ARRANGEMENT OF REGULATIONS

Part VI

AERONAUTICAL RADIO NAVIGATION SERVICE

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AERONAUTICAL MOBILE SERVICE – DATA LINK COMMUNICATIONS

GRENADA

STATUTORY RULES AND ORDERS NO. 34 OF 2025

IN EXERCISE OF THE POWERS CONFERRED PURSUANT TO SECTION 49 OF THE CIVIL AVIATION ACT CAP 54A, THE DIRECTOR GENERAL HEREBY MAKES THE FOLLOWING REGULATIONS–

(Gazetted 31st July, 2025).

PART I
PRELIMINARY

1. Citation. These Regulations may be cited as the

CIVIL AVIATION (COMMUNICATION PROCEDURES INCLUDING THOSE WITH PANS STATUS) REGULATIONS, 2025.

2. Purpose.—(1) Standards and Recommended Practices for Aeronautical Telecommunications were first adopted by the Council on 30 May 1949 pursuant to the provisions of Article 37 of the Convention on International Civil Aviation (Chicago 1944) and designated as Annex 10 to the Convention. They became effective on 1 March 1950. The Standards and Recommended Practices were based on recommendations of the Communications Division at its Third Session in January 1949.

(2) As a result of the adoption of Amendment 70 on 20 March 1995, Annex 10 was structured to include five volumes–

(a) Volume I – Radio Navigation Aids;

(b) Volume II – Communication Procedures;

(c) Volume III – Communication Systems;

(d) Volume IV – Surveillance Radar and Collision Avoidance Systems;

(e) Volume V – Aeronautical Radio Frequency Spectrum Utilization.

(3) States being signatories to the Chicago Convention have the legal obligation to transpose ICAO Annexes into civil aviation regulations. These regulations are the transpose of Annex 10 Volume II. Volume II of Annex 10 contains general, administrative and operational procedures pertaining to aeronautical fixed and mobile communications.

3. Definitions. In these Regulations, unless the context otherwise requires–

(1) SERVICES–

"Aeronautical broadcasting service" means a broadcasting service intended for the transmission of information relating to air navigation;

"Aeronautical fixed service" or "AFS" means a telecommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air services;

"Aeronautical fixed telecommunication network" or "AFTN" means a worldwide system of aeronautical fixed circuits provided, as part of the aeronautical fixed service, for the exchange of messages and/or digital data between aeronautical fixed stations having the same or compatible communications characteristics;

"AFTN communication centre" means an AFTN station whose primary function is the relay or retransmission of AFTN traffic from (or to) a number of other AFTN stations connected to it;

"AFTN destination station" means an AFTN station to which messages and/or digital data are addressed for processing for delivery to the addressee;

"AFTN entry-exit points" means centres through which AFTN traffic entering and leaving an ICAO Air Navigation Region should flow;

"AFTN group" means three or more radio stations in the aeronautical fixed telecommunications network exchanging communications on the same radio frequency;

"AFTN origin station" means an AFTN station where messages and/or digital data are accepted for transmission over the AFTN;

"AFTN station" means a station forming part of the aeronautical fixed telecommunication network (AFTN) and operating as such under the authority or control of a State;

"Aeronautical mobile service (RR S1.32)" means a mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radiobeacon stations may also participate in this service on designated distress and emergency frequencies;

"Aeronautical mobile (R)* service (RR S1.33)" means an aeronautical mobile service reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes.

"Aeronautical mobile-satellite service (RR S1.35)" means a mobile-satellite service in which mobile earth stations are located on board aircraft; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service;

"Aeronautical mobile-satellite (R)* service (RR S1.36)" means an aeronautical mobile-satellite service reserved for communications relating to safety and regularity of flights, primarily along national or international civil air routes;

"Aeronautical radio navigation service (RR S1.46)" means a radio navigation service intended for the benefit and for the safe operation of aircraft;

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

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

RR S1.9 Radiodetermination: The determination of the position, velocity and/or other characteristics of an object, or the obtaining of information relating to these parameters, by means of the propagation properties of radio waves.

"Aeronautical telecommunication agency" means an agency responsible for operating a station or stations in the aeronautical telecommunication service;

"Aeronautical telecommunication service" means a telecommunication service provided for any aeronautical purpose;

"International telecommunication service" means a telecommunication service between offices or stations of different States, or between mobile stations which are not in the same State, or are subject to different States.

(2) STATIONS–

"Aerodrome control radio station" means a station providing radiocommunication between an aerodrome control tower and aircraft or mobile aeronautical stations;

"Aeronautical fixed station" means a station in the aeronautical fixed service;

"Aeronautical mobile service" means a mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radio beacon stations may also participate in this service on designated distress and emergency frequencies;

"Aeronautical station" (means a land station in the aeronautical mobile service. In certain instances, an aeronautical station may be located, for example, on board ship or on a platform at sea;

"Aeronautical telecommunication station" means a station in the aeronautical telecommunication service;

"AFTN communication centre" means an AFTN station whose primary function is the relay or retransmission of AFTN traffic from (or to) a number of other AFTN stations connected to it;

"AFTN destination station" means an AFTN station to which messages and/or digital data are addressed for processing for delivery to the addressee;

"AFTN origin station" means an AFTN station where messages and/or digital data are accepted for transmission over the AFTN;

"AFTN station" means a station forming part of the aeronautical fixed telecommunication network (AFTN) and operating as such under the authority or control of a State;

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

"Automatic relay installation" means a teletypewriter installation where automatic equipment is used to transfer messages from incoming to outgoing circuits;

Note.– This term covers both fully automatic and semi-automatic installations

"Aircraft station (RR S1.83)" means a mobile station in the aeronautical mobile service, other than a survival craft station, located on board an aircraft;

"Communication centre" means an aeronautical fixed station which relays or retransmits telecommunication traffic from (or to) a number of other aeronautical fixed stations directly connected to it;

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

"General purpose system" or "GP" means air-ground radiotelephony facilities providing for all categories of traffic listed in Regulation 22

Note.– In this system communication is normally indirect, i.e. exchanged through the intermediary of a third person.

"Incoming circuit responsibility list" means a list, for each incoming circuit of a communication centre, of the location indicators for which relay responsibilities are to be accepted in respect of messages arriving on that circuit.

"Mobile surface station" means a station in the aeronautical telecommunication service, other than an aircraft station, intended to be used while in motion or during halts at unspecified points.

"Network station" means an aeronautical station forming part of a radiotelephony network;

"Radio direction finding (RR S1.12)" means radiodetermination using the reception of radio waves for the purpose of determining the direction of a station or object;

"Radio direction-finding station (RR S1.91)" means a radiodetermination station using radio direction finding;

Note.– The aeronautical application of radio direction finding is in the aeronautical radio navigation service.

"Regular station" means a station selected from those forming an en-route air-ground radiotelephony network to communicate with or to intercept communications from aircraft in normal conditions;

"Semi-automatic relay installation" means a teletypewriter installation where interpretation of the relaying responsibility in respect of an incoming message and the resultant setting-up of the connections required to effect the appropriate retransmissions require the intervention of an operator but where all other normal operations of relay are carried out automatically;

"Torn-tape" relay installation" means a teletypewriter installation where messages are received and relayed in teletypewriter tape form and where all operations of relay are performed as the result of operator intervention;

"Tributary station" means an aeronautical fixed station that may receive or transmit messages and/or digital data but which does not relay except for the purpose of serving similar stations connected through it to a communication centre.

(3) COMMUNICATION METHODS–

"Air-ground communication" means two-way communication between aircraft and stations or locations on the surface of the earth;

"Air-to-ground communication" means one-way communication from aircraft to stations or locations on the surface of the earth;

"Alternative means of communication" means a means of communication provided with equal status, and in addition to the primary means;

"Blind transmission" means a transmission from one station to another station in circumstances where two-way communication cannot be established but where it is believed that the called station is able to receive the transmission;

"Broadcast" means a transmission of information relating to air navigation that is not addressed to a specific station or stations;

"Channel" means a single means of direct fixed service communication between two points;

"Circuit" means a communication system which includes all the direct AFTN channels between two points;

"Double channel simplex" means simplex using two frequency channels, one in each direction;

Note.– This method was sometimes referred to as cross-band.

"Duplex" means a method in which telecommunication between two stations can take place in both directions simultaneously;

"Frequency channel" means a continuous portion of the frequency spectrum appropriate for a transmission utilizing a specified class of emission;

Note.– The classification of emissions and information relevant to the portion of the frequency spectrum appropriate for a given type of transmission (bandwidths) are specified in the ITU Radio Regulations, Article S2 and Appendix S1.

