICS giving the time at the last reported position.
- (e) *Remaining COM capability*
 LETTERS as necessary identifying the remaining COM capability of the aircraft, if known, using the convention of Field Type 10, or in plain language.
- (f) *Any necessary remarks*
 Plain-language text as necessary.

Example: –1232 121.3 CLA 1229 TRANSMITTING ONLY 126.7
 LAST POSITION CONFIRMED BY RADAR

Field Type 22 — Amendment

Format: – a / b

SINGLE HYPHEN

(a) *Field indicator*
ONE OR TWO NUMERICS giving the type number of the field to be amended.

OBLIQUE STROKE

(b) *Amended data*
The complete and amended data of the field indicated in (a), constructed as specified for that field.

Example of amendment of Field Type 8 (Flight rules and type of flight) to IN:

–8/IN

Example of amendment of Field Type 14 (Estimate data):

–14/ENO/0145F290A090A

Example of amendment of Fields Type 8 (Flight rules and type of flight) and 14 (Estimate data):

–8/I-14/ENO/0148F290A110A

FIELD TYPE 22

<i>Previous type of field or symbol</i>	<i>This type of field is used in</i>	<i>Next type of field or symbol</i>
18	CHG	*22 or)
16	CDN	*22 or)


* Indicates that further fields of this type may be added


RULES FOR THE COMPOSITION OF ATS MESSAGES

(See Sections 1.3 to 1.8 of this Appendix)

STANDARD ATS MESSAGES AND THEIR COMPOSITION

DESIGNATOR		MESSAGE FIELDS																						FIELD TYPE NUMBERS				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22					
Alerting	ALR			3		5		7	8	9	10						13		15	16		18	19	20				Emergency messages
Radiocommunication failure	RCF			3				7																21				
Filed flight plan	FPL			3				7	8	9	10						13		15	16		18						Field flight plan messages and associated update messages
Delay	DLA			3				7									13			16		18						
Modification	CHG			3				7									13			16		18				22		
Flight plan cancellation	CNL			3				7									13			16		18						
Departure	DEP			3				7									13			16		18						
Arrival	ARR			3				7									13			16	17							
Current flight plan	CPL			3				7	8	9	10						13	14	15	16		18						Coordination messages
Estimate	EST			3				7									13	14		16								
Coordination	CDN			3				7									13			16						22		
Acceptance	ACP			3				7									13			16								
Logical acknowledgement message	LAM			3																								
Request flight plan	RQP			3				7									13			16		18						Supplementary messages
Request supplementary flight plan	RQS			3				7									13			16		18						
Supplementary flight plan	SPL			3				7									13			16		18	19					

 This field begins a new line when the message is printed in page teletypewriter form.

 This field is repeated as necessary.

Composition of the standard types of message

The composition of each standard type of message, expressed as a standardized sequence of fields of data, shall be as prescribed in the reference table on this page. Each message shall contain all the fields prescribed.

Composition of the standard types of field

The composition of each standard type of field, expressed as a standardized sequence of elements of data, or in some cases as a simple element, shall be as prescribed in the field tables on pages A3-6 to A3-34.

Note.— Each type of field contains at least one mandatory element and, except in Field Type 9, this is the first or only element in the field. The rules for the inclusion or omission of conditional elements are indicated in the field tables.

Structuring and punctuation

The beginning of the ATS data shall be indicated on page copy by an open bracket '(', which constitutes the Start-of-ATS-Data Signal. This signal shall be used only as the printed character immediately preceding the message type designator.

Note.— In teletypewriter operation using International Telegraph Alphabet No. 2, the open bracket is transmitted as the Figures Case of Signal No. 11. On some teletypewriter machines, this will print as a symbol other than '(', but this variation will be local and of no consequence. Where higher level codes are employed, the character printing as '(' is used.

The beginning of each field, other than the first, shall be indicated by a single hyphen '-', which constitutes the Start-of-Field Signal. This signal shall be used only as the printed character preceding the first element of ATS data in each field.

Note.— In teletypewriter operation using International Telegraph Alphabet No. 2, the single hyphen is transmitted as the Figures Case of Signal No. 1. On some teletypewriter machines, this will print as a symbol other than '-', but this variation will be local and of no consequence. Where higher level codes are employed, the character printing as '-' is used.

Elements within a field shall be separated by an oblique stroke '/' (see Note 1), or a space (sp.) (see Note 2) only where so prescribed in the field tables on pages A3-6 to A3-34.

Note 1.— In teletypewriter operation using International Telegraph Alphabet No. 2, the oblique stroke is transmitted as the Figures Case of Signal No. 24. On some teletypewriter machines, this will print as a symbol other than '/', but this variation will be local and of no consequence. Where higher level codes are employed, the character printing as '/' is used.

Note 2.— In teletypewriter operation using International Telegraph Alphabet No. 2, the space is transmitted as Signal No. 31. Where higher level codes are employed, the character which causes a space on page copy is to be used.

The end of the ATS data shall be indicated by a close bracket ')', which constitutes the End-of-ATS-Data Signal. This signal shall be used only as the printed character immediately following the last field in the message.

Note.— In teletypewriter operation using International Telegraph Alphabet No. 2, the close bracket is transmitted as Signal No. 12. On some teletypewriter machines, this will print as a symbol other than ')', but this variation will be local and of no consequence. Where higher level codes are employed, the character printing as ')' is to be used.

When the standard ATS messages are prepared in teletypewriter form, an Alignment Function (two Carriage Returns followed by one Line Feed) shall be inserted:

- (a) prior to each of the fields so annotated in the reference table on this page;
- (b) in Fields Type 5 (Description of emergency), 15 (Route), 18 (Other information), 19 (Supplementary information), 20 (Alerting search and rescue information), 21 (Radio failure information) and 22 (Amendment), whenever it is necessary to begin a new line on page copy (see Note). In such cases, the Alignment Function shall be inserted between two data elements and shall not divide an element.

Note.— Annex 10, Volume II, prescribes that a line of teletypewriter copy shall not contain more than 69 characters.

Data conventions

Most of the conventions to be used in the expression of ATS data in the messages are prescribed in the field tables on pages A3-6 to A3-34, but the conventions for the expression of level, position and route data are given below.

The expression of level data

Four alternative conventions are available for the expression of level data:

- (a) "F" followed by 3 decimal numerics: indicates a flight level number, i.e. Flight Level 340 is expressed as "F340";
- (b) "S" followed by 4 decimal numerics: indicates standard metric level in tens of metres, i.e. Standard Metric Level 11 300 m (Flight Level 370) is expressed as "S1130";
- (c) "A" followed by 3 decimal numerics: indicates altitude in hundreds of feet, i.e. an altitude of 4 500 feet is expressed as "A045";
- (d) "M" followed by 4 decimal numerics: indicates altitude in tens of metres, i.e. an altitude of 8 400 metres is expressed as "M0840".

The expression of position or route

The following alternative data conventions shall be used for the expression of position or route:

- (a) from 2 to 7 characters, being the coded designator assigned to an ATS route to be flown;

- (b) from 2 to 5 characters, being the coded designator assigned to an en-route point;
- (c) 4 numerics describing latitude in degrees and tens and units of minutes, followed by "N" (meaning "North") or "S" (South), followed by 5 numerics describing longitude in degrees and tens and units of minutes, followed by "E" (East) or "W" (West). The correct number of numerics is to be made up, where necessary, by the insertion of zeros, e.g. "4620N07805W";
- (d) 2 numerics describing latitude in degrees, followed by "N" (North) or "S" (South), followed by 3 numerics describing longitude in degrees, followed by "E" (East) or "W" (West). Again, the correct number of numerics is to be made up, where necessary, by the insertion of zeros, e.g. "46N078W";
- (e) 2 to 5 characters being the coded identification of a significant point, followed by 3 decimal numerics giving the bearing from the point in degrees magnetic followed by 3 decimal numerics giving the distance from the point in nautical miles. In areas of high latitude where it is determined by the appropriate authority that reference to degrees magnetic is impractical, degrees true may be used. The correct number of numerics is to be made up, where necessary, by the insertion of zeros, e.g. a point at 180° magnetic at a distance of 40 nautical miles from VOR "FOJ" would be expressed as "FOJ180040".

The detail of the fields

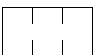
The elements of data prescribed or permitted to be included in each type of field, together with a prescription of the conditions or options permitted, are shown on pages A3-6 to A3-34.

A key appears at the right-hand side of each of the field pages; this key permits the sequence of fields in each type of message to be followed.

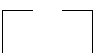
The first field in each message type is Field Type 3; on the page describing Field Type 3 a key indicates the field type number of the next field for each message. On subsequent field pages, the field type number of the previous field is shown to permit back reference also. The Start-of-ATS-Data Signal '(' is used in the key to indicate that there is no previous type of field; the End-of-ATS-Data Signal ')' is used to indicate that there is no next type of field.

On the field pages,

elements with a fixed number of characters are shown diagrammatically as (three characters in this example)



elements of variable length are shown as



Accuracy in the preparation of ATS messages

Where the standard ATS messages are transmitted by teletypewriter channels in areas where ATC computers are known to be in use, the formats and data conventions prescribed in the field tables on pages A3-6 to A3-34 shall be adhered to rigorously.

2. Examples of ATS messages

2.1 Table of contents

<i>Message category</i>	<i>Message type</i>	<i>Message type designator</i>	<i>Paragraph</i>
Emergency	Alerting	ALR	2.2.1
	Radiocommunication failure	RCF	2.2.2
Filed flight plan and associated update	Filed flight plan	FPL	2.3.1
	Modification	CHG	2.3.2
	Cancellation	CNL	2.3.3
	Delay	DLA	2.3.4
	Departure	DEP	2.3.5
	Arrival	ARR	2.3.6
Coordination	Current flight plan	CPL	2.4.1
	Estimate	EST	2.4.2
	Coordination	CDN	2.4.3
	Acceptance	ACP	2.4.4
	Logical acknowledgement	LAM	2.4.5
Supplementary	Request flight plan	RQP	2.5.1
	Request supplementary flight plan	RQS	2.5.2
	Supplementary flight plan	SPL	2.5.3

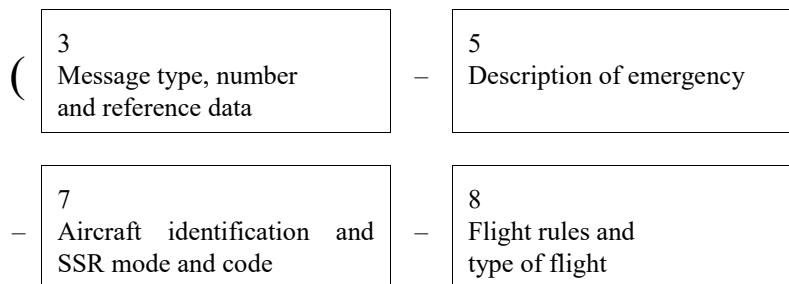
Note 1.— Only the ATS information, i.e. in AFTN messages only the AFTN text, is shown.

Note 2.— The numbers in the composition diagrams correspond to the field type numbers used in Section 1 of this Appendix.

2.2 Emergency messages

2.2.1 Alerting (ALR) message

2.2.1.1 Composition



<p>9 Type of aircraft and wake turbulence category</p>	<p>10 Equipment and capabilities</p>
<p>13 Departure aerodrome and time</p>	
<p>15 Route (using more than one line if necessary)</p>	
<p>16 Destination aerodrome and total estimated elapsed time, destination alternate aerodrome(s)</p>	
<p>18 Other information (using more than one line if necessary)</p>	
<p>19 Supplementary information (using more than one line if necessary)</p>	
<p>20 Alerting search and rescue information (using more than one line if necessary)</p>	

2.2.1.2 Example

The following is an example of an alerting message relating to an uncertainty phase, sent by Athens Approach Control to Belgrade Centre and other ATS units, in respect of a flight from Athens to Munich.

```
(ALR-INCERFA/LGGGZAZX/OVERDUE
-FOX236/A3624-IM
-C141/H-S/C
-LGAT1020
-N0430F220 B9 3910N02230W/N0415F240 B9 IVA/N0415F180 B9
-EDDM0227 EDDF
```

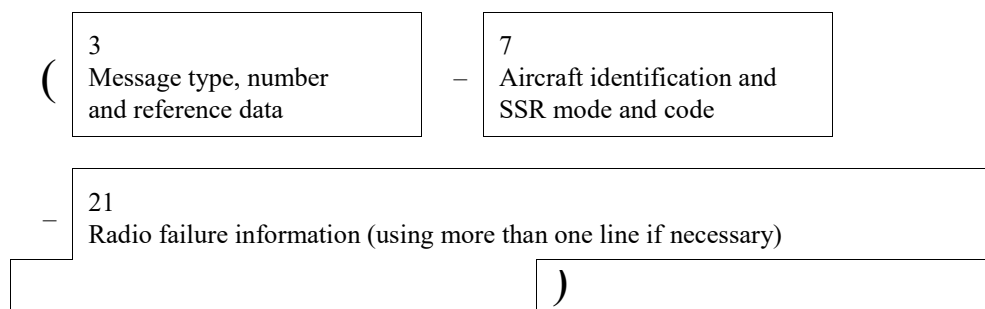

–REG/A43213 EET/LYBE0020 EDMI0133 OPR/USAF RMK/NO
 POSITION REPORT SINCE DEP PLUS 2 MINUTES
 –E/0720 P/12 R/UV J/LF D/02 014 C ORANGE A/SILVER C/SIGGAH
 –USAF LGGGZAZX 1022 126.7 GN 1022 PILOT REPORT OVER NDB ATS
 UNITS ATHENS FIR ALERTED NIL)

2.2.1.2.1 Meaning

Alerting message — uncertainty phase declared by Athens due no position reports and no radio contact since two minutes after departure — aircraft identification FOX236 — IFR, military flight — Starlifter, heavy wake turbulence category, equipped with standard communications, navigation and approach aid equipment for the route, SSR transponder with Modes A (4 096 code capability) and C— last assigned Code 3624 — departed Athens 1020 UTC — cruising speed for first portion of route 430 knots, first requested cruising level FL 220 — proceeding on airway Blue 9 to 3910N2230W where TAS would be changed to 415 knots and FL240 would be requested — proceeding on airway Blue 9 to Ivanic Grad VOR where FL 180 would be requested, maintaining TAS of 415 knots and FL240 would be requested — proceeding on airway Blue 9 to Munich, total estimated elapsed time 2 hours and 27 minutes — destination alternate is Frankfurt — aircraft registration A43213 — accumulated estimated elapsed times at the Belgrade and Munich FIR boundaries 20 minutes and 1 hour and 33 minutes respectively — the aircraft is operated by the USAF — no position report has been received since 2 minutes after departure — endurance 7 hours and 20 minutes after take-off — 12 persons on board — portable radio equipment working on VHF 121.5 MHz and UHF 243 MHz is carried — life jackets fitted with lights and fluorescein are carried — 2 dinghies with orange covers are carried, have a total capacity for 14 persons — aircraft colour is silver — pilot's name is SIGGAH — operator is USAF — Athens approach control was the last unit to make contact at 1022 UTC on 126.7 MHz when pilot reported over GN runway locator beacon — Athens approach control have alerted all ATS units within Athens FIR — no other pertinent information.

2.2.2 Radiocommunication failure (RCF) message

2.2.2.1 Composition



2.2.2.2 Example

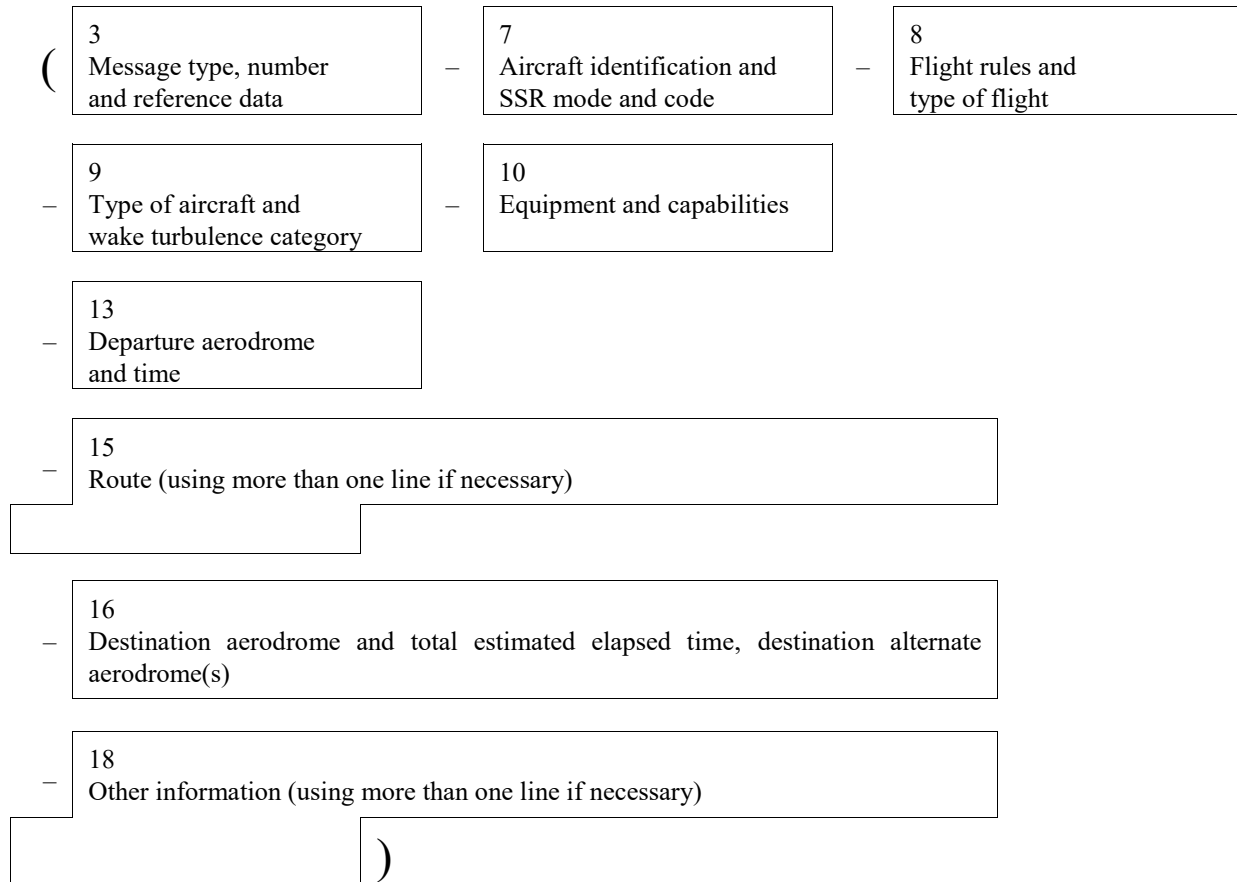
The following is an example of a message sent from London to Amsterdam informing that centre of a radiocommunication failure on a flight that has been cleared to it. The related flight plan shows that the aircraft is not equipped with an SSR transponder.

(RCF-GAGAB
 –1231 121.3 CLA 1229 TRANSMITTING ONLY 126.7 MHZ LAST POSITION CONFIRMED BY RADAR)

2.2.2.2.1 *Meaning*

Radiocommunication failure message — aircraft identification GAGAB — no SSR code assigned — last communication with London Centre 1232 UTC on 121.3 MHz — last reported position was Clacton VOR, at 1229 UTC — remaining COM capability: last heard transmitting on 126.7 MHz — position report at Clacton observed by radar.

2.3 Filed flight plan and associated update messages

2.3.1 *Filed flight plan (FPL) message*2.3.1.1 *Composition*2.3.1.2 *Example*

The following is an example of a filed flight plan message sent by London Airport to Shannon, Shanwick and Gander Centres. The message may also be sent to the London Centre or the data may be passed to that centre by voice.

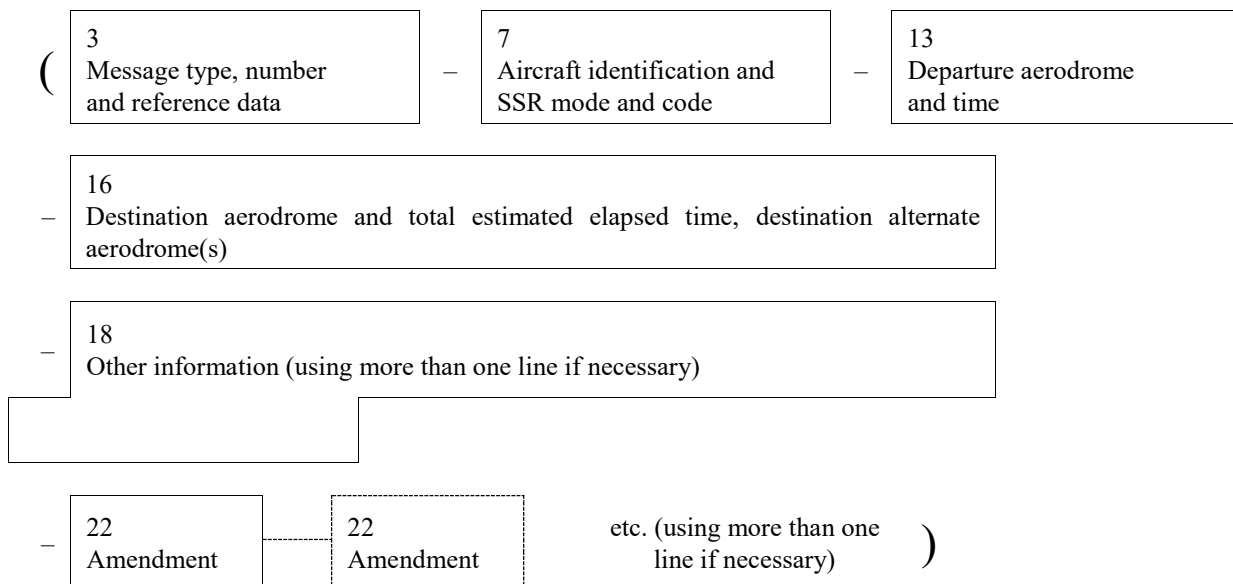
```
FPL-ACA101-IS
-B773/H-CHOV/C
-EGLL1400
-N0450F310 L9 UL9 STU285036/M082F310 UL9 LIMRI
52N020W 52N030W 50N040W 49N050W
-CYQX0455 CYR
-EET/EISN0026 EGGX0111 020W0136 CYQX0228 040W0330 050W0415 SEL/FJEL)
```

2.3.1.2.1 Meaning

Filed flight plan message — aircraft identification ACA101 — IFR, scheduled flight — a Boeing 777-300, heavy wake turbulence category equipped with Loran C, HF RTF, VOR, VHF RTF and SSR transponder with Modes A (4 096 code capability) and C — departure aerodrome is London, estimated off-block time 1400 UTC — cruising speed and requested flight level for the first portion of the route are 450 knots and FL 310 — the flight will proceed on Airways Lima 9 and Upper Lima 9 to a point bearing 285 degrees magnetic and 36 NM from the Strumble VOR. From this point the flight will fly at a constant Mach number of .82, proceeding on Upper Lima 9 to LIMRI; then to 52N20W; to 52N30W; to 50N40W; to 49N50W; to destination Gander, total estimated elapsed time 4 hours and 55 minutes — destination alternate is Goose Bay — captain has notified accumulated estimated elapsed times at significant points along the route, they are at the Shannon FIR boundary 26 minutes, at the Shanwick Oceanic FIR boundary 1 hour and 11 minutes, at 20W 1 hour and 36 minutes, at the Gander Oceanic FIR boundary 2 hours and 28 minutes, at 40W 3 hours and 30 minutes and at 50W 4 hours and 15 minutes — SELCAL code is FJEL.

2.3.2 Modification (CHG) message

2.3.2.1 Composition



2.3.2.2 Example

The following is an example of a modification message sent by Amsterdam Centre to Frankfurt Centre correcting information previously sent to Frankfurt in a filed flight plan message. It is assumed that both centres are computer-equipped.

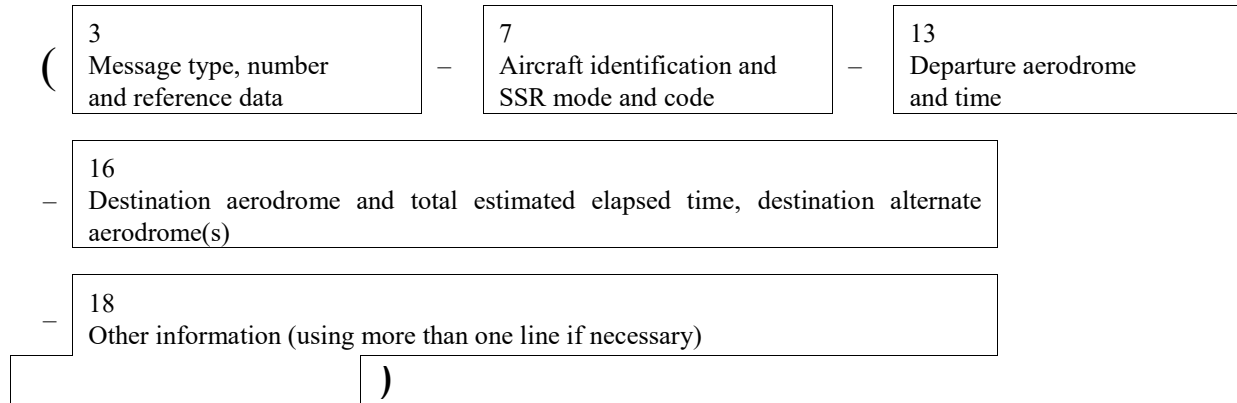
(CHGA/F016A/F014-GABWE/A2173-EHAM0850-EDDF-DOF/080122-8/I-16/EDDN)

2.3.2.2.1 Meaning

Modification message – Amsterdam and Frankfurt computer unit identifiers A and F, followed by serial number (016) of this message sent by Amsterdam, repeat of computer unit identifiers followed by serial number (014) of the related filed flight plan message – aircraft identification GABWE, SSR Code 2173 operating in Mode A, en route from Amsterdam EOBT0850 to Frankfurt date of flight 22 Jan 2008 – Field Type 8 of the related filed flight plan message is corrected to IFR – Field Type 16 of the related filed flight plan is corrected, the new destination is Nürnberg.

2.3.3 Flight plan cancellation (CNL) message

2.3.3.1 Composition



2.3.3.2 Example 1

The following is an example of a flight plan cancellation message sent by an ATS unit to all addressees of a filed flight plan message previously sent by that unit.

(CNL-DLH522-EDBB0900-LFPO-0)

2.3.3.2.1 Meaning

Flight plan cancellation message — cancel the flight plan of aircraft identification DLH522 — flight planned from Berlin EOBT0900 to Paris — no other information.

2.3.3.3 Example 2

The following is an example of a flight plan cancellation message sent by a centre to an adjacent centre. It is assumed that both centres are equipped with ATC computers.

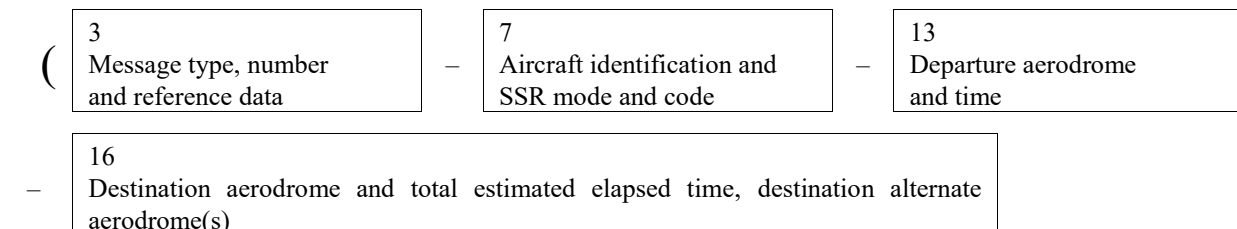
(CNLF/B127F/B055-BAW580-EDDF1430-EDDW-0)

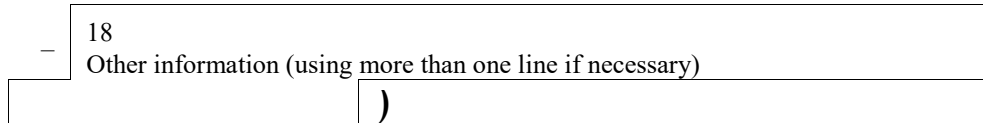
2.3.3.3.1 Meaning

Flight plan cancellation message — identifiers of sending and receiving ATC computer units F and B, followed by serial number (127) of this message, repeat of computer unit identifiers followed by serial number (055) of current flight plan message previously transmitted — cancel the flight plan of aircraft identification BAW580 — flight planned from Frankfurt EOBT1430 to Bremen — no other information.

2.3.4 Delay (DLA) message

2.3.4.1 Composition





2.3.4.2 Example

The following is an example of a delay message sent from a departure aerodrome, or from a parent unit handling communications for a departure aerodrome, to each addressee of a filed flight plan message.