"Ground-to-air communication" means one-way communication from stations or locations on the surface of the earth to aircraft;

"Interpilot air-to-air communication" means two-way communication on the designated air-to-air channel to enable aircraft engaged in flights over remote and oceanic areas out of range of VHF ground stations to exchange necessary operational information and to facilitate the resolution of operational problems;

"Non-network communications" means radiotelephony communications conducted by a station of the aeronautical mobile service, other than those conducted as part of a radiotelephony network;

"Offset frequency simplex" means a variation of single channel simplex wherein telecommunication between two stations is effected by using in each direction frequencies that are intentionally slightly different but contained within a portion of the spectrum allotted for the operation;

"Operational control communications" means communications required for the exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of the safety of the aircraft and the regularity and efficiency of a flight;

Note.– Such communications are normally required for the exchange of messages between aircraft and aircraft operating agencies.

"Pilot-controller" system" means Air-ground radiotelephony facilities implemented primarily to provide a means of direct communication between pilots and controllers;

"Primary means of communication" means the means of communication to be adopted normally by aircraft and ground stations as a first choice where alternative means of communication exist;

"Radiotelephony network" means a group of radiotelephony aeronautical stations which operate on and guard frequencies from the

same family and which support each other in a defined manner to ensure maximum dependability of air-ground communications and dissemination of air-ground traffic;

"Relay time" means the relay time of a COM centre is the elapsed time between the instant that a message has been completely received at that centre and the instant that it has been completely retransmitted on an outgoing circuit;

"Readback" means a procedure whereby the receiving station repeats a received message or an appropriate part thereof back to the transmitting station so as to obtain confirmation of correct reception;

"Regular station" means a station selected from those forming an en-route air-ground radiotelephony network to communicate with or to intercept communications from aircraft in normal conditions;

"Route (AFTN)" means the path followed by a particular channel of a circuit;

"Routing" or "AFTN" means the chosen itinerary to be followed by messages on the AFTN between acceptance and delivery;

"Routing Directory" means a list in a communication centre indicating for each addressee the outgoing circuit to be used;

"Routing List" means a list in a communication centre indicating for each addressee the outgoing circuit to be used;

"Simplex" means a method in which telecommunication between two stations takes place in one direction at a time;

Note.– In application to the aeronautical mobile service this method may be subdivided as follows–

a) single channel simplex;

b) double channel simplex;

c) offset frequency simplex.

"Single channel simplex" means simplex using the same frequency channel in each direction;

"Telecommunication (RR S1.3)" means any transmission, emission, or reception of signs, signals, writing, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems;

"Transit time" means the elapsed time between the instant of filing a message with an AFTN station for transmission on the network, and the instant that it is made available to the addressee.

(4) DIRECTION FINDING–

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

"Location indicator" means a four-letter code group formulated in accordance with rules prescribed by ICAO and assigned to the location of an aeronautical fixed station;

"Radio bearing" means the angle between the apparent direction of a definite source of emission of electro-magnetic waves and a reference direction, as determined at a radio direction-finding station. A true radio bearing is one for which the reference direction is that of true North. A magnetic radio bearing is one for which the reference direction is that of magnetic North.

(5) TELETYPEWRITER SYSTEMS–

"Automatic relay installation" means a teletypewriter installation where automatic equipment is used to transfer messages from incoming to outgoing circuits;

Note.– This term covers both fully automatic and semi-automatic installations.

"Fully automatic relay installation" means a teletypewriter installation where interpretation of the relaying responsibility in respect of an

incoming message and the resultant setting-up of the connections required to effect the appropriate retransmissions is carried out automatically, as well as all other normal operations of relay, thus obviating the need for operator intervention, except for supervisory purposes;

"Message field" means an assigned area of a message containing specified elements of data;

"Semi-automatic relay installation" means a teletypewriter installation where interpretation of the relaying responsibility in respect of an incoming message and the resultant setting-up of the connections required to effect the appropriate retransmissions require the intervention of an operator but where all other normal operations of relay are carried out automatically;

"Teletypewriter tape" means a tape on which signals are recorded in the 5-unit Start-Stop code by completely severed perforations (Chad Type) or by partially severed perforations (Chadless Type) for transmission over teletypewriter circuits;

"Torn-tape relay installation" means a teletypewriter installation where messages are received and relayed in teletypewriter tape form and where all operations of relay are performed as the result of operator intervention.

(6) AGENCIES–

"Aeronautical telecommunication agency" means an agency responsible for operating a station or stations in the aeronautical telecommunication service;

"Aircraft operating agency" means a person, organisation or enterprise engaged in, or offering to engage in, an aircraft operation.

(7) FREQUENCIES–

"Primary frequency" means the radiotelephony frequency assigned to an aircraft as a first choice for air-ground communication in a radiotelephony network;

"Secondary frequency" means the radiotelephony frequency assigned to an aircraft as a second choice for air-ground communication in a radiotelephony network.

(8) DATA LINK COMMUNICATIONS–

"Controller-pilot data link communications" or "CPDLC" means a means of communication between controller and pilot, using data link for ATC communications;

"CPDLC message" means information exchanged between an airborne system and its ground counterpart. A CPDLC message consists of a single message element or a combination of message elements conveyed in a single transmission by the initiator;

"CPDLC message set" means a list of standard message elements and free text message elements;

"Current data authority" means the designated ground system through which a CPDLC dialogue between a pilot and a controller currently responsible for the flight is permitted to take place;

Free text message element. Part of a message that does not conform to any standard message element in the PANS-ATM (Doc 4444);

"Logon address" means a specified code used for data link logon to an ATS unit;

"Next data authority" means the ground system so designated by the current data authority through which an onward transfer of communications and control can take place;

"Standard message element" means part of a message defined in the PANS-ATM (Doc 4444) in terms of display format, intended use and attributes.

(9) MISCELLANEOUS–

"Aeronautical fixed circuit" means a circuit forming part of the aeronautical fixed service (AFS);

"Aeronautical fixed telecommunication network circuit" means a circuit forming part of the aeronautical fixed telecommunication network (AFTN);

"Aeronautical telecommunication log" means a record of the activities of an aeronautical telecommunication station;

"Air-report" means a report from an aircraft in flight prepared in conformity with requirements for position, and operational and/or meteorological reporting;

Note.– Details of the AIREP form are given in the PANS-ATM (Doc 4444).

"Altitude" means the vertical distance of a level, a point or an object considered as a point, measured from mean sea level (MSL);

"ANSP" means Air Navigation Services Provider;

"ATS direct speech circuit" means an aeronautical fixed service (AFS) telephone circuit, for direct exchange of information between air traffic services (ATS) units;

"Automatic telecommunication log" means a record of the activities of an aeronautical telecommunication station recorded by electrical or mechanical means;

"Flight level" means a surface of constant atmospheric pressure which is related to a specific pressure datum, 1 013.2 hectopascals (hPa), and is separated from other such surfaces by specific pressure intervals;

Note 1.– A pressure type altimeter calibrated in accordance with the standard atmosphere:

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

b) when set to a QFE altimeter setting, will indicate height above the QFE reference datum;

c) when set to a pressure 1 013.2 hPa, may be used to indicate flight levels.

Note 2.– The terms "height" and "altitude", used in Note 1 above, indicate altimetric rather than geometric heights and altitudes.

"Frequency channel" means a continuous portion of the frequency spectrum appropriate for a transmission utilizing a specified class of emission;

Note.– The classification of emissions and information relevant to the portion of the frequency spectrum appropriate for a given type of transmission (bandwidths) are specified in the ITU Radio Regulations, Article S2 and Appendix S1.

"Height" means the vertical distance of a level, a point or an object considered as a point, measured from a specified datum;

"Human performance" means human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations;

"Location indicator" means a four-letter code group formulated in accordance with rules prescribed by ICAO and assigned to the location of an aeronautical fixed station;

"Meteorological operational channel" means a channel of the aeronautical fixed service (AFS), for the exchange of aeronautical meteorological information;

"Meteorological operational telecommunication network" means an integrated system of meteorological operational channels, as part of the aeronautical fixed service (AFS), for the exchange of aeronautical meteorological information between the aeronautical fixed stations within the network;

Note.– "Integrated" is to be interpreted as a mode of operation necessary to ensure that the information can be transmitted and received by the stations within the network in accordance with pre-established schedules.

"NOTAM" means a notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations;

"Operational control communications" means communications required for the exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of the safety of the aircraft and the regularity and efficiency of a flight;

Note.– Such communications are normally required for the exchange of messages between aircraft and aircraft operating agencies.

"Route segment" means a route or portion of route usually flown without an intermediate stop;

"Routing Directory" means a list in a communication centre indicating for each addressee the outgoing circuit to be used;

"SNOWTAM" means a special series NOTAM notifying the presence or removal of hazardous conditions due to snow, ice, slush or standing water associated with snow, slush and ice on the movement area, by means of a specific format;

"The Authority" means the Eastern Caribbean Civil Aviation Authority.