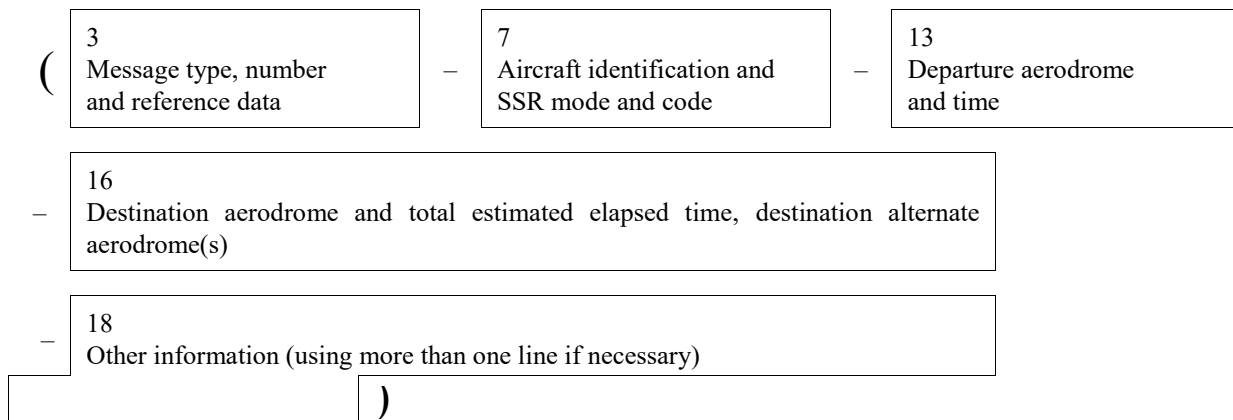
(DLA-KLM671-LIRF0900-LYDU-0)

2.3.4.2.1 Meaning

Delay message — aircraft identification KLM671 — revised estimated off-block time Fiumicino 0900 UTC destination Dubrovnik — no other information.

2.3.5 Departure (DEP) message

2.3.5.1 Composition



2.3.5.2 Example

The following is an example of a departure message sent from a departure aerodrome, or from a parent unit handling communications for a departure aerodrome, to each addressee of a filed flight plan message.

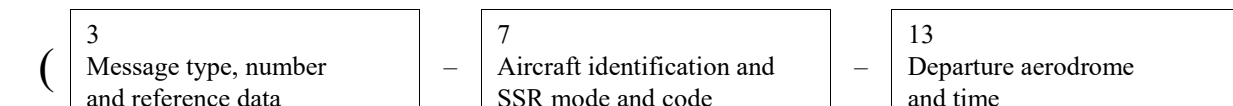
(DEP-CSA4311-EGPD1923-ENZV-0)

2.3.5.2.1 Meaning

Departure message — aircraft identification CSA4311 — departed from Aberdeen at 1923 UTC — destination Stavanger — no other information.

2.3.6 Arrival (ARR) message

2.3.6.1 Composition



–

17 Arrival aerodrome and time

)

2.3.6.2 Example 1

The following is an example of an arrival message sent from the arrival aerodrome (= destination) to the departure aerodrome.

(ARR-CSA406-LHBP0800-LKPR0913)

2.3.6.2.1 Meaning

Arrival message — aircraft identification CSA406 — departed from Budapest/Ferihegy at 0800 — landed at Prague/Ruzyne Airport at 0913 UTC.

2.3.6.3 Example 2

The following is an example of an arrival message sent for an aircraft which has landed at an aerodrome for which no ICAO location indicator has been allocated. The SSR code would not be meaningful.

(ARR-HHE13-EHAM0900 – EDDD – ZZZZ1030 DEN HELDER)

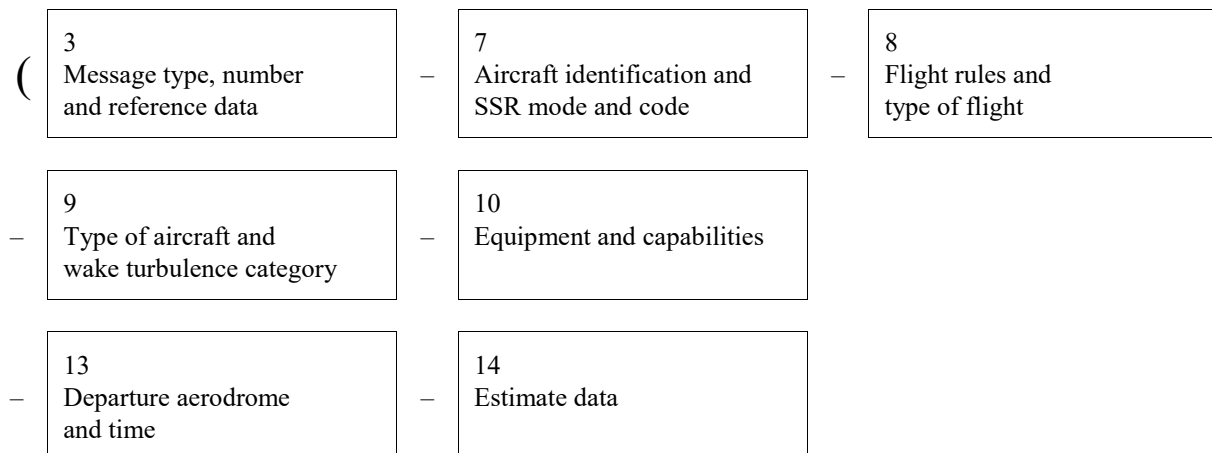
2.3.6.3.1 Meaning

Arrival message aircraft identification HHE13 — departed from Amsterdam at 0900 — destination Frankfurt – landed at Den Helder heliport at 1030 UTC.

2.4 Coordination messages

2.4.1 Current flight plan (CPL) message

2.4.1.1 Composition



–	15 Route (using more than one line if necessary)
–	16 Destination aerodrome and total estimated elapsed time, destination alternate aerodrome(s)
–	18 Other information (using more than one line if necessary)

2.4.1.2 Example 1

The following is an example of a current flight plan message sent from Boston Centre to New York Centre on a flight which is en route from Boston to La Guardia Airport.

```
(CPL-UAL621/A5120-IS
-A320/M-S/C
-KBOS-HFD/1341A220A200A
-N0420A220 V3 AGL V445
-KLGA
-0)
```

2.4.1.3 Example 2

The following is an example of the same current flight plan message, but in this case the message is exchanged between ATC computers.

```
(CPLBOS/LGA052-UAL621/A5120-IS
-A320/M-S/C
-KBOS-HFD/1341A220A200A
-N0420A220 V3 AGL V445
-KLGA
-0)
```

Note.— The messages in Examples 1 and 2 are identical except that the Message Number of Example 2 does not appear in Example 1.

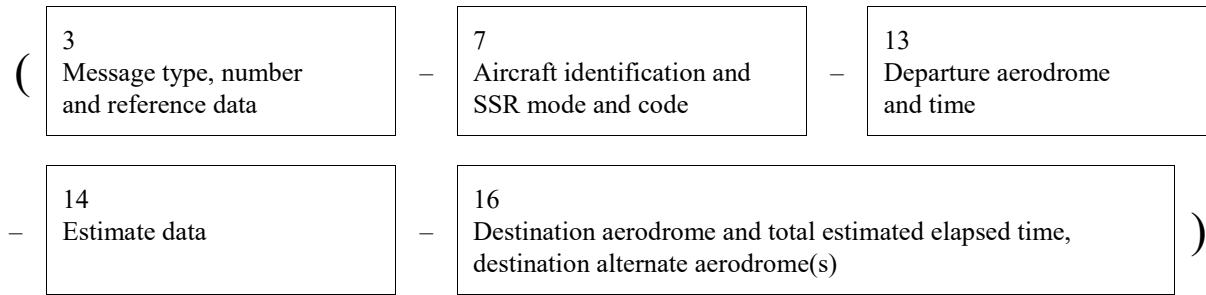
2.4.1.4 Meaning

Current flight plan message [with sending unit identity (BOS) and receiving unit identity (LGA), followed by the serial number of this message (052)] — aircraft identification UAL621, last assigned SSR Code 5120 in Mode A — IFR, scheduled flight — one A320, medium wake turbulence category, equipped with standard communications, navigation and approach aid equipment for the route and SSR transponder with Modes A (4 096 code capability) and C —

departed Boston — the flight is estimated to cross the Boston/New York “boundary” at point HFD at 1341 UTC, cleared by the Boston Centre at altitude 22 000 feet but to be at or above altitude 20 000 feet at HFD — TAS is 420 knots, requested cruising level is altitude 22 000 feet — the flight will proceed on airway V3 to reporting point AGL thence on airway V445 — destination is La Guardia Airport — no other information.

2.4.2 Estimate (EST) message

2.4.2.1 Composition



2.4.2.2 Example

The following is an example of an estimate message sent from Paris Centre to London Centre. It is assumed that London Centre has received a filed flight plan message relating to this flight. Both centres are equipped with computers.

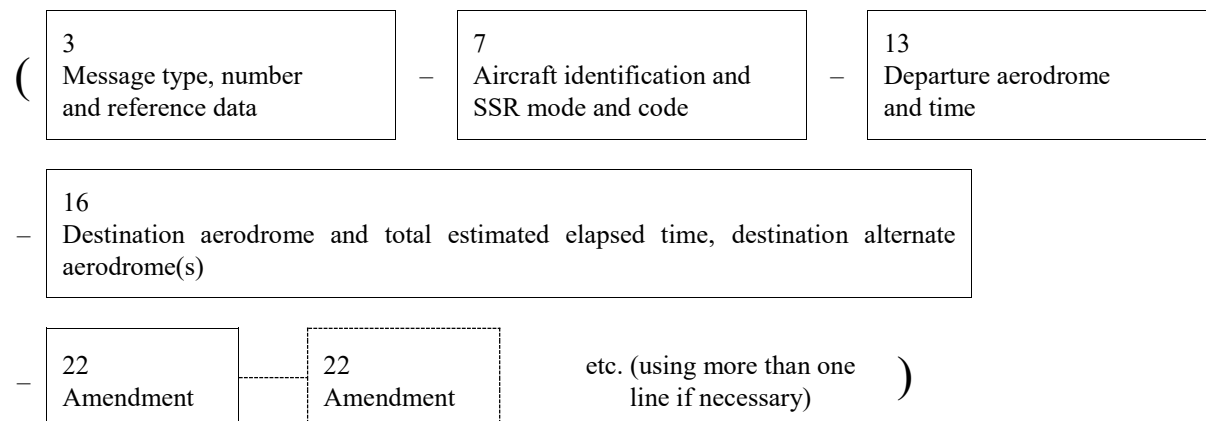
(ESTP/L027-BAW671/A5631-LFPG-ABB/1548F140F110A-EGLL)

2.4.2.2.1 Meaning

Estimate message [with sending unit identity (P) and receiving unit identity (L), followed by the serial number of this message (027)] — aircraft identification BAW671, last assigned SSR Code 5631 operating in Mode A — departure aerodrome Paris de Gaulle — estimating Abbeville VOR 1548 UTC, cleared FL 140, flight will cross the Abbeville VOR at FL 110 or above, ascending — destination aerodrome London.

2.4.3 Coordination (CDN) message

2.4.3.1 Composition



2.4.3.2 Example

The following is an example of a coordination message sent from Prestwick Centre to Dublin Centre proposing changes to the conditions under which an aircraft should cross the Dublin/Prestwick boundary. Prestwick has received a current flight plan message from Dublin and both centres are equipped with ATC computers.

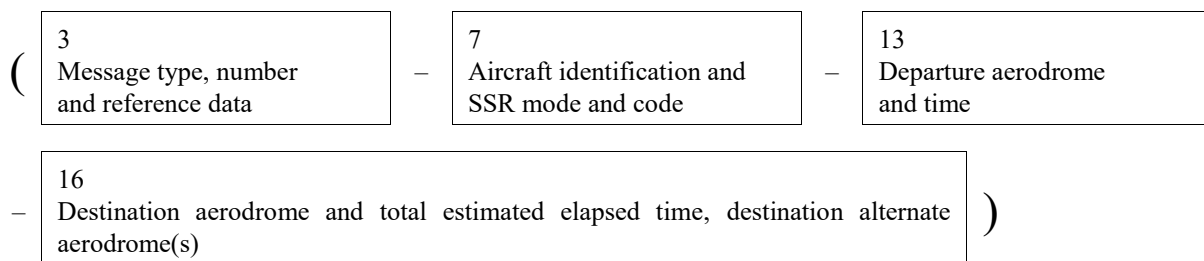
(CDNP/D098D/P036-BAW617/A5136-EIDW-EGPK-14/GRN/1735F210F130A)

2.4.3.2.1 Meaning

Coordination message — Prestwick and Dublin ATC computer unit identifiers, P and D, followed by serial number (098) of this message sent by Prestwick, followed by analogous data identifying the current flight plan message sent from Dublin to which it is related (D/P036) — aircraft identification BAW617/SSR Code 5136 operating in Mode A — en route from Dublin to Prestwick — Field Type 14 is the subject of the proposal, i.e. Prestwick will accept the flight at the boundary point GRN at 1735 UTC and crossing the boundary point at or above FL 130 climbing to a cleared level of FL 210.

2.4.4 Acceptance (ACP) message

2.4.4.1 Composition



2.4.4.2 Example

The following is an example of an acceptance message sent from London Centre to Paris Centre relating to a current flight plan message which London has received from Paris. It is assumed that both centres are equipped with ATC computers.

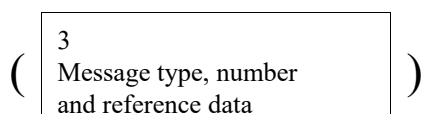
(ACPL/P086P/L142-EIN065/A4570-LFPO-EGLL)

2.4.4.2.1 Meaning

Acceptance message — London and Paris computer unit identifiers, L and P, followed by serial number (086) of this message sent by London, followed by analogous data identifying the current flight plan message sent from Paris, to which it is related (PL142) — aircraft identification EIN065/SSR Code 4570 operating in Mode A — en route from Paris to London — is acceptable.

2.4.5 Logical acknowledgement (LAM) message

2.4.5.1 Composition



2.4.5.2 Example

The following is an example of a logical acknowledgement message sent by a centre to an adjacent centre reacting to a current flight plan message. It is assumed that both centres are equipped with ATC computers.

(LAMP/M178M/P100)

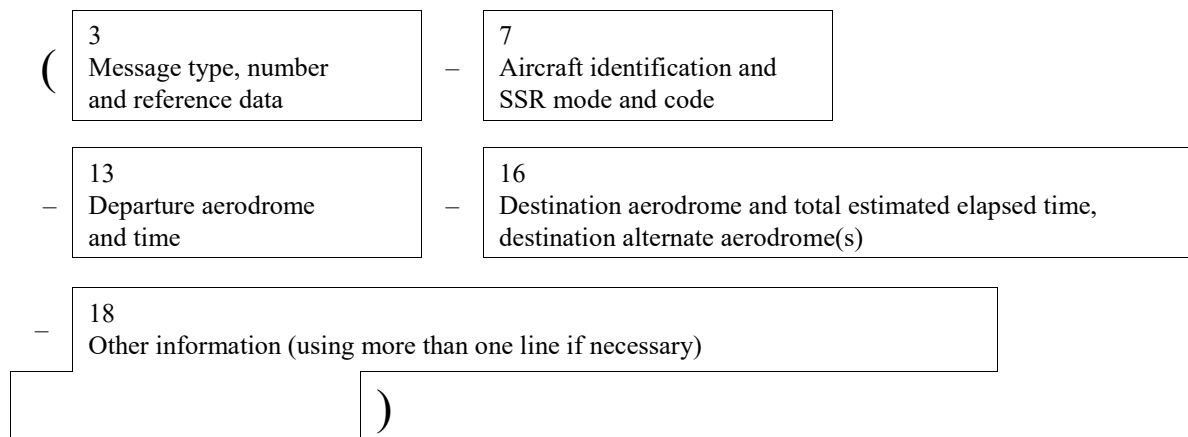
2.4.5.2.1 Meaning

Logical acknowledgement message — identifiers of sending and receiving ATC computer units Paris and Maastricht, followed by the sending unit serial number (178) of this message, followed by the computer unit identifiers and serial number (100) of the related estimate message.