Part II

ADMINISTRATIVE PROVISIONS RELATING TO THE INTERNATIONAL AERONAUTICAL TELECOMMUNICATIONS SERVICE

4. Division of service. The international aeronautical telecommunication service shall be divided into the following four parts–

(a) aeronautical fixed services;

(b) aeronautical mobile services;

(c) aeronautical radio navigation services; and

(d) aeronautical broadcasting services.

5. Telecommunication access. The Authority shall ensure that aeronautical telecommunication stations, including end systems and intermediate systems of the aeronautical telecommunication network (ATN), shall be protected from unauthorised direct or remote access.

6. Hours of service.—(1) The responsible entity shall give notice of the normal hours of service of stations and offices of the international aeronautical telecommunications services under its control to the aeronautical telecommunications agencies designated to receive this information or other administrations concerned.

(2) Whenever necessary and practicable, the responsible entity shall give notification of any change in the normal hours of service, before such a change is effected, to the aeronautical telecommunication agencies designated to receive this information or other Administrations concerned.

(3) If a station of the international aeronautical telecommunication service, or an aircraft operating agency, requests a change in the hours of service of another station, such change shall be requested as soon as possible after the need for change is known. The station or aircraft operating agency requesting the change shall be informed of the result of its request as soon as possible.

7. Supervision.—(1) The Eastern Caribbean Civil Aviation Authority shall be the authority responsible for ensuring that the international aeronautical telecommunication service is conducted in accordance with these Regulations.

(2) Any occasional infringement of the procedures prescribed by these Regulations shall be dealt with by direct communication, immediately, between the parties concerned either by correspondence or by personal contact, where the infringement is not of a serious nature.

(3) When a station commits serious or repeated infringements, representations relating to them shall be made to the authority designated in sub-regulation (1) of the State to which the station belongs by the authority which detects them.

(4) The Authority designated under sub-regulation (1) shall exchange information relating to the performance of systems of communication, radio navigation, operation and maintenance or unusual transmission phenomena.

8. Superfluous transmissions. The authority shall ensure that there is no willful transmission of unnecessary or anonymous signals, messages or data by any station in ECCAA Member States.

9. Interference. Before authorizing tests and experiments in any station, each ANSP, in order to avoid harmful interference, shall prescribe the taking of all possible precautions, such as the choice of frequency and of time, and the reduction or, if possible, the suppression of radiation. Any harmful interference resulting from tests and experiments shall be eliminated as soon as possible.

Part III

GENERAL PROCEDURES FOR INTERNATIONAL AERONAUTICAL TELECOMMUNICATION SERVICE

10. Extensions of services and closing down of stations.—(1) Where required by the Authority, a station of the international aeronautical telecommunications service shall extend its normal hours of service to provide for traffic necessary for flight operations.

(2) A station shall notify its intention to all other stations with which it is in direct communication to confirm that an extension of service is not required and advise of the time of re-opening, if not within its normal hours of service before close down.

(3) A station shall notify its intention of closing down either to the control station, if any or to all stations in the network where it is working regularly in a network on a common circuit.

(4) The station referred to in sub-regulation (3) shall continue to watch for two minutes and may close down, if the station has received no call during this period.

(5) The stations with other than continuous hours of operation, engaged in or expected to become engaged in distress, urgency, unlawful interference or interception traffic, shall extend their normal hours of service to provide the required support to those communications.

11. Acceptance of messages.—(1) An ANSP shall accept for transmission only messages coming within the categories specified in regulation 40.

(2) Determining the acceptability of a message shall be the responsibility of the station where the message is filed for transmission.

(3) The ANSP of any station through which a message is relayed shall make representations at a later date to the ANSP in control of the accepting station regarding any message which is considered unacceptable.

(4) Only messages for stations forming part of the Aeronautical Telecommunication Service shall be accepted for transmission, except where special arrangements have been made with the air navigation service provider concerned.

(5) The acceptance of a message intended for two or more addresses, whether at the same station or at different stations, shall be permitted subject to the provisions prescribed in paragraph 1(2)(c)(iv) of Schedule 1 to these Regulations.

(6) The messages handled for aircraft operating agencies shall be accepted only when handed in to the telecommunication station in the form specified in these Regulations, by an authorised representative of that agency or when received from that agency over an authorised circuit.

12. Transmission and delivery of message.—(1) A message accepted under regulation 28 shall be transmitted, relayed and delivered in accordance with the priority classification and without discrimination or undue delay.

(2) A single office for each aircraft that operates an agency shall be designated by agreement between the ANSP and the aircraft that operates an agency concerned for each station of the air navigation service provider from which messages are delivered to one or more aircraft operating agencies.

(3) Stations of the international aeronautical telecommunications service shall be responsible for delivery of messages to an addressee located within the boundaries of the aerodrome served by that station and beyond those boundaries, only to the addressee as may be agreed by special arrangement with the administrations concerned.

(4) The Authority shall prescribe a form of written record or other permanent means of delivering messages.

(5) The messages originated in the aeronautical mobile service by an aircraft in flight and which require transmission over the AFTN to effect delivery, shall be reprocessed by the aeronautical telecommunication station prior to transmission on the AFTN.

(6) The messages originated in the aeronautical mobile service by an aircraft in flight and which require transmission over the aeronautical fixed service, other than on an AFTN circuit, shall be reprocessed by the aeronautical telecommunication station into the message format set out in Schedule 1 to these Regulations, except where, subject to sub-regulation (3), prior or other arrangements have been made between the aeronautical telecommunication agency and the aircraft operating agency concerned for predetermined distribution of messages from aircraft.

(7) The messages without specific address containing–

(a) meteorological information received from an aircraft in flight, shall be forwarded without delay to the meteorological office associated with the point of reception; and

(b) air traffic services information from aircraft in flight shall be forwarded without delay to the air traffic services unit associated with the communication station receiving the message.

(8) In cases where telephone or loudspeaker systems are used without recording facilities for the delivery of messages, a written copy should be provided, as confirmation of delivery, as soon as possible.

(9) When recording the text of air-reports in AIREP form, the data conventions approved by ICAO for this purpose shall be used wherever possible.

(10) When air-reports in AIREP form are to be retransmitted by telegraphy (including teletypewriting), the text transmitted shall be as recorded in compliance with sub-regulation 9.

13. Time systems.—(1) A station in the aeronautical telecommunication service shall use the universal co-ordinated time system.

(2) The station referred to in sub-regulation (1) shall designate midnight as 2400 for the end of the day and 0000 for the beginning of the day.

(3) A date-time group shall consist of six figures, the first two figures representing the date of the month and the last four figures representing the hours and minutes in universal coordinated time.

14. Record of communications.—(1) A telecommunication log, written or automatic, shall be maintained in each station of the aeronautical telecommunication service except that an aircraft station, when using radiotelephony in direct communication with an aeronautical station, need not maintain a telecommunication log.

(2) An aeronautical station shall record messages at the time of their receipt, except that, if during an emergency, the continued manual recording results in delays in communication, the recording of messages may be temporarily interrupted and completed at the earliest opportunity.

(3) Where a record is maintained in an aircraft station, either in a radiotelephone log or elsewhere, concerning distress communications, harmful interference or interruption to communications, the record shall be associated with information concerning the time, position and altitude of the aircraft.

(4) In the case of a written log, entries shall be made only by operators on duty, except that another person who has knowledge of facts pertinent to the entries may certify in the log, the accuracy of entries of the operators.

(5) Superfluous marks or notations shall not be made in the log and all entries shall be complete, clear, correct and intelligible.

(6) A correction in a written log shall be–

(a) made only by the person making the initial entry;

(b) accomplished by drawing or typing a single line through the incorrect entry, initialing against the entry, recording the time and date of correction; and

(c) made on the next line after the last entry.

(7) Written or automatic telecommunication logs shall be retained for a period of at least thirty days and where the logs are pertinent to inquiries or investigations, the logs shall be retained for longer periods until it is evident that they will no longer be required.

(8) The following information shall be entered in every written log–

(a) the name of the agency operating the station;

(b) the identification of the station;

(c) the date;

(d) the time of opening and closing of the station;

(e) the signature of each operator, with the time the operator assumes and relinquishes watch;

(f) the frequencies being guarded and type of watch being maintained on each frequency;

(g) a record of each communication, test transmission, or attempted communication showing text of communication, time communication completed, station communicated with, and frequency used;

(h) all distress communications and action;

(i) a brief description of communication conditions and difficulties, including harmful interference. Such entries should include, whenever practicable, the time at which interference was experienced, the character, radio frequency and identification of the interfering signal;

(j) brief description of interruption to communications due to equipment failure or other trouble, giving the duration of the interruption and action taken; and

(k) any additional information may be considered by the operator to be of value as part of the record of the operations of the station.