2.5 Supplementary messages

2.5.1 Request flight plan (RQP) message

2.5.1.1 Composition



2.5.1.2 Example

The following is an example of a request flight plan message sent by a centre to an adjacent centre after receipt of an estimate message, for which no corresponding filed flight plan message had been received previously.

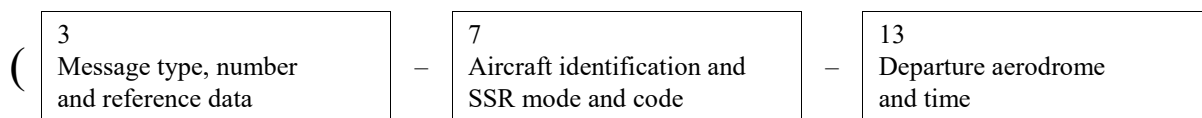
(RQP-PHOEN-EHRD-EDDL-0)

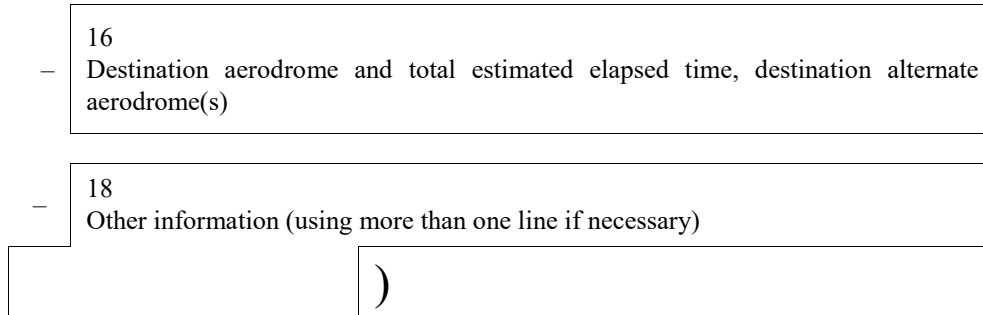
2.5.1.2.1 Meaning

Request flight plan message — aircraft identification PHOEN departed from Rotterdam — destination Düsseldorf – no other information.

2.5.2 Request supplementary flight plan (RQS) message

2.5.2.1 Composition





2.5.2.2 Example

The following is an example of a request supplementary flight plan message sent by an ATS unit to the ATS unit serving the departure aerodrome requesting information contained in the flight plan form, but not transmitted in the filed or current flight plan messages.

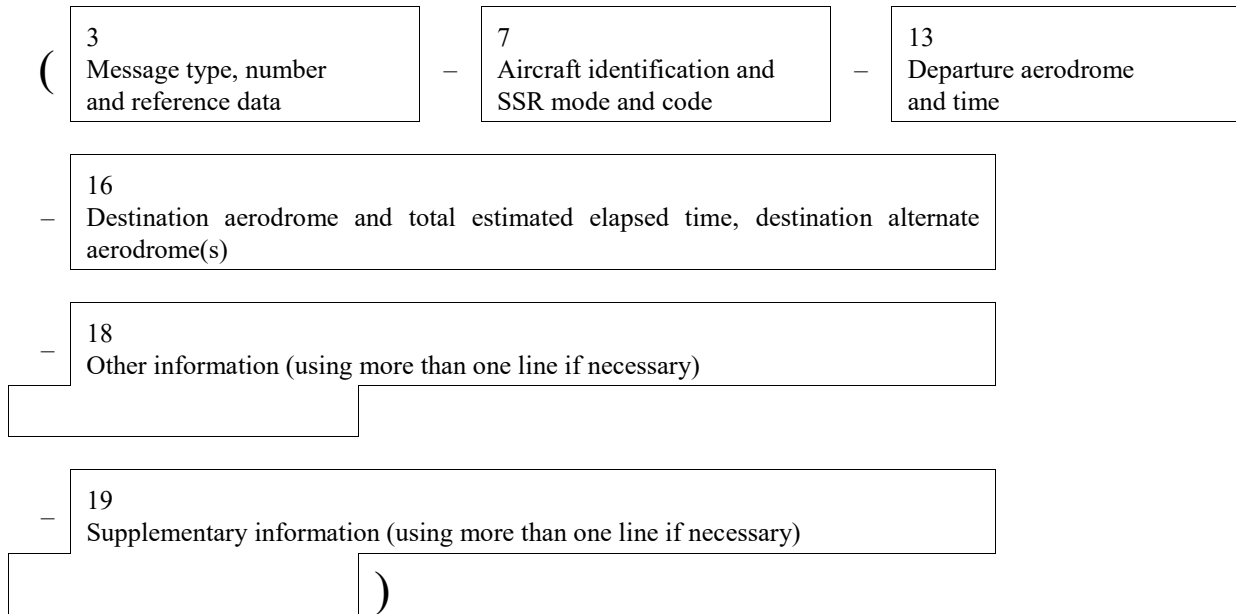
(RQS-KLM405/A4046-EHAM-CYMX-0)

2.5.2.2.1 Meaning

Request supplementary flight plan message — aircraft identification KLM405/SSR Code 4046 operating in Mode A — departure aerodrome is Amsterdam — destination aerodrome is Mirabel – no other information.

2.5.3 Supplementary flight plan (SPL) message

2.5.3.1 Composition



2.5.3.2 Example

The following is an example of a supplementary flight plan message sent by the departure aerodrome of a flight to an ATS unit which had requested supplementary information recorded on the flight plan form (but not transmitted in filed flight plan messages or current flight plan messages).

(SPL-SAW502A
-EDDW0920
-EKCH0400 EKVB
-REG/GBZTA RMK/CHARTER
-E/0640 P/9 R/V J/L A/BLUE C/DENKE)

2.5.3.2.1 Meaning

Supplementary flight plan message — aircraft identification SAW502A no SSR — departed Bremen 0920 UTC — destination Kastrup, total estimated elapsed time 4 hours — alternate Viborg — aircraft registration GBZTA — charter flight — endurance 6 hours and 40 minutes after departure — 9 persons on board — portable radio working on International Distress Frequency 121.5 MHz is carried — life jackets fitted with lights are carried — the aircraft colour is blue — the pilot's name is Denke.

Appendix 4

AIR TRAFFIC INCIDENT REPORT

1. ICAO model air traffic incident report form
2. Instructions for the completion of the air traffic incident report form

1. ICAO model air traffic incident report form

AIR TRAFFIC INCIDENT REPORT FORM		
<i>For use when submitting and receiving reports on air traffic incidents. In an initial report by radio, shaded items should be included.</i>		
A — AIRCRAFT IDENTIFICATION	B — TYPE OF INCIDENT	
	AIRPROX / PROCEDURE / FACILITY*	
C — THE INCIDENT		
1. General		
a)	Date / time of incident _____	UTC
b)	Position _____	
2. Own aircraft		
a)	Heading and route _____	
b)	True airspeed _____ measured in () kt _____ () km/h _____	
c)	Level and altimeter setting _____	
d)	Aircraft climbing or descending	
	() Level flight	() Climbing () Descending
e)	Aircraft bank angle	
	() Wings level	() Slight bank () Moderate bank
	() Steep bank	() Inverted () Unknown
f)	Aircraft direction of bank	
	() Left	() Right () Unknown
g)	Restrictions to visibility (select as many as required)	
	() Sun glare	() Windscreen pillar () Dirty windscreen
	() Other cockpit structure	() None
h)	Use of aircraft lighting (select as many as required)	
	() Navigation lights	() Strobe lights () Cabin lights
	() Red anti-collision lights	() Landing / taxi lights () Logo (tail fin) lights
	() Other	() None
i)	Traffic avoidance advice issued by ATS	
	() Yes, based on ATS surveillance system	() Yes, based on visual sighting () Yes, based on other information
	() No	
j)	Traffic information issued	
	() Yes, based on ATS surveillance system	() Yes, based on visual sighting () Yes, based on other information
	() No	

* Delete as appropriate.

- k) Airborne collision avoidance system — ACAS
 Not carried Type Traffic advisory issued
 Resolution advisory issued Traffic advisory or resolution advisory not issued
- l) Identification
 No ATS surveillance system available Identification No identification
- m) Other aircraft sighted
 Yes No Wrong aircraft sighted
- n) Avoiding action taken
 Yes No
- o) Type of flight plan IFR / VFR / none*

3. Other aircraft

- a) Type and call sign / registration (if known) _____
- b) If a) above not known, describe below
 High wing Mid wing Low wing
 Rotorcraft
 1 engine 2 engines 3 engines
 4 engines More than 4 engines
- Marking, colour or other available details

- c) Aircraft climbing or descending
 Level flight Climbing Descending
 Unknown
- d) Aircraft bank angle
 Wings level Slight bank Moderate bank
 Steep bank Inverted Unknown
- e) Aircraft direction of bank
 Left Right Unknown
- f) Lights displayed
 Navigation lights Strobe lights Cabin lights
 Red anti-collision lights Landing / taxi lights Logo (tail fin) lights
 Other None Unknown

* Delete as appropriate.

g)	Traffic avoidance advice issued by ATS	<input type="checkbox"/> Yes, based on ATS surveillance system <input type="checkbox"/> No	<input type="checkbox"/> Yes, based on visual sighting <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes, based on other information <input type="checkbox"/> Unknown
h)	Traffic information issued	<input type="checkbox"/> Yes, based on ATS surveillance system <input type="checkbox"/> No	<input type="checkbox"/> Yes, based on visual sighting <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes, based on other information <input type="checkbox"/> Unknown
i)	Avoiding action taken	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Unknown
4. Distance				
a)	Closest horizontal distance _____			
b)	Closest vertical distance _____			
5. Flight meteorological conditions				
a)	IMC / VMC*			
b)	Above / below* clouds / fog / haze or between layers*			
c)	Distance vertically from cloud _____ m / ft* below _____ m / ft* above			
d)	In cloud / rain / snow / sleet / fog / haze*			
e)	Flying into / out of* sun			
f)	Flight visibility _____ m / km*			
6. Any other information considered important by the pilot-in-command				

D — MISCELLANEOUS				
1. Information regarding reporting aircraft				
a)	Aircraft registration _____			
b)	Aircraft type _____			
c)	Operator _____			
d)	Aerodrome of departure _____			
e)	Aerodrome of first landing _____		Destination _____	
f)	Reported by radio or other means to _____ (name of ATS unit) at date/time _____ UTC			
g)	Date / time / place of completion of form _____			

* Delete as appropriate.

2. Function, address and signature of person submitting report

- a) Function _____
- b) Address _____
- c) Signature _____
- d) Telephone number _____

3. Function and signature of person receiving report

- a) Function _____ b) Signature _____

E — SUPPLEMENTARY INFORMATION BY ATS UNIT CONCERNED

1. Receipt of report

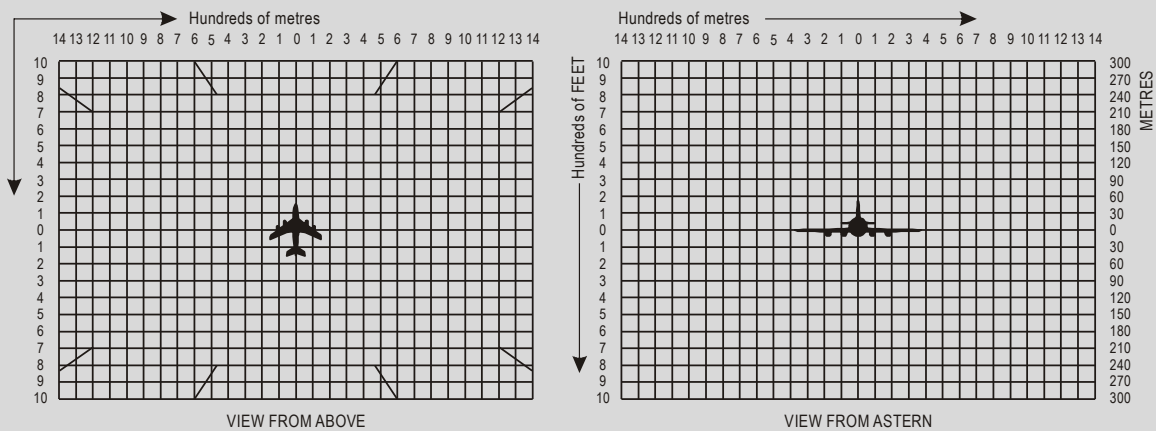
- a) Report received via AFTN / radio / telephone / other (specify)* _____
- b) Report received by _____ (name of ATS unit)

2. Details of ATS action

Clearance, incident seen (ATS surveillance system/visually, warning given, result of local enquiry, etc.)

DIAGRAMS OF AIRPROX

Mark passage of other aircraft relative to you, in plan on the left and in elevation on the right, assuming YOU are at the centre of each diagram. Include first sighting and passing distance.



* Delete as appropriate.

2. Instructions for the completion of the air traffic incident report form*Item*

- A Aircraft identification of the aircraft filing the report.
 - B An AIRPROX report should be filed immediately by radio.
 - C1 Date/time UTC and position in bearing and distance from a navigation aid or in LAT/LONG.
 - C2 Information regarding aircraft filing the report, tick as necessary.
 - C2 c) E.g. FL 350/1 013 hPa or 2 500 ft/QNH 1 007 hPa or 1 200 ft/QFE 998 hPa.
 - C3 Information regarding the other aircraft involved.
 - C4 Passing distance — state units used.
 - C6 Attach additional papers as required. The diagrams may be used to show the aircraft's positions.
 - D1 f) State name of ATS unit and date/time in UTC.
 - D1 g) Date and time in UTC and place of completion of form.
 - E2 Include details of ATS unit such as service provided, radiotelephony frequency, SSR codes assigned and altimeter setting. Use diagram to show the aircraft's position and attach additional papers as required.
-

Appendix 5

CONTROLLER-PILOT DATA LINK COMMUNICATIONS (CPDLC) MESSAGE SET

Note 1.— The message identifier of the CPDLC message set in this appendix is derived from the operational category of the CPDLC message element. A message element identifier of specific technologies, correlated to those defined in this document can be found in the Global Operational Data Link (GOLD) Manual (Doc 10037).

Note 2.— Parameters contained in message elements are defined in Table A-5-14-1 of this appendix. When they are optional in a message element, parameters are denoted with an [O].

No table of figures entries found.

1. Route message elements

Table A5-1-1. Route uplinks (RTEU)

Instructions to proceed via the specified route or named procedure, or change the route, and notifications to expect route changes.