15. Establishment of radio communication.—(1) A station shall answer calls directed to it by other stations in the aeronautical telecommunication service and shall exchange communications on request.

(2) A station shall radiate the minimum power necessary to ensure satisfactory service.

16. Use of abbreviations and codes.—(1) The international aeronautical telecommunications services shall use abbreviations and codes whenever they are appropriate and codes shall be used to shorten or facilitate communication.

(2) The originator shall, if required by the Aeronautical Telecommunication Station accepting the message for transmission, make available to that station a decode for the abbreviations and codes used where abbreviations and codes other than those approved by the authority are contained in the text of message.

17. Cancellation of messages. A telecommunication station shall cancel a message where the cancellation is authorised by the message originator.

Part VI

AERONAUTICAL FIXED SERVICE (AFS)

18. Systems and applications used in the AFS. The aeronautical fixed service shall comprise the following systems and applications that are used for ground-ground (i.e. point-to-point and/or point-to-multipoint) communications in the international aeronautical telecommunication service–

(a) air traffic services direct speech circuits and networks;

(b) meteorological operational circuits, networks and broadcast systems;

(c) the aeronautical fixed telecommunications network (AFTN);

(d) the common ICAO data exchange data format (CIDIN);

(e) the air traffic services (ATS) message handling services; and

(f) the inter-centre communications (ICC).

19. Material permitted in Aeronautical Fixed Services messages. The material permitted in AFS messages is specified in Schedule 2 to these Regulations.

20. ATS direct speech circuits. The air traffic services direct speech communications shall be those specified in the Civil Aviation (Air Traffic Services) Regulations, 2025.

21. Meteorological operational channels and meteorological operational telecommunication networks. The meteorological operational channel procedures and meteorological operational communication network procedures shall be compatible with the AFTN or ATS Message Handling Services procedures.

Aeronautical Fixed Telecommunication Network (AFTN)

22. Categories of messages.—(1) Subject to regulations 11 and 12, the following categories of messages shall be handled by the AFTN–

(a) distress messages with priority indicator SS which comprise those messages sent by mobile stations reporting that they are threatened by grave and imminent danger and all other messages relative to immediate assistance required by the mobile station in distress;

(b) urgency messages with priority indicator DD which comprise messages concerning the safety of a ship, aircraft or other vehicles or of a person on board or within sight;

(c) flight safety messages with priority indicator FF which comprise–

(i) movement and control messages (as defined in ICAO Document DOC - 4444, Chapter 11);

(ii) messages originated by an aircraft operating agency of immediate concern to aircraft in flight or preparing to depart; or

(iii) meteorological messages restricted to SIGMET information, special air-reports, AIRMET messages, volcanic ash and tropical cyclone advisory information and amended forecasts;

(d) meteorological messages with priority indicator GG which comprise–

(i) messages concerning forecasts, e.g. terminal aerodrome forecasts (TAFs), area and routine forcasts; or

(ii) messages concerning observations and reports e.g. METAR, SPECI.

(e) flight regularity messages with priority indicator GG which comprise–

(i) aircraft load messages required for weight and balance computation;

(ii) messages concerning changes in aircraft operating schedules;

(iii) messages concerning aircraft servicing;

(iv) messages concerning changes in collective requirements for passengers, crew and cargo covered by deviation from normal operating schedules;

(v) messages concerning non-routine landings;

(vi) messages concerning pre-flight arrangements for air navigation services and operational servicing for non-scheduled aircraft operations such as overflight clearance requests;

(vii) messages originated by aircraft operating agencies reporting an aircraft arrival or departure; or

(viii) messages concerning parts and materials urgently required for the operation of aircraft;

(f) aeronautical information services (AIS) messages with priority indicator GG which comprise messages concerning NOTAMs;

(g) aeronautical administrative messages with priority indicator KK which comprise–

(i) messages regarding the operation or maintenance of facilities provided for the safety or regularity of aircraft operations;

(ii) messages concerning the functioning of aeronautical telecommunication services; or

(iii) messages exchanged between civil aviation authorities relating to aeronautical services; and

(h) service messages with priority indicator as appropriate which comprise messages originated by Aeronautical Fixed Stations to obtain information or verification concerning other messages which appear to have been transmitted incorrectly by the AFS, confirming channel- sequence numbers etc.

(2) Messages requesting information shall take the same priority indicator as the category of message being requested except where a higher priority is warranted for flight safety.

23. Service messages.—(1) The service messages shall be prepared in the format prescribed in Schedule 1 to these Regulations.

(2) In applying the provisions of Schedule 1 to these Regulations to service messages addressed to an aeronautical fixed station identified only by a location indicator, the indicator shall be immediately followed by the ICAO three-letter designator YFY, followed by an appropriate 8th letter.

(3) The service messages shall be assigned the appropriate priority indicator. Where service messages refer to messages previously transmitted, the priority indicator assigned shall be that used for the message to which they refer.

(4) The service messages correcting errors in transmission shall be addressed to all the addressees that shall have received the incorrect transmission.

(5) A reply to a service message shall be addressed to the station which originated the initial service message.

(6) The text of all service messages shall be as concise as possible.

(7) A service message, other than the one acknowledging receipt of SS messages, shall be further identified by the use of the abbreviation "SVC" as the first item in the text.

(8) Where a service message refers to a message previously handled, reference to the previous message shall be made by use of the appropriate transmission identification or the filing time and originator indicator groups identifying the previous message.

24. Order of priority. The order of priority for the transmission of messages in the AFTN shall be as follows–

(a) transmission priority 1 shall comprise of messages with priority indicator SS;

(b) transmission priority 2 shall comprise of messages with priority indicator DD and FF; and

(c) transmission priority 3 shall comprise of messages with priority indicator GG and KK.

25. Same priority messages. The messages that have the same priority indicator shall be transmitted in the order in which they are received for transmission.

26. Routing of messages and supervision of message traffic. Where an AFTN is used, the routing of messages and supervision of message traffic shall be as specified in Schedule 3 to these Regulations.

27. Failure of communications. Where an AFTN is used and there exists a communication failure, the requirements stipulated in paragraph 4 of Schedule 3 to these Regulations shall apply.

28. Long term retention of AFTNs traffic records.—(1) The AFTN origin stations shall retain, for a period of at least 30 days, all copies of transmitted messages in their entirety.

(2) The AFTNs destination stations shall retain, for a period of at least 30 days, a record containing the information necessary to identify all messages received and the action taken.

(3) The AFTNs communication centres shall retain, for a period of at least 30 days, a record containing the information necessary to identify all messages relayed or retransmitted and the action taken.

29. Short term retention of AFTNs traffic records.—(1) The AFTNs communication centres shall retain, for a period of at least one hour, a copy of all messages, in their entirety, retransmitted or relayed by those communication centres, except as provided in sub-regulation (2).

(2) Where acknowledgement is made between AFTN communication centres, a relay centre shall be considered as having no further responsibility for retransmission or repetition of a message for which it has received positive acknowledgement, and the message may be deleted from its records.

30. Test procedures on AFTNs channels. Test messages transmitted on AFTNs channels for the purposes of testing and repairing lines shall comprise the following–

(a) the start-of-message signal;

(b) the procedure signal QJH;

(c) the originator indicator;

(d) three page-copy lines of the sequence of characters RY in ITA-2 or U (5/5) *(2/10) in IA-5; and

(e) the end-of-message signal.

31. Characters of AFTN messages. AFTNs messages entered by the AFTNs origin station shall not exceed 2100 characters in length.

32. Stripped address. AFTNs communication centres shall omit from the address all the addressee indicators not required when applying the provisions of paragraph 1(2) of Schedule 1 to these Regulations for–

(a) onward transmission by the AFTNs communication centre to which the message is transmitted;

(b) local delivery to the addressee by the AFTNs destination station; or

(c) an onward transmission or local delivery by the aggregate of stations on a multi-point circuit.

33. Message format – International Alphabet No. 5 (IA-5). All messages of International Telegraph Alphabet No. 5 shall comply with the message format specified in Schedule 1 to these Regulations.

34. Action taken on mutilated messages in International Telegraph Alphabet No. 5 detected in computerised AFTN relay stations. Any action taken on mutilated messages in International Telegraph Alphabet No.5 detected in computerised AFTN relay stations shall be as specified in paragraph 2 of Schedule 1 to these Regulations.