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
RTEU-1	Instruction to proceed via the specified departure clearance.	<i>(departure clearance)</i>	M	W/U
RTEU-2	Instruction to proceed directly to the specified position.	PROCEED DIRECT TO <i>(position)</i>	M	W/U
RTEU-3	Instruction to proceed, at the specified time, directly to the specified position.	AT TIME <i>(time)</i> PROCEED DIRECT TO <i>(position)</i>	M	W/U
RTEU-4	Instruction to proceed, at the specified position, directly to the next specified position.	AT <i>(Position)</i> PROCEED DIRECT TO <i>(position)</i>	M	W/U
RTEU-5	Instruction to proceed upon reaching the specified level, directly to the specified position.	AT <i>(level single)</i> PROCEED DIRECT TO <i>(position)</i>	M	W/U
RTEU-6	Instruction to proceed to the specified position via the specified route.	CLEARED TO <i>(position)</i> VIA <i>(departure data[O]) (en-route data)</i>	M	W/U
RTEU-7	Instruction to proceed via the specified route.	CLEARED <i>(departure data[O]) (en-route data) (arrival approach data)</i>	M	W/U
RTEU-8	Instruction to proceed in accordance with the specified procedure.	CLEARED <i>(procedure name)</i>	M	W/U
RTEU-9	Instruction to proceed from the specified position via the specified route.	AT <i>(position)</i> CLEARED <i>(en-route data) (arrival approach data)</i>	M	W/U
RTEU-10	Instruction to proceed from the specified position via the specified procedure.	AT <i>(position)</i> CLEARED <i>(procedure name)</i>	M	W/U

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
RTEU-11	Instruction to enter a holding pattern at the specified position in accordance with the specified instructions. <i>Note.— RTEU-13 EXPECT FURTHER CLEARANCE AT [time] is appended to this message when an extended hold is anticipated (Chapter 6, 6.5.7 and 6.5.8 refer).</i>	AT (<i>position</i>) HOLD INBOUND TRACK (<i>degrees</i>) (<i>direction</i>) TURNS (<i>leg type</i>) LEGS	M	W/U
RTEU-12	Instruction to enter a holding pattern at the specified position in accordance with the published holding instructions. <i>Note.— RTEU-13 EXPECT FURTHER CLEARANCE AT [time] is appended to this message when an extended hold is anticipated (Chapter 6, 6.5.7 and 6.5.8 refer).</i>	AT (<i>position</i>) HOLD AS PUBLISHED	M	W/U
RTEU-13	Notification that an onwards clearance may be issued at the specified time.	EXPECT FURTHER CLEARANCE AT TIME (<i>time</i>)	M	R
RTEU-14	Notification that a clearance may be issued for the aircraft to fly the specified procedure or clearance name.	EXPECT (<i>named instruction</i>)	M	R
RTEU-15	Request to confirm the assigned route.	CONFIRM ASSIGNED ROUTE	M	Y
RTEU-16	Request to make a position report.	REQUEST POSITION REPORT	M	Y
RTEU-17	Request to provide the estimated time of arrival at the specified position.	ADVISE ETA (<i>position</i>)	M	Y

Table A5-1-2. Route downlinks (RTED)

Requests to modify the route of flight.

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
RTED-1	Request for a direct clearance to the specified position.	REQUEST DIRECT TO <i>(position)</i>	M	Y
RTED-2	Request for the specified procedure or clearance name.	REQUEST <i>(named instruction)</i>	M	Y
RTED-3	Request for the specified route.	REQUEST CLEARANCE <i>(departure data[O]) (en-route data) (arrival approach data[O])</i>	M	Y
RTED-4	Request for the specified clearance.	REQUEST <i>(clearance type)</i> CLEARANCE	M	Y
RTED-5	Position report.	POSITION REPORT <i>(position report)</i>	M	N
RTED-6	Request for the specified heading.	REQUEST HEADING <i>(degrees)</i>	M	Y
RTED-7	Request for the specified ground track.	REQUEST GROUND TRACK <i>(degrees)</i>	M	Y
RTED-8	Request for the time or position that can be expected to rejoin the cleared route.	WHEN CAN WE EXPECT BACK ON ROUTE	M	Y
RTED-9	Confirmation that the assigned route is the specified route.	ASSIGNED ROUTE <i>(departure data[O]) (en-route data) (arrival approach data[O])</i>	M	N
RTED-10	Notification of estimated time of arrival at the specified position.	ETA <i>(position)</i> TIME <i>(time)</i>	M	N

2. Lateral message elements

Table A5-2-1. Lateral uplinks (LATU)

Instructions to fly a parallel route or rejoin the originally cleared route, clearances to deviate from assigned route and notifications to expect an offset change.

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
LATU-1	Instruction to fly a parallel track to the cleared route at a displacement of the specified distance in the specified direction.	OFFSET (<i>specified distance</i>) (<i>direction</i>) OF ROUTE	M	W/U
LATU-2	Instruction to fly a parallel track to the cleared route at a displacement of the specified distance in the specified direction and commencing at the specified position.	AT (<i>position</i>) OFFSET (<i>specified distance</i>) (<i>direction</i>) OF ROUTE	M	W/U
LATU-3	Instruction to fly a parallel track to the cleared route at a displacement of the specified distance in the specified direction and commencing at the specified time.	AT TIME (<i>time</i>) OFFSET (<i>specified distance</i>) (<i>direction</i>) OF ROUTE	M	W/U
LATU-4	Instruction to rejoin the cleared route.	REJOIN ROUTE	M	W/U
LATU-5	Instruction to rejoin the cleared route before passing the specified position.	REJOIN ROUTE BEFORE PASSING (<i>position</i>)	M	W/U
LATU-6	Instruction to rejoin the cleared route before the specified time.	REJOIN ROUTE BEFORE TIME (<i>time</i>)	M	W/U
LATU-7	Notification that a clearance may be issued to enable the aircraft to rejoin the cleared route before passing the specified position.	EXPECT BACK ON ROUTE BEFORE PASSING (<i>position</i>)	M	R
LATU-8	Notification that a clearance may be issued to enable the aircraft to rejoin the cleared route before the specified time.	EXPECT BACK ON ROUTE BEFORE TIME (<i>time</i>)	M	R
LATU-9	Instruction to resume own navigation following a period of tracking or heading clearances. May be used in conjunction with an instruction on how or where to rejoin the cleared route.	RESUME OWN NAVIGATION	M	W/U

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
LATU-10	Instruction allowing deviation up to the specified distance(s) from the cleared route in the specified direction(s).	CLEARED TO DEVIATE UP TO (<i>lateral deviation</i>) OF ROUTE	M	W/U
LATU-11	Instruction to turn left or right as specified on to the specified heading.	TURN (<i>direction</i>) HEADING (<i>degrees</i>)	M	W/U
LATU-12	Instruction to turn left or right as specified on to the specified track.	TURN (<i>direction</i>) GROUND TRACK (<i>degrees</i>)	M	W/U
LATU-13	Instruction to turn the specified number of degrees left or right.	TURN (<i>direction</i>) (<i>number of degrees</i>) DEGREES	M	W/U
LATU-14	Instruction to continue to fly the present heading.	CONTINUE PRESENT HEADING	M	W/U
LATU-15	Instruction to fly the specified heading upon reaching the specified position.	AT (<i>position</i>) FLY HEADING (<i>degrees</i>)	M	W/U
LATU-16	Instruction to fly the specified heading.	FLY HEADING (<i>degrees</i>)	M	W/U
LATU-17	Instruction to report when clear of weather.	REPORT CLEAR OF WEATHER	M	W/U
LATU-18	Instruction to report when the aircraft is back on the cleared route.	REPORT BACK ON ROUTE	M	W/U
LATU-19	Instruction to report upon passing the specified position.	REPORT PASSING (<i>position</i>)	M	W/U

Table A5-2-2. Lateral downlinks (LATD)

Requests to offset or deviate from route.

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALR T</i>	<i>RES P</i>
LATD-1	Request for a parallel track from the cleared route at a displacement of the specified distance in the specified direction.	REQUEST OFFSET (<i>specified distance</i>) (<i>direction</i>) OF ROUTE	M	Y
LATD-2	Request for a weather deviation up to the specified distance(s) off track in the specified direction(s).	REQUEST WEATHER DEVIATION UP TO (<i>lateral deviation</i>) OF ROUTE	M	Y
LATD-3	Report indicating that the aircraft is clear of weather.	CLEAR OF WEATHER	M	N

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
LATD-4	Report indicating that the cleared route has been rejoined.	BACK ON ROUTE	M	N
LATD-5	Report indicating diverting to the specified position via the specified route, which may be sent without any previous coordination done with ATC.	DIVERTING TO (<i>position</i>) VIA (<i>en-route data</i>) (<i>arrival approach data[O]</i>)	M	Y
LATD-6	Report indicating that the aircraft is offsetting to a parallel track at the specified distance in the specified direction from the cleared route.	OFFSETTING (<i>specified distance</i>) (<i>direction</i>) OF ROUTE	M	Y
LATD-7	Report indicating deviating specified distance or degrees in the specified direction from the cleared route.	DEVIATING (<i>specified deviation</i>) (<i>direction</i>) OF ROUTE	M	Y
LATD-8	Report indicating passing the specified position.	PASSING (<i>position</i>)	M	N

3. Level message elements

Table A5-3-1. Level uplinks (LVLU)

Instructions to change the assigned level, responses to level request, modifications or restrictions to level clearances, and notifications to expect level clearance.

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
LVLU-1	Notification that an instruction may be expected for the aircraft to commence climb at the specified time.	EXPECT HIGHER AT TIME (<i>time</i>)	M	R
LVLU-2	Notification that an instruction may be expected for the aircraft to commence climb at the specified position.	EXPECT HIGHER AT (<i>position</i>)	M	R
LVLU-3	Notification that an instruction may be expected for the aircraft to commence descent at the specified time.	EXPECT LOWER AT TIME (<i>time</i>)	M	R

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
LVLU-4	Notification that an instruction may be expected for the aircraft to commence descent at the specified position.	EXPECT LOWER AT <i>(position)</i>	M	R
LVLU-5	Instruction to maintain the specified level or vertical range.	MAINTAIN <i>(level)</i>	M	W/U
LVLU-6	Instruction that a climb to the specified level or vertical range is to commence and once reached is to be maintained.	CLIMB TO <i>(level)</i>	M	W/U
LVLU-7	Instruction that at the specified time a climb to the specified level or vertical range is to commence and once reached is to be maintained.	AT TIME <i>(time)</i> CLIMB TO <i>(level)</i>	M	W/U
LVLU-8	Instruction that at the specified position a climb to the specified level or vertical range is to commence and once reached is to be maintained.	AT <i>(position)</i> CLIMB TO <i>(level)</i>	M	W/U
LVLU-9	Instruction that a descent to the specified level or vertical range is to commence and once reached is to be maintained.	DESCEND TO <i>(level)</i>	M	W/U
LVLU-10	Instruction that at the specified time a descent to the specified level or vertical range is to commence and once reached is to be maintained.	AT TIME <i>(time)</i> DESCEND TO <i>(level)</i>	M	W/U
LVLU-11	Instruction that at the specified position a descent to the specified level or vertical range is to commence and once reached is to be maintained.	AT <i>(position)</i> DESCEND TO <i>(level)</i>	M	W/U
LVLU-12	Instruction that a climb is to be completed such that the specified level is reached before the specified time.	CLIMB TO REACH <i>(level single)</i> BEFORE TIME <i>(time)</i>	M	W/U
LVLU-13	Instruction that a climb is to be completed such that the specified level is reached before passing the specified position.	CLIMB TO REACH <i>(level single)</i> BEFORE PASSING <i>(position)</i>	M	W/U
LVLU-14	Instruction that a descent is to be completed such that the specified level is reached before the specified time.	DESCEND TO REACH <i>(level single)</i> BEFORE TIME <i>(time)</i>	M	W/U

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
LVLU-15	Instruction that a descent is to be completed such that the specified level is reached before passing the specified position.	DESCEND TO REACH (<i>level single</i>) BEFORE PASSING (<i>position</i>)	M	W/U
LVLU-16	Instruction to stop the climb at the specified level and, once reached, this level is to be maintained. The specified level will be below the previously assigned level. This instruction should only be issued when the controller can confirm that the previously assigned level has not yet been reached.	STOP CLIMB AT (<i>level single</i>)	M	W/U
LVLU-17	Instruction to stop the descent at the specified level and, once reached, this level is to be maintained. The specified level will be above the previously assigned level. This instruction should only be issued when the controller can confirm that the previously assigned level has not yet been reached.	STOP DESCENT AT (<i>level single</i>)	M	W/U
LVLU-18	Instruction to climb at the specified rate or greater.	CLIMB AT (<i>vertical rate</i>) OR GREATER	M	W/U
LVLU-19	Instruction to climb at the specified rate or less.	CLIMB AT (<i>vertical rate</i>) OR LESS	M	W/U
LVLU-20	Instruction to descend at the specified rate or greater.	DESCEND AT (<i>vertical rate</i>) OR GREATER	M	W/U
LVLU-21	Instruction to descend at the specified rate or less.	DESCEND AT (<i>vertical rate</i>) OR LESS	M	W/U
LVLU-22	Notification that a clearance may be issued for the aircraft to commence a climb to the specified level at the specified number of minutes after departure.	EXPECT (<i>level single</i>) (<i>number of minutes</i>) AFTER DEPARTURE	M	R
LVLU-23	Instruction to report upon leaving the specified level.	REPORT LEAVING (<i>level single</i>)	M	W/U
LVLU-24	Instruction to report when the aircraft is maintaining the specified level.	REPORT MAINTAINING (<i>level single</i>)	M	W/U
LVLU-25	Instruction to report the present level.	REPORT PRESENT LEVEL	M	Y
LVLU-26	Instruction to report upon reaching the specified vertical range.	REPORT REACHING BLOCK (<i>level single</i>) TO (<i>level single</i>)	M	W/U

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
LVLU-27	Request to confirm the assigned level.	CONFIRM ASSIGNED LEVEL	M	Y
LVLU-28	Request to provide the preferred level.	ADVISE PREFERRED LEVEL	M	Y
LVLU-29	Request to provide the preferred time and/or position to commence descent to the aerodrome of intended arrival.	ADVISE TOP OF DESCENT	L	Y
LVLU-30	Request for the earliest time or position when the specified level can be accepted.	WHEN CAN YOU ACCEPT (<i>level single</i>)	M	Y
LVLU-31	Request to indicate whether or not the specified level can be accepted at the specified position.	CAN YOU ACCEPT (<i>level single</i>) AT (<i>position</i>)	M	A/N
LVLU-32	Request to indicate whether or not the specified level can be accepted at the specified time.	CAN YOU ACCEPT (<i>level single</i>) AT TIME (<i>time</i>)	M	A/N

Table A5-3-2. Level downlinks (LVLD)

Requests to change the assigned altitude and inquiries when level change can be expected.