35. Transfer of AFTNs messages over code and byte independent circuits and networks. Where AFTN messages are transferred across code and byte independent circuits and networks of the AFS, the following shall apply–

(a) the message shall start with an alignment function followed by the address and, except as provided in paragraph (c), the headline of the message shall be omitted;

(b) the message shall end with a complete ending;

(c) entry centres shall be permitted to insert additional data preceding the first alignment function and following the ending of the message for the purposes of technical supervision; and

(d) where paragraph (c) is applied, the data added shall not include either carriage return or line feed characters or any of the combinations listed in paragraph (3) of Schedule 2 to these Regulations.

36. Air Traffic Services Message Handling Services (ATS-MHS). The ATS-MHS application shall be used to exchange air traffic services messages between users over the Aeronautical Telecommunication Network internet in accordance with Schedule 4 to these Regulations.

37. Inter-Centre Communications.—(1) The Inter-Centre Communications (ICC) applications set shall be used to exchange air traffic services messages between air traffic service users over the Aeronautical Telecommunication Network (ATN) internet. The ICC applications set enables the exchange of information in support of the following operational services–

(a) flight notification;

(b) flight coordination;

(c) transfer of control and communications;

(d) flight planning;

(e) airspace management; and

(f) fair traffic flow management.

(2) The first of the applications developed for the ICC set is the ATS interfacility data communication (AIDC).

(3) The AIDC application exchanges information between ATS units (ATSUs) for support of critical air traffic control (ATC) functions, such as notification of flights approaching a flight information region (FIR) boundary, coordination of boundary conditions and transfer of control and communications authority.

38. AFTN Long Message Transmission. Transmission of AFTN Long Messages shall be as specified in Schedule 10 to these Regulations.

PART V

AERONAUTICAL MOBILE SERVICE — VOICE COMMUNICATIONS

39. General procedures for aeronautical mobile service – voice communications.—(1) The highest standard of discipline shall be observed at all times in all aeronautical mobile service voice communications.

(2) ICAO standardized phraseology shall be used in all situations for which it has been specified and where the standardised phraseology cannot serve the intended transmission, plain language shall be used.

(3) The transmission of messages, other than those specified in regulation 40 on aeronautical mobile frequencies when the aeronautical fixed services are able to serve the intended purpose, shall be avoided.

(4) In all communications, the consequences of human performance which affect the accurate reception and comprehension of messages shall be taken into consideration.

(5) Where it is necessary for an aircraft station to send signals for testing or adjustment which may interfere with the working of a neighbouring aeronautical station, the consent of the station shall be obtained before the signals are sent and any such transmissions shall be kept to a minimum.

(6) When it is necessary for a station in the aeronautical mobile service to make test signals, either for the adjustment of a transmitter before making a call or for the adjustment of a receiver, such signals shall not continue for more than 10 seconds and shall be composed of spoken numerals (ONE, TWO, THREE, etc.) in radiotelephony, followed by the radio call sign of the station transmitting the test signals. Such transmissions shall be kept to a minimum.

(7) The responsibility of establishing communication shall rest with the station having traffic to transmit, except as otherwise provided in these Regulations.

(8) After a call is made to an aeronautical station, a period of at least 10 seconds shall elapse before a second call is made.

(9) Where an aeronautical station is called simultaneously by several aircraft stations, the aeronautical station shall decide the order in which the aircraft shall communicate.

(10) In communications between aircraft stations, the duration of communication shall be controlled by the aircraft station receiving the communication, subject to the intervention of an aeronautical station.

(11) Where the communications in sub-regulation (10) take place on an air traffic service (ATS) frequency, the prior permission of the aeronautical station shall be obtained but a request for permission shall not be required for brief exchanges.

40. Categories of messages. The categories of messages handled by the aeronautical mobile service and the order of priority in the establishment of communications and the transmission of messages shall be in accordance with table 5-1 prescribed in Schedule 5 to these Regulations.

41. Communication related to direction finding. The communications relating to direction finding shall be handled in accordance with regulation 52 of these Regulations.

42. Composition of flight safety messages. The flight safety messages shall comprise–

(a) movement and control messages;

(b) messages originated by an aircraft operating agency or by an aircraft, of immediate concern to an aircraft in flight;

(c) meteorological advice of immediate concern to an aircraft in flight or about to depart; or

(d) other messages concerning aircraft in flight or about to depart.

43. Composition of meteorological messages. The meteorological messages shall comprise of meteorological information to or from aircraft, other than messages specified in regulation 45.

44. Composition of flight regularity messages. The flight regularity messages shall comprise–

(a) The messages regarding the operation or maintenance of facilities essential for the safety or regularity of aircraft operation;

(b) messages concerning the servicing of aircraft;

(c) instructions to aircraft operating agency representatives concerning changes in requirements for passengers and crew caused by unavoidable deviations from normal operating schedules;

(d) messages concerning non-routine landings to be made by an aircraft;

(e) messages concerning aircraft parts and materials urgently required; and

(f) messages concerning changes in aircraft operating schedules.

45. Handling of flight regularity messages. Air traffic services units using direct pilot controller communication channels shall only be required to handle flight regularity messages where the messages can be achieved without interference with their primary role and where no other channels are available for the handling of the messages.

46. Composition of inter-pilot air-to-air communication.—(1) Inter-pilot air-to-air communication shall comprise messages relating to any matter affecting safety and regularity of flights.

(2) The category and priority of the messages under sub-regulation (1) shall be determined on the basis of their content, in accordance with regulations 42 and 44.

47. Cancellation of messages.—(1) The station transmitting the message shall instruct the receiving station to disregard an incomplete transmission if a message has not been completely transmitted when instructions to cancel are received, and the instructions shall be effected in radiotelephony by use of an appropriate phrase.

(2) Where a completed message transmission is being held pending correction and the receiving station is to be informed to take no forwarding action, or where delivery or onward relay cannot be accomplished, the transmission shall be cancelled and the cancellation shall be effected in radiotelephony by the use of an appropriate phrase.

(3) The station cancelling a transmission shall be responsible for any further action required.

48. Radiotelephony procedures. The radiotelephony procedures for aeronautical mobile service – voice communication shall be as specified in Schedule 6 to these Regulations.

49. Distress and urgency radio telephony communication procedures. The distress and urgency radiotelephony communication procedures for aeronautical mobile service – voice communication shall be as specified in Schedule 7 to these Regulations.

50. Communications relating to acts of unlawful interference. The station addressed by an aircraft subjected to an act of unlawful interference or the first station acknowledging a call from such an aircraft, shall render all possible assistance, including notification of appropriate air traffic service units and any other station, agency or person in a position to facilitate the flight.

Part VI

AERONAUTICAL RADIO NAVIGATION SERVICE

51. Composition of aeronautical radio navigation service.—(1) The aeronautical radio navigation service shall comprise all types and systems of radio navigation aids in the international aeronautical service.

(2) An aeronautical radio navigation aid which is not in continuous operation shall, where practicable, be put into operation on receipt of a request from an aircraft, a controlling authority on the ground or an authorised representative of an aircraft operating agency.

(3) The request referred to in sub-regulation (2) shall be made to the aeronautical station concerned on the air-ground frequency normally in use.

(4) The local aeronautical information service unit shall be furnished, without delay with essential information about changes in the operational status of non-visual aids as required for pre-flight briefing and dissemination in accordance with the Civil Aviation (Aeronautical Information Services) Regulations, 2025.

52. Aeronautical radio navigation service direction finding.—(1) A direction-finding station working alone shall when requested give the following–

(a) a true bearing of the aircraft, using the appropriate phrase;

(b) a true heading to be steered by the aircraft, with no wind, to head for the direction-finding station using the appropriate phrase;

(c) a magnetic bearing of the aircraft, using the appropriate phrase; and

(d) the magnetic heading to be steered by the aircraft with no wind to make for the station, using the appropriate phrase.

(2) Where direction-finding stations work as a network to determine the position of an aircraft, the bearings taken by each station shall be sent immediately to the station controlling the direction- finding network to enable the position of the aircraft to be determined.

(3) The station controlling the network referred to in sub-regulation (1) shall, upon request, give the aircraft its position in one of the following ways–

(a) in relation to a point of reference or in latitude and longitude, using the appropriate phrase;

(b) the true bearing of the aircraft in relation to the direction-finding station or other specified point, using the appropriate phrase and its distance from the direction finding station or point, using the appropriate phrase; or

(c) the magnetic heading to steer with no wind, to make for the direction-finding station or other specified point and its distance from the direction-finding station or point, using the appropriate phrases.

(4) An aircraft station shall make requests for bearings, courses or positions, to the aeronautical station responsible or to the station controlling the direction-finding network.

(5) The aircraft station referred to in sub-regulation (4) above shall call the aeronautical station or the direction-finding control station on the listening frequency and specify the type of service that is desired using the appropriate phrase.

(6) As soon as the direction-finding station or group of stations is ready, the station originally called by the aircraft station shall where necessary request transmission for direction-finding service and, if necessary, indicate the frequency to be used by the aircraft station, the number of times the transmission should be repeated, the duration of the transmission required or any special transmission requirement

(7) In radiotelephony, an aircraft station which requests a bearing shall end the transmission by repeating its call sign. If the transmission has been too short for the direction-finding station to obtain a bearing, the aircraft shall give a longer transmission for two periods of approximately ten seconds, or alternatively provide such other signals as may be requested by the direction-finding station.

(8) A direction-finding station shall request the aircraft station to repeat a transmission if not satisfied with its observation.

(9) The direction-finding station shall advise the aircraft station when a heading or bearing has been requested in the following form–

(a) the appropriate phrase;

(b) bearing or heading in degrees in relation to the direction-finding station, sent as three figures;

(c) the class of bearing; and

(d) the time of observation, if necessary.

(10) Where a position has been requested, the direction finding control station shall after plotting all simultaneous observations determine the observed position of the aircraft and shall advise the aircraft station in the following form–

(a) the appropriate phrase;

(b) the position;

(c) the class of the position; and

(d) the time of observation.

(11) As soon as the aircraft station has received the bearing, heading or position, it shall repeat back the message for confirmation or correction.

(12) When positions are given by bearing or heading and distance from a known point other than the station making the report, the reference point shall be an aerodrome, prominent town or geographic feature. An aerodrome shall be given in preference to other places. When a large city or town is used as a reference place, the bearing or heading, and the distance given shall be measured from its centre.

(13) When the position is expressed in latitude and longitude, groups of figures for degrees and minutes shall be used followed by the letter N or S for latitude and the letter E or W for longitude, respectively. In radiotelephony, the words NORTH, SOUTH, EAST or WEST shall be used.

(14) According to the estimate by the direction-finding station of the accuracy of the observations, bearings and positions shall be classified as follows–

Bearings–

Class A – accurate within plus or minus 2 degrees;

Class B – accurate within plus or minus 5 degrees;

Class C – accurate within plus or minus 10 degrees; and

Class D – accuracy less than Class C;

Positions–

Class A – accurate within 9.3 km (5 NM);

Class B – accurate within 37 km (20 NM);

Class C – accurate within 92 km (50 NM); and

Class D – accuracy less than Class C.

(15) A direction-finding station shall have authority to refuse to give bearings, heading or positions where conditions are unsatisfactory or where bearings do not fall within the calibrated limits of the station and shall state the reason at the time of refusal.

Part VII

AERONAUTICAL BROADCASTING SERVICE

53. Broadcast material. An originator of a broadcast material shall prepare a text of broadcast material in the form desired for transmission.

54. Frequencies and schedules.—(1) A broadcast station shall make broadcasts on specified frequencies at specified times and the schedules and frequencies of all broadcasts shall be made public in the appropriate documents.

(2) Where the broadcast station makes a change in frequencies or times, the change shall–

(a) be made public by NOTAM at least two weeks before the change; and

(b) be announced on all regular broadcasts for 48 hours preceding the change and shall be transmitted once at the beginning and once at the end of each broadcast, where practicable.

(3) Scheduled broadcasts other than sequential collective type broadcasts, shall be started at the scheduled time by the general call.

(4) A short notice shall be transmitted at the scheduled time, advising recipients to "stand by" and stating the approximate number of minutes of delay where a broadcast is to be delayed.

(5) The broadcast shall not be started until the end of the standby period as stated in sub-regulation (4).

(6) The transmission shall be terminated by each station promptly at the end of the allotted time period whether or not transmission of all material has been completed, where broadcasts are conducted on a time allotment basis.

(7) In sequential collective type broadcasts, each station shall be ready to commence its broadcasts at the designated time and where, for any reason, a station does not commence its broadcast at the designated time, the station immediately following in sequence shall wait and commence its broadcast at its own designated time.

55. Radiotelephone broadcast procedures. An aeronautical broadcasting service shall comply with the radiotelephone broadcast procedures specified in Schedule 8 to these Regulations.

56. Interruption of service.—(1) A broadcast shall be made by another station, if possible, in the event of interruption of service at the station responsible for broadcast, until normal service is resumed.

(2) Where the broadcast in sub-regulation (1) is not possible, and the broadcast is of the type intended for interception by fixed stations, the stations which are required to copy the broadcasts shall continue to listen on the specified frequencies until normal service is resumed.

Part VIII

AERONAUTICAL MOBILE SERVICE – DATA LINK COMMUNICATIONS

57. Composition of data link messages. The composition of data link messages for aeronautical mobile service – data link communication shall be as specified in paragraph 2 of Schedule 9 to these Regulations.

58. Display of data link messages.—(1) Ground and airborne systems shall allow for messages to be appropriately displayed, printed when required and shall be stored in a manner that permits timely and convenient retrieval.

(2) The English language shall be displayed as a minimum whenever textual presentation is required.

59. Controller pilot data link communication procedures. The controller pilot data link communication procedures in aeronautical mobile service – data link communication shall be as specified in paragraph 3 of Schedule 9 to these Regulations.

SCHEDULE 1

(Regulations 11, 32, 33 and 34)

MESSAGE FORMAT — INTERNATIONAL ALPHABET NO. 5 (IA-5)-

1. When it has been agreed between the administrations concerned to use International Alphabet No. 5 (IA-5) the format described in this Schedule shall be used. All messages, other than those prescribed in regulation 48 shall comprise the components specified in sub-paragraphs (1) to (6) inclusive.

Note 1.— An illustration of the IA-5 message format is given in Figure 1-1.

Note 2.— In the subsequent standards relative to message format the following symbols have been used in making reference to the functions assigned to certain signals in IA-5.

Symbol	*Signification*
<	CARRIAGE RETURN (character position 0/13)
≡	LINE FEED (character position 0/10)
→	SPACE (character position 2/0).

(1) The heading shall comprise—

(a) start-of-heading (SOH) character 0/1;

(b) transmission identification comprising—

(i) circuit or link identification; and

(ii) channel-sequence number;

(c) additional service information (if necessary) comprising—

(i) one SPACE; and

(ii) no more than 10 characters.

(d) On point-to-point circuits or links, the identification shall consist of three letters selected and assigned by the transmitting station; the first letter identifying the transmitting, the second letter the receiving end of the circuit, and the third letter the channel. Where only one channel exists, the letter A shall be assigned. Where more than one channel between stations is provided, the channels shall be identified as A, B, C, etc., in respective order. On multipoint channels, the identification shall consist of three letters selected and assigned by the circuit control or master station.

(e) Except as provided in sub-paragraph (1) (f) immediately below three-digit channel- sequence numbers from 001 to 000 (representing 1000) shall be assigned sequentially by telecommunication stations to all messages transmitted directly from one station to another. A separate series of these numbers shall be assigned for each channel and a new series shall be started daily at 0000 hours.

(f) the expansion of the channel-sequence number to preclude duplication of the same numbers during the 24-hour period shall be permitted subject to agreement between the Authorities responsible for the operation of the circuit.

(g) the transmission identification shall be sent over the circuit in the following sequence—

(i) transmitting-terminal letter;

(ii) receiving-terminal letter;

(iii) channel-identification letter;

(iv) channel-sequence number.

(h) Additional service information shall be permitted to be inserted following the transmission identification subject to agreement between the Authorities responsible for the operation of the circuit. Such additional service information shall be preceded by a SPACE (→) followed by not more than 10 characters inserted into the heading of message immediately following the last digit of the channel-sequence number and shall not contain any alignment functions. When no such additional service information is added the information in sub-paragraph (g) shall be followed immediately by that of paragraph (2) immediately below.

(2) The address shall comprise—

(a) alignment function [<≡];

(b) priority indicator;

(i) the priority indicator shall consist of the appropriate two-letter group assigned by the originator in accordance with the following—

Priority indicator	**Message category**
SS	distress messages
DD	urgency messages
FF	flight safety messages
GG	meteorological messages
GG	flight regularity messages
GG	aeronautical information services messages
KK	aeronautical administrative messages, as appropriate service messages

(ii) The order of priority shall be the same as specified in regulation 24.

(c) addressee indicator(s).

(i) An addressee indicator, which shall be immediately preceded by a SPACE, except when it is the first address indicator of the second or third line of addresses, shall comprise—

(aa) the four-letter location indicator of the place of destination;

(bb) the three-letter designator identifying the organisation or function (aeronautical authority, service or aircraft operating agency) addressed;

(cc) an additional letter, which shall represent a department, division or process within the organisation or function addressed. The letter X shall be used to complete the address when explicit identification is not required.