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
LVLD-1	Request to fly at the specified level or vertical range.	REQUEST (<i>level</i>)	M	Y
LVLD-2	Request for a climb to the specified level or vertical range.	REQUEST CLIMB TO (<i>level</i>)	M	Y
LVLD-3	Request for a descent to the specified level or vertical range.	REQUEST DESCENT TO (<i>level</i>)	M	Y
LVLD-4	Request for a climb/descent to the specified level or vertical range to commence at the specified position.	AT (<i>position</i>) REQUEST (<i>level</i>)	M	Y
LVLD-5	Request for a climb/descent to the specified level or vertical range to commence at the specified time.	AT TIME (<i>time</i>) REQUEST (<i>level</i>)	M	Y
LVLD-6	Request for the earliest time or position that a descent can be expected.	WHEN CAN WE EXPECT LOWER LEVEL	M	Y

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
LVLD-7	Request for the earliest time or position that a climb can be expected.	WHEN CAN WE EXPECT HIGHER LEVEL	M	Y
LVLD-8	Report indicating leaving the specified level.	LEAVING (<i>level single</i>)	M	N
LVLD-9	Report indicating that the specified level is being maintained.	MAINTAINING (<i>level single</i>)	M	N
LVLD-10	Report indicating reaching the specified vertical range.	REACHING BLOCK (<i>level single</i>) TO (<i>level single</i>)	M	N
LVLD-11	Confirmation that the assigned level or vertical range is the specified level or vertical range.	ASSIGNED LEVEL (<i>level</i>)	M	N
LVLD-12	Report indicating that the aircraft's preferred level is the specified level.	PREFERRED LEVEL (<i>level single</i>)	M	N
LVLD-13	Report indicating climbing to the specified level.	CLIMBING TO (<i>level single</i>)	M	N
LVLD-14	Report indicating descending to the specified level.	DESCENDING TO (<i>level single</i>)	M	N
LVLD-15	Indication that the specified level can be accepted at the specified time.	WE CAN ACCEPT (<i>level single</i>) AT TIME (<i>time</i>)	M	N
LVLD-16	Indication that the specified level can be accepted at the specified position.	WE CAN ACCEPT (<i>level single</i>) AT (<i>position</i>)	M	N
LVLD-17	Indication that the specified level cannot be accepted.	WE CANNOT ACCEPT (<i>level single</i>)	M	N
LVLD-18	Notification of the preferred time and position to commence descent for approach.	TOP OF DESCENT (<i>position</i>) TIME (<i>time</i>)	M	N

4. Crossing constraint message elements

Table A5-4-1. Crossing constraint uplinks (CSTU)

Instructions to cross a specified position at a specified altitude, time, and/or speed, instruction to cancel a crossing constraint.

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
CSTU-1	Instruction that the specified position is to be crossed at the specified level or within the specified vertical range.	CROSS (<i>position</i>) AT (<i>level</i>)	M	W/U
CSTU-2	Instruction that the specified position is to be crossed at or above the specified level.	CROSS (<i>position</i>) AT OR ABOVE (<i>level single</i>)	M	W/U
CSTU-3	Instruction that the specified position is to be crossed at or below the specified level.	CROSS (<i>position</i>) AT OR BELOW (<i>level single</i>)	M	W/U
CSTU-4	Instruction that the specified position is to be crossed at the specified time.	CROSS (<i>position</i>) AT TIME (<i>time</i>)	M	W/U
CSTU-5	Instruction that the specified position is to be crossed before the specified time.	CROSS (<i>position</i>) BEFORE TIME (<i>time</i>)	M	W/U
CSTU-6	Instruction that the specified position is to be crossed after the specified time.	CROSS (<i>position</i>) AFTER TIME (<i>time</i>)	M	W/U
CSTU-7	Instruction that the specified position is to be crossed between the specified times.	CROSS (<i>position</i>) BETWEEN TIME (<i>time</i>) AND TIME (<i>time</i>)	M	W/U
CSTU-8	Instruction that the specified position is to be crossed at the specified speed.	CROSS (<i>position</i>) AT (<i>speed</i>)	M	W/U
CSTU-9	Instruction that the specified position is to be crossed at or less than the specified speed.	CROSS (<i>position</i>) AT (<i>speed</i>) OR LESS	M	W/U
CSTU-10	Instruction that the specified position is to be crossed at or greater than the specified speed.	CROSS (<i>position</i>) AT (<i>speed</i>) OR GREATER	M	W/U
CSTU-11	Instruction that the specified position is to be crossed at the specified time and at the level or within the vertical range as specified.	CROSS (<i>position</i>) AT TIME (<i>time</i>) AT (<i>level</i>)	M	W/U

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
CSTU-12	Instruction that the specified position is to be crossed before the specified time and at the level or within the vertical range as specified.	CROSS (<i>position</i>) BEFORE TIME(<i>time</i>) AT (<i>level</i>)	M	W/U
CSTU-13	Instruction that the specified position is to be crossed after the specified time and at the level or within the vertical range as specified.	CROSS (<i>position</i>) AFTER TIME(<i>time</i>) AT (<i>level</i>)	M	W/U
CSTU-14	Instruction that the specified position is to be crossed at the level or within the vertical range, as specified, and at the specified speed.	CROSS (<i>position</i>) AT (<i>level</i>) AT (<i>speed</i>)	M	W/U
CSTU-15	Instruction that the specified position is to be crossed at the specified time at the level or within the vertical range, as specified, and at the specified speed.	CROSS (<i>position</i>) AT TIME (<i>time</i>) AT (<i>level</i>) AT (<i>speed</i>)	M	W/U

5. Speed message elements

Table A5-5-1. Speed uplinks (SPDU)

Instructions to change or maintain speed, notifications to expect speed change.

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
SPDU-1	Notification that a speed instruction may be issued to take effect at the specified time.	EXPECT SPEED CHANGE AT TIME (<i>time</i>)	M	R
SPDU-2	Notification that a speed instruction may be issued to take effect at the specified position.	EXPECT SPEED CHANGE AT (<i>position</i>)	M	R
SPDU-3	Notification that a speed instruction may be issued to take effect at the specified level.	EXPECT SPEED CHANGE AT (<i>level single</i>)	M	R
SPDU-4	Instruction to maintain the specified speed.	MAINTAIN (<i>speed</i>)	M	W/U
SPDU-5	Instruction to maintain the present speed.	MAINTAIN PRESENT SPEED	M	W/U

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
SPDU-6	Instruction to maintain the specified speed or greater.	MAINTAIN (<i>speed</i>) OR GREATER	M	W/U
SPDU-7	Instruction to maintain the specified speed or less.	MAINTAIN (<i>speed</i>) OR LESS	M	W/U
SPDU-8	Instruction to maintain the specified speed range.	MAINTAIN (<i>speed</i>) TO (<i>speed</i>)	M	W/U
SPDU-9	Instruction that the present speed is to be increased to the specified speed and maintained until further advised.	INCREASE SPEED TO (<i>speed</i>)	M	W/U
SPDU-10	Instruction that the present speed is to be increased to the specified speed or greater, and maintained at or above the specified speed until further advised.	INCREASE SPEED TO (<i>speed</i>) OR GREATER	M	W/U
SPDU-11	Instruction that the present speed is to be reduced to the specified speed and maintained until further advised.	REDUCE SPEED TO (<i>speed</i>)	M	W/U
SPDU-12	Instruction that the present speed is to be reduced to the specified speed, or less, and maintained at or below the specified speed until further advised.	REDUCE SPEED TO (<i>speed</i>) OR LESS	M	W/U
SPDU-13	Instruction to resume a normal speed. The aircraft no longer needs to comply with a previously issued speed restriction.	RESUME NORMAL SPEED	M	W/U
SPDU-14	Indication that the preferred speed may be flown without restriction.	NO SPEED RESTRICTION	M	R
SPDU-15	Request to report the speed defined by the specified speed type(s).	REPORT (<i>speed types</i>) SPEED	M	Y
SPDU-16	Request to confirm the assigned speed.	CONFIRM ASSIGNED SPEED	M	Y
SPDU-17	Request for the earliest time or position when the specified speed can be accepted.	WHEN CAN YOU ACCEPT (<i>speed</i>)	M	Y

Table A5-5-2. Speed downlinks (SPDD)

Requests related to speed and inquiries when speed change can be expected.

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
SPDD-1	Request for the specified speed.	REQUEST (<i>speed</i>)	M	Y
SPDD-2	Request for the earliest time or position that the specified speed can be expected.	WHEN CAN WE EXPECT (<i>speed</i>)	M	Y
SPDD-3	Report indicating the speed defined by the specified speed types is the specified speed.	(<i>speed types</i>) SPEED (<i>speed</i>)	M	N
SPDD-4	Confirmation that the assigned speed is the specified speed.	ASSIGNED SPEED (<i>speed</i>)	M	N
SPDD-5	Indication that the specified speed can be accepted at the specified time.	WE CAN ACCEPT (<i>speed</i>) AT TIME (<i>time</i>)	M	N
SPDD-6	Indication that the specified speed cannot be accepted.	WE CANNOT ACCEPT (<i>speed</i>)	M	N

6. Air traffic advisory message elements**Table A5-6-1. Air traffic advisory uplinks (ADVU)**

Advisories related to the use of CPDLC, ADS-C and surveillance services.

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
ADVU-1	Advisory providing the altimeter setting for the specified facility.	(<i>facility Designation</i>) ALTIMETER (<i>altimeter setting</i>)	M	R
ADVU-2	Advisory that ATS surveillance service is terminated.	SURVEILLANCE SERVICE TERMINATED	M	R
ADVU-3	Advisory that ATS surveillance service has been established. A position may be specified.	IDENTIFIED (<i>position[O]</i>)	M	R
ADVU-4	Advisory that ATS surveillance contact has been lost.	IDENTIFICATION LOST	M	R
ADVU-5	Advisory that the current ATIS code is as specified.	ATIS (<i>ATIS code</i>)	M	R
ADVU-6	Advisory to request again with the next ATC unit.	REQUEST AGAIN WITH NEXT ATC UNIT	M	N

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
ADVU-7	Advisory of traffic significant to the flight.	TRAFFIC IS (<i>traffic description</i>)	M	R
ADVU-8	Instruction to report that the specified traffic has been visually sighted and passed. The instruction may indicate the estimated time of passing.	REPORT SIGHTING AND PASSING OPPOSITE DIRECTION (<i>aircraft type[O]</i>) (<i>traffic location</i>) (<i>ETP time[O]</i>)	M	W/U
ADVU-9	Instruction to select the specified SSR code.	SQUAWK (<i>SSR code</i>)	M	W/U
ADVU-10	Instruction to disable SSR transponder responses.	STOP SQUAWK	M	W/U
ADVU-11	Instruction to stop ADS-B transmissions.	STOP ADS-B TRANSMISSION	M	W/U
ADVU-12	Instruction to include level information in SSR transponder responses.	SQUAWK MODE C	M	W/U
ADVU-13	Instruction to stop including level information in SSR transponder responses.	STOP SQUAWK MODE C	M	W/U
ADVU-14	Request to confirm the selected SSR code.	CONFIRM SQUAWK CODE	M	Y
ADVU-15	Instruction that the “ident” function on the SSR transponder is to be actuated.	SQUAWK IDENT	M	W/U
ADVU-16	Instruction to activate the ADS-C capability.	ACTIVATE ADS-C	M	W/U
ADVU-17	Instruction to transmit voice position reports, as specified, due to ADS-C being out of service.	ADS-C OUT OF SERVICE REVERT TO VOICE POSITION REPORTS	M	W/U
ADVU-18	Instruction to intermediary aircraft to relay the specified message to the specified aircraft on the specified frequency, when provided.	RELAY TO (<i>aircraft identification</i>) (<i>unit name</i>) (<i>relay text</i>) (<i>frequency[O]</i>)	M	W/U
ADVU-19	Request to check the aircraft lateral position, level or speed due to the ATC unit detecting a deviation from the clearance.	(<i>deviation type</i>) DEVIATION DETECTED. VERIFY AND ADVISE	M	W/U

Table A5-6-2. Air traffic advisory downlinks (ADVD)

Reports related to the application of relay procedure.

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
ADVD-1	Report indicating that the aircraft is squawking the specified SSR code.	SQUAWKING (<i>SSR code</i>)	M	N
ADVD-2	Report indicating that whether or not traffic has been visually sighted and if so, if it has been passed. May provide a description of the aircraft.	TRAFFIC (<i>aircraft type[O]</i>) (<i>traffic location</i>) (<i>traffic visibility</i>)	M	N

7. Voice communications message elements**Table A5-7-1. Voice communications uplinks (COMU)**

Instructions to monitor or contact air traffic control on voice frequencies and instructions to check stuck microphone.

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
COMU-1	Instruction to establish voice contact with the specified ATS unit on the specified frequency.	CONTACT (<i>unit name</i>) (<i>frequency</i>)	M	W/U
COMU-2	Instruction at the specified position, to establish voice contact with the specified ATS unit on the specified frequency.	AT (<i>position</i>) CONTACT (<i>unit name</i>) (<i>frequency</i>)	M	W/U
COMU-3	Instruction at the specified time to establish voice contact with the specified ATS unit on the specified frequency.	AT TIME (<i>time</i>) CONTACT (<i>unit name</i>) (<i>frequency</i>)	M	W/U
COMU-4	Advisory of the secondary frequency.	SECONDARY FREQUENCY (<i>frequency</i>)	M	R
COMU-5	Instruction to monitor the specified ATS unit on the specified frequency. The flight crew is not required to establish voice contact on the frequency.	MONITOR (<i>unit name</i>) (<i>frequency</i>)	M	W/U
COMU-6	Instruction at the specified position to monitor the specified ATS on the specified frequency. The flight crew is not required to establish voice contact on the frequency.	AT (<i>position</i>) MONITOR (<i>unit name</i>) (<i>frequency</i>)	M	W/U

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
COMU-7	Instruction that at the specified time to monitor the specified ATS unit on the specified frequency. The flight crew is not required to establish voice contact on the frequency.	AT TIME (<i>time</i>) MONITOR (<i>unit name</i>) (<i>frequency</i>)	M	W/U
COMU-8	Instruction to check the microphone due to detection of a continuous transmission on the specified frequency.	CHECK STUCK MICROPHONE (<i>frequency</i>)	H	N
COMU-9	Advisory of the name of the current ATC unit.	CURRENT ATC UNIT (<i>unit name</i>)	M	N

Table A5-7-2. Voice communications downlinks (COMD)

Requests regarding voice contact or frequency change.

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
COMD-1	Request for voice contact on the specified-frequency.	REQUEST VOICE CONTACT (<i>frequency</i>)	M	Y
COMD-2	Notification from the intermediary aircraft of the specified response from the specified aircraft.	RELAY FROM (<i>aircraft identification</i>) (<i>relayed text response</i>)	M	N

8. Spacing message elements**Table A5-8-1. Spacing uplinks (SPCU)**

Clearances to conduct spacing manoeuvre during en-route or arrival operations and notifications to expect spacing clearance.