(ii) Where a message is to be addressed to an organisation that has not been allocated an ICAO three-letter designator of the type prescribed in sub-paragraph (3)(c);

(iii) the location indicator of the place of destination shall be followed by the ICAO three-letter designator YYY (or the ICAO three-letter designator YXY in the case of a military service or

organisation). The name of the addressee organisation shall then be included in the first item in the text of the message. The eighth position letter following the ICAO three-letter designator YYY or YXY shall be the filler letter X.

(iv) Where a message is to be addressed to an aircraft in flight and, therefore, requires handling over the AFTN for part of its routing before retransmission over the Aeronautical Mobile Service, the location indicator of the aeronautical station which is to relay the message to the aircraft shall be followed by the ICAO three-letter designator ZZZ. The identification of the aircraft shall then be included in the first item of the text of the message. The eighth position letter following the ICAO three-letter designator ZZZ shall be the filler letter X.

(v) The complete address shall be restricted to three lines of page-printing copy, and, except as provided in paragraph 2, a separate addressee indicator shall be used for each addressee whether at the same or different locations.

(vi) The completion of the addressee indicator group(s) in the address of a message shall be immediately followed by the alignment function.

(vii) Where messages are offered in page-copy form for transmission and contain more addressee indicators than can be accommodated on three lines of a page copy, such messages shall be converted, before transmission, into two or more messages, each of which shall conform with the provisions of sub-paragaph (2)(c)(vi) immediately above. During such conversion, the addressee indicators shall, in so far as practicable, be positioned in the sequence which will ensure that the minimum number of retransmissions will be required at subsequent communication centres.

Message part		Component of the message part	Elements of the component	Teletypewriter character
THE HEADING	HEADING LINE (*see* 4.4.15.1.1)	Start-of-Heading Character	One Character (0/1)	SOH
		Transmission Identification	a) Transmitting-terminal letter b) Receiving-terminal letter c) Channel-identification letter d) Channel-sequence number (*Example:* NRA062)	.....
		(*If necessary*) Additional Service Indication	a) One SPACE b) No more than the remainder of the line (*Example:* 270930)	→
	ADDRESS (*see* 4.4.15.2.1)	Alignment Function	One CARRIAGE RETURN, one LINE FEED	<≡
		Priority Indicator	The relevant 2-letter group	..
		Addressee Indicator(s)	One SPACE An 8-letter group (*Example:* **EGLLZRZX→EGLLYKYX→EGLLACAD**) given in sequence for each addressee	
		Alignment Function(s)	One CARRIAGE RETURN, one LINE FEED	<≡
	ORIGIN (*see* 4.4.15.2.2)	Filing Time	6-digit date-time group specifying when the message was filed for transmission	.....
		Originator Indicator	a) One SPACE b) 8-letter group identifying the message originator	→.....
		Priority Alarm (*used only in teletypewriter operation for Distress Messages*)	Five characters (0/7)(BEL)	
		Optional Heading Information	a) One SPACE b) Additional data not to exceed the remainder of the line. See 4.4.15.2.2.6.	
		Alignment Function	One CARRIAGE RETURN, one LINE FEED	<≡
		Start-of-Text Character	One character (0/2)	STX
TEXT (*see* 4.4.15.3)		Beginning of the Text	Specific identification of Addressee(s) *(if necessary)* *with* each followed by one CARRIAGE RETURN, one LINE FEED *(if necessary)* The English word FROM *(if necessary)*(*see* 4.4.15.3.5) Specific identification of Originator *(if necessary)* The English word STOP followed by one CARRIAGE RETURN, one LINE FEED *(if necessary)* (*see* 4.4.15.3.5) *and/or* Originator's reference *(if used)*	
		Message Text	Message Text with one CARRIAGE RETURN, one LINE FEED at the end of each printed line of the Text except for the last one (*see* 4.4.15.3.6)	
		Confirmation *(if necessary)*	a) One CARRIAGE RETURN, one LINE FEED b) The abbreviation CFM followed by the portion of the Text being confirmed	
		Correction *(if necessary)*	a) One CARRIAGE RETURN, one LINE FEED b) The abbreviation COR followed by the correction of an error made in the preceding Text	
ENDING (*see* 4.4.15.3.12.1)		Alignment Function	One CARRIAGE RETURN, one LINE FEED	<≡
		Page-feed Sequence	One character (0/11)	VT
		End-of-Text character	One character (0/3)	ETX

Figure 1-1. Message format International Alphabet No. 5 (IA-5)

(3) The origin shall comprise—

(a) filing time which shall comprise the 6-digit date-time group indicating the date and time of filing the message for transmission;

(b) originator indicator which shall be immediately preceded by a SPACE and comprise—

(1) the four-letter location indicator of the place at which the message is originated;

(2) the three-letter designator identifying the organisation or

function (aeronautical authority, service or aircraft operating agency) which originated the message;

(3) an additional letter to represent a department, division or process within the organisation or function of the originator and letter X to complete the address when explicit identification is not required;

(c) where a message is originated by an organisation that has not been allocated an ICAO three-letter designator of the type prescribed in sub-paragraph (3)(b) of Schedule 1, the location indicator of the place at which the message is originated shall be followed immediately by the ICAO three-letter designator YYY followed by the filler letter X (or the ICAO three-letter designator YXY followed by the filler letter X in the case of a military service or organisation). The name of the organisation (or military service) shall then be included in the first item in the text of the message.

(d) Messages relayed over the Aeronautical Fixed Telecommunication Network that have been originated in other networks shall use a valid AFTN originator indicator that has been agreed for use by the relay or gateway function linking the AFTN with the external network.

(e) Where a message originated by an aircraft in flight requires handling on the Aeronautical Fixed Telecommunication Network for part of its routing before delivery, the originator indicator shall comprise the location indicator of the aeronautical station responsible for transferring the message to the AFTN, followed immediately by the ICAO three-letter designator ZZZ followed by the filler letter X. The identification of the aircraft shall then be included in the first item in the text of the message.

(f) When necessary, priority alarm shall be used only for distress messages and consist of five successive BEL (0/7) characters;

Note.— Use of the priority alarm will actuate a bell (attention) signal at the receiving teletypewriter station, other than at those fully automatic stations which may provide a similar alarm on receipt of priority indicator SS, thereby alerting supervisory personnel at relay centres and operators at tributary stations, so that immediate attention may be given to the message.

(g) optional heading information that shall be included in the origin line provided a total of 69 characters is not exceeded and subject to agreement between the Administrations concerned. The presence of the optional data field shall be indicated by one occurrence of the

SPACE character immediately preceding optional data alignment function;

(h) start-of-text character, character 0/2 (STX); and

(i) When additional addressing information in a message needs to be exchanged between source and destination addresses, it shall be conveyed in the optional data field (ODF), using the following specific format—

(i) characters one and full stop (1.) to indicate the parameter code for the additional address function;

(ii) three modifier characters, followed by an equal sign (=) and the assigned 8-character ICAO address; and

(iii) the character hyphen (-) to terminate the additional address parameter field.

(iv) When a separate address for service messages or inquiries is different from the originator indicator, the modifier SVC shall be used.

(v) The origin line shall be concluded by an alignment function [<≡] and the start-of-text (STX) (0/2) character.

(4) Text—

(a) The text of messages shall be drafted in accordance with sub-paragraph (6)(h) and shall consist of all data between STX and ETX.

(b) When an originator's reference is used, it shall appear at the beginning of the text, except as provided in sub-paragraphs (f) and (g).

(c) When the ICAO three-letter designators YXY, YYY or ZZZ comprise the second element of the addressee indicator and it, therefore, becomes necessary to identify in the text the specific addressee of the message, such identification group shall precede the originator's reference (if used) and become the first item of the text.

(d) When the ICAO three-letter designators YXY, YYY or ZZZ comprise the second element of the originator indicator and it thus becomes necessary to identify in the text the name of the organisation (or military service) or the aircraft which originated the message, such identification shall be inserted in the first item of the text of the message.

(e) When applying the provisions of sub-paragraphs (f) and (g) to messages where the ICAO three-letter designator(s) YXY, YYY, ZZZ refer to two or more different organisations (or military services), the sequence of further identification in the text shall correspond to the complete sequence used in the address and originator indicator of the message. In such instance, each addressee identification shall be followed immediately by an alignment function. The name of the (YXY, YYY or ZZZ) organisation originating the message shall then be preceded with "FROM". "STOP" followed by an alignment function shall then be included in the text at the end of this identification and preceding the remainder of text.

(f) An alignment function shall be transmitted at the end of each printed line of the text. When it is desired to confirm a portion of the text of a message in teletypewriter operation, such confirmation shall be separated from the last text group by an alignment function [<≡] and shall be indicated by the abbreviation CFM followed by the portion being confirmed.

(g) Where messages are prepared off-line, e.g. by preparation of a paper tape, errors in the text shall be corrected by backspacing and replacing the character in error by character DEL (7/15).