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
SPCU-1	ATS acknowledgement for the pilot use of the in-trail procedure when the ITP aircraft is behind the reference aircraft. This message element is always concatenated with a vertical clearance.	ITP BEHIND (<i>aircraft identification</i>)	M	N

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
SPCU-2	ATS acknowledgement for the pilot use of the in-trail procedure when the ITP aircraft is ahead of the reference aircraft. This message element is always concatenated with a vertical clearance.	ITP AHEAD OF (<i>aircraft identification</i>)	M	N
SPCU-3	ATS acknowledgement for the pilot use of the in-trail procedure when the ITP aircraft is behind both reference aircraft. This message element is always concatenated with a vertical clearance.	ITP BEHIND (<i>aircraft identification</i>) AND BEHIND (<i>aircraft identification</i>)	M	N
SPCU-4	ATS acknowledgement for the pilot use of the in-trail procedure when the ITP aircraft is ahead of both reference aircraft. This message element is always concatenated with a vertical clearance.	ITP AHEAD OF (<i>aircraft identification</i>) AND AHEAD OF (<i>aircraft identification</i>)	M	N
SPCU-5	ATS acknowledgement for the pilot use of the in-trail procedure when the ITP aircraft is behind one reference aircraft and ahead of one reference aircraft. This message element is always concatenated with a vertical clearance.	ITP BEHIND (<i>aircraft identification</i>) AND AHEAD OF (<i>aircraft identification</i>)	M	M

Table A5-8-2. Spacing downlinks (SPCD)

Responses and reports to conduct spacing manoeuvre during en-route or arrival operations.

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
SPCD-1	Advisory indicating that the pilot has the ITP equipment, and provides the specified distance to the reference aircraft, including aircraft identification. This message element is always concatenated with a vertical request.	ITP (<i>specified distance</i>) BEHIND (<i>aircraft identification</i>)	M	N

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
SPCD-2	Advisory indicating that the pilot has the ITP equipment, and provides the specified distance from the reference aircraft, including aircraft identification. This message element is always concatenated with a vertical request.	ITP (<i>specified distance</i>) AHEAD OF (<i>aircraft identification</i>)	M	N
SPCD-3	Advisory indicating that the pilot has the ITP equipment, and provides the specified distance to both reference aircraft, including aircraft identification. This message element is always concatenated with a vertical request.	ITP (<i>specified distance</i>) BEHIND (<i>aircraft identification</i>) AND (<i>specified distance</i>) BEHIND (<i>aircraft identification</i>)	M	N
SPCD-4	Advisory indicating that the pilot has the ITP equipment, and provides the specified distance from both reference aircraft, including aircraft identification. This message element is always concatenated with a vertical request.	ITP (<i>specified distance</i>) AHEAD OF (<i>aircraft identification</i>) AND (<i>specified distance</i>) AHEAD OF (<i>aircraft identification</i>)	M	N
SPCD-5	Advisory indicating that the pilot has the ITP equipment, and provides the specified distance to one reference aircraft and the specified distance from another reference aircraft, including aircraft identification. This message element is always concatenated with a vertical request.	ITP (<i>specified distance</i>) BEHIND (<i>aircraft identification</i>) AND (<i>specified distance</i>) AHEAD OF (<i>aircraft identification</i>)	M	N

9. Emergency/urgency message elements

Table A5-9-1. Emergency/urgency uplinks (EMGU)

Instructions or annotations associated to instructions providing a high level of alert in the cockpit.

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
EMGU-1	Request to provide the fuel remaining (time) and the number of persons on board.	REPORT ENDURANCE AND PERSONS ON BOARD	H	Y
EMGU-2	Instruction to immediately comply with the associated instruction to avoid an imminent situation.	IMMEDIATELY	H	N
EMGU-3	Request to confirm an ADS-C indicated emergency.	CONFIRM ADS-C EMERGENCY	H	A/N

Table A5-9-2. Emergency/urgency downlinks (EMGD)

Reports providing a high level of alert to the air traffic control.

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
EMGD-1	Indication of an urgent situation.	PAN PAN PAN	H	Y
EMGD-2	Indication of an emergency situation.	MAYDAY MAYDAY MAYDAY	H	Y
EMGD-3	Report indicating fuel remaining (time) and number of persons on board.	<i>(remaining fuel)</i> ENDURANCE AND <i>(persons on board)</i> PERSONS ON BOARD	H	Y
EMGD-4	Indication that the emergency situation is cancelled.	CANCEL EMERGENCY	H	Y

10. Standard response message elements

Table A5-10-1. Standard response uplinks (RSPU)

Standard air traffic control responses to pilot inquiries and requests.

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
RSPU-1	Indication that the message cannot be complied with.	UNABLE	M	N
RSPU-2	Indication that the message will be responded to shortly.	STANDBY	M	N

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
RSPU-3	Indication that a long-term delay in response can be expected.	REQUEST DEFERRED	M	N
RSPU-4	Indication that the message is received.	ROGER	M	N
RSPU-5	Indication that ATC is responding positively to the message.	AFFIRM	M	N
RSPU-6	Indication that ATC is responding negatively to the message.	NEGATIVE	M	N
RSPU-7	Indication that the request has been forwarded to the next control unit.	REQUEST FORWARDED	M	N
RSPU-8	Request to confirm the referenced request since the initial request was not understood. The request should be clarified and resubmitted.	CONFIRM REQUEST	M	N

Table A5-10-2. Standard response downlinks (RSPD)

Standard responses to air traffic control instructions and inquiries.

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
RSPD-1	Indication that the instruction is understood and will be complied with.	WILCO	M	N
RSPD-2	Indication that the instruction cannot be complied with.	UNABLE	M	N
RSPD-3	Indication that the message will be responded to shortly.	STANDBY	M	N
RSPD-4	Indication that the message is received.	ROGER	M	N
RSPD-5	Indication of a positive response to a message.	AFFIRM	M	N
RSPD-6	Indication of a negative response to a message.	NEGATIVE	M	N

11. Supplemental message elements

Table A5-11-1. Supplemental uplinks (SUPU)

Annotations to air traffic control instructions and standard responses.

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
SUPU-1	Indication that the associated instruction is to be executed when the flight crew is ready.	WHEN READY	M	N
SUPU-2	Indication that the associated message is issued due to the specified reason.	DUE TO (<i>specified reason uplink</i>)	M	N
SUPU-3	Instruction to execute the associated instruction at the aircraft's best performance rate.	EXPEDITE	M	N
SUPU-4	Indication that the associated instruction is either a revision to a previously issued instruction or is different from the requested clearance.	REVISED (<i>revision reason[O]</i>)	H	N

Table A5-11-2. Supplemental downlinks (SUPD)

Annotations to requests and standard responses.

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
SUPD-1	Indication that the associated message is issued due to specified reason.	DUE TO (<i>specified reason downlink</i>)	N	N

12. Free text message elements

Used when none of the standard message elements in the CPDLC message set in this appendix are appropriate for a specific intended use.

Table A5-12-1. Free text uplinks (TXTU)

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
TXTU-1		<i>(free text)</i>	M	R
TXTU-2		<i>(free text)</i>	M	N
TXTU-3		<i>(free text)</i>	N	N
TXTU-4		<i>(free text)</i>	M	W/U
TXTU-5		<i>(free text)</i>	M	A/N

Table A5-12-2. Free text downlinks (TXTD)

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
TXTD-1		<i>(free text)</i>	M	Y
TXTD-2		<i>(free text)</i>	M	N

13. System management message elements

Table A5-13-1. System management uplinks (SYSU)

Messages dedicated to the management of the CPDLC communications (usually sent by the ground system).

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
SYSU-1	System-generated notification of an error.	ERROR (<i>error information</i>)	N	N
SYSU-2	System-generated notification of the next data authority or the cancellation thereof.	NEXT DATA AUTHORITY (<i>facility designation</i> [O])	M	N
SYSU-3	System-generated notification that the received message is not supported.	MESSAGE NOT SUPPORTED BY THIS ATC UNIT	M	N

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
SYSU-4	System-generated notification that the received message is acceptable for display.	LOGICAL ACKNOWLEDGEMENT	N	N
SYSU-5	System-generated message indicating that requests for logical acknowledgements are not permitted.	USE OF LOGICAL ACKNOWLEDGEMENT PROHIBITED	M	N
SYSU-6	Advisory providing the maximum one-way uplink message transmission delay.	LATENCY TIME VALUE <i>(latency value)</i>	N	N
SYSU-7	Indication that the received message has a latency greater than the requirement.	MESSAGE RECEIVED TOO LATE, RESEND MESSAGE OR CONTACT BY VOICE	M	N

Table A5-13-2. System management downlinks (SYSD)

Messages dedicated to the management of the CPDLC communications (usually sent by aircraft system).

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
SYSD-1	System-generated notification of an error.	ERROR <i>(error information)</i>	N	N
SYSD-2	System-generated notification that the received message is acceptable for display.	LOGICAL ACKNOWLEDGEMENT	N	N
SYSD-3	System-generated rejection of any CPDLC message sent from a ground facility that is not the current data authority.	NOT CURRENT DATA AUTHORITY	M	N
SYSD-4	System-generated notification that the ground facility is now the current data authority.	CURRENT DATA AUTHORITY	M	N
SYSD-5	System-generated notification that the ground system is not designated as the next data authority (NDA), indicating the identity of the current data authority (CDA). Identity of the NDA, if any, is also reported.	NOT AUTHORIZED NEXT DATA AUTHORITY <i>(facility designation) (facility designation[O])</i>	M	N
SYSD-6	Indication that the received message has a latency greater than the requirement.	MESSAGE RECEIVED TOO LATE, RESEND MESSAGE OR CONTACT BY VOICE	M	N

<i>Message element identifier</i>	<i>Message element intended use</i>	<i>Format for message element display</i>	<i>ALRT</i>	<i>RESP</i>
SYSD-7	System-generated notification that the aircraft is in the inhibited state.	AIRCRAFT CPDLC INHIBITED	M	N

14. Message elements parameters

Table A5-14-1. Parameters

Provides descriptions for the variables used in the parameters specified in the message elements.

<i>Variable</i>	<i>Description</i>
<i>aircraft identification</i>	Provides the aircraft identification identical to, or the code equivalent of, the aircraft call sign as provided in Item 7 of the flight plan.
<i>aircraft type</i>	Specifies the aircraft type when known.
<i>altimeter setting</i>	Specifies an altimeter in inches of mercury or hectopascals.
<i>arrival approach data</i>	Specifies at least one of the following: destination airport, arrival runway, arrival procedure, or approach procedure.
<i>ATIS code</i>	Specifies the current ATIS code.
<i>ATS route designator</i>	Specifies the 2-7 character name of the route.
<i>along track waypoint</i>	Specifies point in the route specified as relative distance for another waypoint on the route. May include speed and level constraints at this point.
<i>clearance limit</i>	Specifies the farthest cleared point as a <i>position</i> .
<i>clearance name</i>	Specifies a 2-14 character name of a clearance, usually specifying the name of an unpublished procedure or route.
<i>clearance type</i>	Specifies the type of clearance as: approach, departure, further, startup, pushback, taxi, or oceanic.
<i>degrees</i>	Specifies direction in terms of degrees as either degrees from magnetic north or degrees from true north.
<i>departure clearance</i>	Specifies the required departure clearance information as one or more of the following: <ul style="list-style-type: none"> • departure airport; • departure runway; • cleared to position; • departure route data specified as either; <ul style="list-style-type: none"> ○ the route is as filed; or ○ a SID and optionally that the rest of the route after the SID is as filed (i.e. then as filed). • departure level, and any constraint on the level (duration or until position); • expected level and any constraint on the level (duration or until position); • departure speed and any constraint on the speed (duration or until position); • departure heading in degrees;

<i>Variable</i>	<i>Description</i>
	<ul style="list-style-type: none"> • indication when no delay is expected; • target start-up approval time; • arrival and/or approach procedures including any special instructions; • SSR code; • ATIS code; and/or • departure frequency.
<i>departure data</i>	Specifies the departure data as at least one of the following: departure airport, departure runway, or departure procedure.
<i>deviation type</i>	Specifies the deviation type as a lateral position, level or speed.
<i>direction</i>	Specifies direction as: <ul style="list-style-type: none"> • left, right, or either side; • north, south, east, or west; or • northeast, northwest, southeast, or southwest.
<i>SSR code</i>	Specifies the SSR code as 4 octal digits.
<i>specified reason downlink</i>	Specifies the reason for the associated message as weather or aircraft performance.
<i>specified reason uplink</i>	Specifies the reason for the associated message as: opposite direction traffic, same direction traffic, converging traffic, crossing traffic, or diverging traffic, airspace restriction, invalid oceanic entry point, no flight plan held, oceanic clearance request received too late.
<i>error information</i>	Specifies reason for error as: unrecognized message reference number, insufficient resources, checksum failure, or undefined.
<i>ETP time</i>	Specifies the estimated time (hours and minutes) of passing opposite direction traffic.
<i>facility designation</i>	Specifies the ICAO location indicator for a facility.
<i>facility function</i>	Specifies the function of the facility as: centre, approach, tower, final, ground control, clearance delivery, departure, control, radio, apron, information, ramp, flight watch, AOC/company, de-icing, or flight service.
<i>free text</i>	Provides additional information in a non-structured format.
<i>frequency</i>	Specifies the frequency as an HF, VHF, or UHF frequency, or as a SATVOICE number.
<i>hold at waypoint</i>	Specifies a holding instruction providing the position of the holding as: <i>position</i> , and additionally any or all of the following: holding speed low, waypoint level constraint, holding speed high, a left or right holding, degrees, time a further clearance is expected, and <i>leg type</i> .
<i>latency value</i>	Provides the CPDLC message latency value in seconds.
<i>lateral deviation</i>	Specifies the lateral deviation as the permitted distance left, right, or either side from the cleared route in nautical miles or kilometres.
<i>latitude longitude</i>	Specifies the latitude and longitude in degrees, minutes, tenths of minutes and direction (north, south, east or west).
<i>leg type</i>	Specifies a holding leg as distance (tenths of nautical miles or tenths of kilometres) or time (tenths of minutes).

<i>Variable</i>	<i>Description</i>
<i>level</i>	Specifies a level as a single or block level in feet, metres, or flight levels.
<i>level single</i>	Specifies a single level in feet, metres, or flight levels.
<i>named instruction</i>	Specifies a named instruction as either a <i>clearance name</i> or a <i>procedure name</i> .
<i>number of degrees</i>	Provides the number of degrees.
<i>number of minutes</i>	Provides the number of minutes (time).
<i>persons on board</i>	Provides the number of persons on board or indicates that the number is unknown.
<i>place bearing distance</i>	Specifies a <i>place bearing</i> and a distance in nautical miles or kilometres.
<i>place bearing</i>	Specifies a <i>published identifier</i> and <i>degrees</i> .
<i>position</i>	Specifies a position as a: <ul style="list-style-type: none"> • <i>published identifier</i>; • <i>latitude longitude</i>; or • <i>place bearing distance</i>.
<i>Position report</i>	Provides information similar to a voice position report as defined in 4.11.2.
<i>procedure name</i>	Specifies a procedure name by specifying a procedure type (departure, arrival, or approach) and identifier (1-20 characters), and when applicable: <ul style="list-style-type: none"> • the runway; • any required procedure transition; and/or • any required additional information about the procedure.
<i>published identifier</i>	Specifies the published identifier name (1-5 characters) and associated latitude and longitude (degrees, minutes, seconds).
<i>relay text</i>	Specifies the information to be relayed to the specified aircraft as <i>free text</i> .
<i>relayed text response</i>	Specifies information relayed from the specified aircraft as <i>free text</i> .
<i>remaining fuel</i>	Specifies remaining fuel as time in seconds.
<i>revision reason</i>	Specifies the reason(s) for the clearance revision as any or all of the following: a level change, a speed change, a route change at a specified position, a route change at multiple waypoints, an entry point change, a clearance limit change, a named instruction change, and/or a ground location change.
<i>en-route data</i>	Specifies the cleared route of flight for up to 128 waypoints with positional information (<i>route information</i>), including for each waypoint as required, level constraint, speed constraint, required time of arrival, holding instruction and fly-by or flyover information (<i>route information additional</i>). A <i>clearance limit</i> may be included. A locally defined <i>named instruction</i> may also be included.
<i>route information additional</i>	Specifies any or all of the following: <ul style="list-style-type: none"> • 1 to 8 <i>along track waypoint</i>; • 1 to 8 <i>hold at waypoint</i>; • 1 to 32 <i>waypoint speed level</i>; and • 1 to 32 <i>required time arrival</i>.

<i>Variable</i>	<i>Description</i>
<i>route information</i>	Specifies route information as one of: <ul style="list-style-type: none"> • <i>published identifier</i>; • <i>latitude longitude</i>; • <i>place bearing distance</i>; or • <i>ATS route designator</i>.
<i>required time arrival</i>	For the specified position, provides the required time of arrival (hours, minutes (seconds (optional))), optionally any tolerance around the required time of arrival, and indicates the required time of arrival as at, before, or after the specified time.
<i>runway</i>	Specifies a runway by direction and configuration (left, right, centre, or none).
<i>specified deviation</i>	Specifies the deviation from the route as a <i>specified distance</i> or <i>number of degrees</i> .
<i>specified distance</i>	Specifies distance in nautical miles or kilometres.
<i>speed</i>	Specifies speed in English or metric units as: indicated, true, ground, or Mach speed.
<i>speed types</i>	Specifies the speed as a minimum or maximum and 1 to 2 speed type(s), where the speed type indicates speed as: indicated, true, ground, Mach, approach, cruise, or present.
<i>time</i>	Specifies time in hours and minutes.
<i>traffic description</i>	Specifies a description of traffic significant to a flight by providing any or all of the following information: the <i>aircraft flight identification</i> , the <i>aircraft type</i> , the current flight level of the aircraft, the location relative to the given aircraft as the distance (if known) above or below, and indicates when known that the traffic is, opposite direction, same direction, converging, crossing, or diverging from the given aircraft.
<i>traffic location</i>	Specifies the location for opposite direction traffic indicating if the traffic is above or below the given aircraft, and when known, provides the vertical distance in feet or metres.
<i>traffic visibility</i>	Indicates the traffic visibility as: sighted and passed, sighted, or not sighted.
<i>unit name</i>	Specifies the unit name by providing any or all of the following: <i>facility name</i> , <i>facility designation</i> , or <i>facility function</i> , as appropriate.
<i>vertical rate</i>	Specifies the vertical rate as feet/minute or metres/minute.
<i>waypoint speed level</i>	Specifies the speed and level constraints on the specified position.

Appendix 6

ATS INTERFACILITY DATA COMMUNICATIONS (AIDC) MESSAGES

1. INTRODUCTION

1.1 General

1.1.1 This Appendix describes the types of messages and their contents to be used for operational communications between ATS unit computer systems. This type of data transfer is referred to as ATS interfacility data communications (AIDC) and is to be the basis for migration of data communications to the aeronautical telecommunication network (ATN).

1.1.2 It is not the intention that controllers see the messages, but their operational content is required to be displayed or made available to the controllers in accordance with the display capability and procedures at the unit concerned. While the majority of flight data is provided by the system, it is a prerequisite that certain items of operational data required to be transferred can be entered at the controller working position.

1.1.3 AIDC messages contain items of data referred to as data fields. In most cases a data field is used in more than one message. A table including the AIDC data fields is included in this Appendix. Specific details on the definition, range and resolution of the fields can be found in the *Manual of Air Traffic Services Data Link Applications* (Doc 9694).

1.2 Coordination environments

1.2.1 ATC procedures vary significantly, depending on the surveillance capabilities of the coordinating ATS units in a given boundary environment. For the purpose of this Appendix the coordination environments are identified as either surveillance or procedural. In some instances the same type of message may require the inclusion of different or additional data to accommodate the demands of differing environments. Depending on the environment, the timing of the transmission of these messages may also vary. The environment may also affect whether the AIDC message is automatically processed, or displayed to the controller for manual processing.

1.2.2 A surveillance environment is an environment where an ATS surveillance system is in use, and allows controllers to positively identify the traffic. Radar and/or ADS-B are available to the controllers at sector positions on both sides of a common boundary, and traffic is identified by information presented on a situation display. Such facilities permit surveillance coordination procedures to be used.

1.2.3 A procedural environment exists in those areas where surveillance coordination procedures are not available because at least one of the coordinating ATS units does not have a surveillance capability, or the surveillance capabilities differ. For example, surveillance in oceanic and remote areas is often achieved with ADS-C, CPDLC or voice position reports; in such areas, coordination procedures differ from those used in a surveillance environment.

1.3 Message composition

1.3.1 In order to correctly link a response to an AIDC message with the original message, a reference to the original message is included in the response. The following AIDC messages shall contain a reference to the AIDC message(s) being responded to:

Operational responses such as:

Coordinate Accept;
Coordinate Reject;
Coordinate Negotiate;
Transfer Conditions Accept;
Transfer Control Assume;
Coordinate Standby.

Application management messages such as:

Application Accept;
Application Reject.

1.3.2 An AIDC message is composed of a message header and a sequence of fields of data. Each message shall contain all the mandatory fields and all relevant optional fields.

1.3.3 The message header contains a message identification, a time stamp (yyyymmddhhmmss) and a message sequence number.

2. MESSAGE PURPOSE AND USAGE

NOTIFICATION MESSAGE

2.1 Notify

The Notify message satisfies the following operational requirements:

- a) updates the basic flight plan data in the receiving ATS unit with the most recent information or allows the creation of a flight plan if one did not previously exist;
- b) provides advance information and revisions thereto from an ATS unit on a flight that is expected subsequently to enter the area of interest of another ATS unit;
- c) facilitates early correlation of ATS surveillance system tracks; and
- d) facilitates short-term sector load assessment.

COORDINATION MESSAGES

2.2 Coordinate Initial

The Coordinate Initial message satisfies the following operational requirements:

- a) replaces the verbal boundary estimate;
- b) updates the basic flight plan data in the receiving unit with the most recent information or allows the creation of a flight plan if one did not previously exist;
- c) coordinates a flight before departure in order to comply with the approval request procedure;
- d) initiates a coordination dialogue between units;
- e) facilitates distribution and display of flight plan data within the receiving unit; and
- f) expedites display of SSR code/call sign correlated data blocks in the receiving unit.

2.3 Coordinate Negotiate

The Coordinate Negotiate message satisfies the following operational requirements:

- a) forwards a counterproposal from the controller in the receiving unit to the controller in the transferring unit as a reply to a Coordinate Initial message;
- b) forwards a counterproposal to amendments proposed in a Coordinate Update or another Coordinate Negotiate message;
- c) proposes modification to previously agreed conditions if the new proposed conditions are not in accordance with the appropriate letter of agreement; and
- d) proposes an amendment to previously agreed conditions after the transfer of control has been completed (i.e. when the flight is still within proximity to the boundary between the two units).

Note.— Previously agreed conditions may include flight plan data not related to trajectory information (e.g. SSR code, CNS equipment).

2.4 Coordinate Accept

The Coordinate Accept message is used to indicate acceptance of the proposed coordination conditions during the AIDC coordination and negotiation phases.

2.5 Coordinate Cancel

The Coordinate Cancel message is used to indicate to the receiving ATS unit that all coordination and/or notification previously received for a flight is being cancelled.

Note.— This message is not a replacement for a flight plan cancellation (CNL) message and is not used to erase the basic flight plan data.

2.6 Coordinate Reject

The Coordinate Reject message is used to indicate that the proposed coordination, or revision thereto, is unacceptable and no counterproposal is being proposed. Any existing coordination conditions remain as previously coordinated.

2.7 Coordinate Standby

The Coordinate Standby message is used to indicate that the message has been received, the data has been referred to a controller and/or other unit and an operational response will be sent in due course.

2.8 Coordinate Update

The Coordinate Update message is used to transmit modifications to previously agreed coordination conditions, provided that they are in accordance with letters of agreement, each time the coordination conditions change.

Note.— Previously agreed conditions may include flight plan data not related to trajectory information (e.g. SSR code, CNS equipment).

TRANSFER MESSAGES

2.9 Transfer Initiate

The Transfer Initiate message satisfies the following operational requirements:

- a) informs the receiving unit of the current control environment of the flight; and
- b) alleviates the requirement for the controller in the transferring unit to verbally provide this information to the controller in the accepting unit.

2.10 Transfer Conditions Proposal

The Transfer Conditions Proposal message proposes conditions for the transfer of communication and control, as well as updated executive data, to the controller in the receiving unit.

Note.— Transfer of communication is not to be confused with transfer of control conditions contained in the letter of agreement between the ATS units concerned. It should be noted that transfer of communication and transfer of control do not necessarily occur simultaneously.

2.11 Transfer Conditions Accept

The Transfer Conditions Accept message indicates that the controller in the accepting unit has agreed to accept transfer of communication and control of the flight in response to a Transfer Conditions Proposal message.

2.12 Transfer Communication Request

The Transfer Communication Request message is an unsolicited request by the controller in the accepting unit to establish communication with the flight on the appropriate channel immediately.

2.13 Transfer Communication

The Transfer Communication message is used to indicate that the controller in the transferring unit has instructed the flight to establish communication with the controller in the accepting unit.

2.14 Transfer Communication Assume

The Transfer Communication Assume message is used to indicate that the accepting unit has established communication with the flight.

2.15 Transfer Control

The Transfer Control message is used to initiate the transfer phase, and indicate that the controller in the transferring unit wishes to transfer control responsibility of the flight to the accepting unit.

2.16 Transfer Control Assume

The Transfer Control Assume message is used to indicate that the accepting unit has accepted control responsibility of the flight from the transferring unit.

GENERAL INFORMATION

2.17 General Point

The General Point message satisfies the following operational requirements:

- a) draws the attention of a controller, who may or may not be the controller in the receiving unit, to a specified flight; and
- b) transfers basic flight plan data when the receiving unit does not hold details of the flight.

2.18 General Executive Data

The General Executive Data message is sent either by the transferring unit to the receiving unit or from the receiving unit to the transferring unit to provide updates to information relating to the control environment of a flight after the transition to the transfer state has commenced.

Note.— The coordination conditions are not modified by receipt of a General Executive Data message.

2.19 Free Text Emergency

The Free Text Emergency message is used for the exchange of free text relating to emergency conditions.

2.20 Free Text General

The Free Text General message is used for the exchange of free text relating to non-emergency conditions.

APPLICATION MANAGEMENT MESSAGES

2.21 Application Accept

The Application Accept message shall be sent by the receiving unit for each message (except for another application management message, or a message containing invalid data) that has been received, processed, found free of errors and is available for presentation to a control position.

2.22 Application Reject

The Application Reject message notifies the sender of the original message that it has been received but that an error has been detected within it. The Application Reject message includes a code that identifies the nature of the error.

3. AIDC MESSAGE CONTENT

3.1 Table A6-1 lists the mandatory and optional contents of each AIDC message.

3.2 One of the optional fields available for a number of the AIDC messages is *Other information*.

3.2.1 The ICAO flight plan may contain information in Item 18 — “Other information” — that affects the management of the flight. To amend the contents of an indicator in Item 18, the AIDC message shall contain the entire new contents of the indicator being amended (e.g. to amend “RMK/TCAS EQUIPPED” to include “NON RVSM”, the AIDC message contains “RMK/TCAS EQUIPPED NON RVSM”). Item 18 indicators that are not being amended should not be included in the AIDC message.

3.2.2 To delete the contents of an indicator in Item 18, the AIDC message shall contain the indicator followed by “/0” (e.g. “NAV/0” to indicate that there is no longer any significant navigation data).

Note.— It is not the intention that the receiving unit necessarily displays “NAV/0”, nor that this is a requirement to be included in the original filed flight plan.

Table A6-1. AIDC message content

<i>Message</i>	<i>Mandatory</i>	<i>Optional</i>
Notify	Aircraft identification Departure aerodrome Destination aerodrome Boundary estimate data	Flight rules Type of flight Number of aircraft (if more than one in the flight) Aircraft type Wake turbulence category CNS equipment Route Amended destination Code (SSR) Other information

<i>Message</i>	<i>Mandatory</i>	<i>Optional</i>
Coordinate Initial	Aircraft identification Departure aerodrome Destination aerodrome Boundary estimate data	Flight rules Type of flight Number of aircraft (if more than one in the flight) Aircraft type Wake turbulence category CNS equipment Route Amended destination Code (SSR) Other information
Coordinate Negotiate	Aircraft identification Departure aerodrome Destination aerodrome Boundary estimate data	Flight rules Type of flight Number of aircraft (if more than one in the flight) Aircraft type Wake turbulence category CNS equipment Route Amended destination Code (SSR) Other information
Coordinate Accept		Aircraft identification Departure aerodrome Destination aerodrome
Coordinate Reject		Aircraft identification Departure aerodrome Destination aerodrome
Coordinate Standby		Aircraft identification Departure aerodrome Destination aerodrome
Coordinate Cancel	Aircraft identification Departure aerodrome Destination aerodrome	Fix Reason for cancellation
Coordinate Update	Aircraft identification Departure aerodrome Destination aerodrome Boundary estimate data	Flight rules Type of flight Number of aircraft (if more than one in the flight) Aircraft type Wake turbulence category CNS equipment Route Amended destination Code (SSR) Other information

<i>Message</i>	<i>Mandatory</i>	<i>Optional</i>
Transfer Initiate	Aircraft identification Executive data (if available)	Track data
Transfer Conditions Proposal	Aircraft identification Executive data (if available)	Track data
Transfer Communication Request	Aircraft identification	Frequency
Transfer Communication	Aircraft identification	Frequency Track data Executive data and/or Release indication
Transfer Communication Assume	Aircraft identification	
Transfer Control	Aircraft identification	Departure aerodrome Destination aerodrome Executive data
Transfer Control Assume	Aircraft identification	Departure aerodrome Destination aerodrome
General Point	Aircraft identification Departure aerodrome Destination aerodrome	Sector designator (sending) Sector designator (receiving) Flight rules Type of flight Number of aircraft (if more than one in the flight) Aircraft type Wake turbulence category CNS equipment Route Track data Code (SSR) Other information
General Executive Data	Aircraft identification	Executive data Frequency
Free Text Emergency	Facility designation or Aircraft identification Free text	
Free Text General	Facility designation or Aircraft identification Free text	
Application Accept		
Application Reject	Error code	Error data

— END —

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