(h) Corrections to textual errors made in on-line operations shall be corrected by inserting →E→E→E→ following the error, then retyping the last correct word (or group).

(i) When it is not discovered until later in the origination process that an error has been made in the text, the correction shall be separated from the last text group, or confirmation, if any, by an alignment function [<≡]. This shall be followed by the abbreviation COR and the correction.

(j) Stations shall make all indicated corrections on the page-copy prior to local delivery or a transfer to a manually operated circuit.

(k) When messages are transmitted only on low-speed circuits, the text of messages entered by the AFTN origin station shall not exceed 1 800 characters in length. AFTN messages exceeding 1 800 characters shall be entered by the AFTN origin station in the form of separate messages.

Note 1. — Low-speed circuits operate at 300 bits per second or less.

Note 2. — The character count includes all printing and non-printing characters in the text from, but not including, the start-of-text signal to, but not including, the first alignment function of the ending.

(l) The transmission on medium- or high-speed circuits of AFTN messages with text exceeding 1 800 characters that have not been entered by the AFTN origin station in the form of separate messages shall be subject to agreement between the administrations concerned and not diminish the performance characteristics of the network or link.

Note 1. — Medium-speed circuits operate at speeds in the range between 300 and 3 000 bits per second. High-speed circuits operate at speeds in excess of 3 000 bits per second.

Note 2.— The character count includes all printing and non-printing characters in the text from, but not including,

(5) Ending—

(a) The ending of a message shall comprise the following in the order stated:

(i) an alignment [<≡] function following the last line of text;

(ii) page-feed character, character 0/11 (VT);

(iii) end-of-text character 0/3 (ETX).

(b) Station terminal equipment (page printers) on the International Alphabet Number 5 (IA-5) shall be provided with a capability to generate sufficient line feed functions for local station use upon the reception of a VERTICAL TAB character (0/11).

(c) When the message does not transit ITA-2 portions of the AFTN, or where Administrations have made provisions to add automatically the second carriage return before transmission to an ITA-2 circuit, one carriage return in the alignment function and end-of-line function shall be permitted subject to agreement between the administrations concerned.

(d) Messages entered by the AFTN origin station shall not exceed 2 100 characters in length, when transmitted only on low-speed circuits.

Note 1.— Low-speed circuits operate at 300 bits per second or less.

Note 2.— The character count includes all printing and nonprinting characters in the message from and including the start-of-heading character (SOH) to and including the end-of-text character.

(e) The transmission on medium- or high-speed circuits of AFTN messages exceeding 2 100 characters that have not been entered by the AFTN origin station in the form of separate messages shall be subject to agreement between the Administrations concerned and not diminish the performance characteristics of the network or link.

Note 1.— Medium-speed circuits operate at speeds in the range between 300 and 3 000 bits per second. High-speed circuits operate at speeds in excess of 3 000 bits per second.

Note 2.— The character count includes all printing and non-printing characters in the message from and including the start-of-heading character (SOH) to and including the end-of-text character.

(f) Except as provided in sub-paragraphs (6)(h) to (6)(k), the procedures of regulations 50 to 52 shall be used for messages using IA-5 code.

(g) The transmission of message texts that do not require conversion to the IA-2 code and format and with message lines containing more than 69 printable and non-printable characters shall be subject to agreement between the Administrations concerned

(h) Channel-check transmissions- In the case where continuous control of channel condition is not provided the following periodic transmissions shall be sent on teletypewriter circuits—

(i) heading line; S

(ii) alignment function T; X

(iii) the procedure signal CH; E

(iv) alignment function T. X

(i) A receiving station shall check the transmission identification of the incoming transmission specified in sub-paragraph (h) to ensure its correct sequence in respect of all messages received over that incoming channel.

Note.— Application of this procedure provides some measure of assurance that channel continuity is maintained; however, a continuously controlled channel is much more preferable in that data integrity can also be improved.

(j) Where a circuit is unoccupied and uncontrolled, the transmission identified in sub-paragraph (6)(h) shall be sent at H + 00, H + 20, H + 40.

(k) The receipt of distress messages (priority indicator SS) shall be individually acknowledged by the AFTN destination station by sending a service message to the AFTN origin station. Such acknowledgement of receipt shall take the format of a complete message addressed to the AFTN origin station, shall be assigned priority indicator SS and the associated priority alarm, and shall have a text comprising:

(i) the procedure signal R;

(ii) the origin line without priority alarm, or optional heading information of the message being acknowledged;

(iii) the ending.

Note.— The following example illustrates the application of the sub-paragraph (6)(k) *procedures:*

Heading

<≡ SS → LECBZRZX <≡
121322 → EGLLYFYX (Priority Alarm) <≡
S
TR → 121319 → LECBZRZX <≡
X

Ending.

Action taken on mutilated messages in IA-5 detected in computerised AFTN relay stations

2. (1) On channels employing continuous control the mutilation detection and subsequent recovery shall be a function of the link control procedures and shall not require the subsequent sending of service or CHECK TEXT NEW ENDING ADDED messages.

(2) On channels not employing continuous control the relay station shall employ the following procedures—

(a) If, during the reception of a message a relay station detects that the message has been mutilated at some point ahead of the end-of-text character, it shall;

(i) cancel the onward routing responsibility for the message; and

(ii) send a service message to the transmitting station requesting a retransmission.

Note.— The following example illustrates a typical text of a service message in which the foregoing procedure has been applied in respect of a mutilated message:

SVC→QTA→RPT→ABC 123

(b) When the provisions of sub-paragraph (2)(a) are applied, the station receiving the service message shall reassume responsibility for the referenced message with a new (correct in sequence) transmission identification. If that station is not in possession of an unmutilated copy of the original message, it shall send a message to the originator as identified by the originator indicator in the origin of the mutilated message, requesting repetition of the incorrectly received message.

Note.— The following example illustrates a typical text of a service message in which the foregoing procedure has been applied in respect of a mutilated message having as its origin "141335 CYULACAX":
SVC→QTA→RPT→141335→CYULACAX (ending)

(3) If, after transmission of the text material of a message, a relay station can detect that there is no complete end-of-text character, but has no practical means of discovering whether the irregularity has affected only the end-of-text character, or whether it has also caused part of the original text to have been lost, it shall insert into the channel the following—

(a) <≡CHECK≡TEXT≡

NEW→ENDING→ADDED

(b) its own station identification;

(c) (ending).

Transfer of AFTN messages over code and byte independent circuits and networks

3. (1) When AFTN messages are transferred across code and byte independent circuits and networks of the AFS, the following shall apply.

(a) Except as provided in sub-paragraph (1) (c) the heading line of the message shall be omitted. The message shall start with an alignment function followed by the address.

(b) The message shall end with a complete ending.

(c) For the purposes of technical supervision, entry centres shall be permitted to insert additional data preceding the first alignment function and/or following the ending of the message.

(d) When the provisions of sub-paragraph (1) (c) above are applied, the data added shall not include ither carriage return or line feed characters or any of the combinations listed in paragraph 1 (3) of Schedule 1 to these Regulations.

SCHEDULE 2

(regulations 19 and 35)

MATERIAL PERMITTED IN AFS MESSAGES

Material permitted in AFS messages

Note.— The provisions contained in this Schedule do not apply to ATS voice communications.

(1) The following characters are allowed in text messages—

Letters: ABCDEFGHIJKLMNOPQRSTUVWXYZ

Figures: 1 2 3 4 5 6 7 8 9 0

Other signs:

- (hyphen)
? (question mark)
: (colon)
((open bracket)
) (close bracket)
. (full stop, period, or decimal point)
, (comma)
' (apostrophe)
= (double hyphen or equal sign)
/ (oblique)
+ (plus sign)

Characters other than those listed above shall not be used in messages unless absolutely necessary for understanding of the text. When used, they shall be spelled out in full.

(2) For the exchange of messages over the teletypewriter circuits, the following characters of International Alphabet No. 5 (IA-5) shall be permitted—

—characters 0/1 to 0/3, 0/7 — in the priority alarm, 0/10, 0/11— in the ending sequence, 0/13;

—characters 2/0, 2/7 to 2/9, 2/11 to 2/15;

—characters 3/0 to 3/10, 3/13, 3/15;

—characters 4/1 to 4/15;

—characters 5/0 to 5/10; and

—character 7/15.

(a) The foregoing provisions are not intended to prevent the use of the full IA-5 after agreement between the administrations concerned.

(3) Roman numerals shall not be employed. If the originator of a message wishes the addressee to be informed that roman figures are intended, the Arabic figure or figures shall be written and preceded by the word ROMAN.

(4) Messages using IA-5 shall not contain—

(i) character 0/1 (SOH) other than the one in the heading;

(ii) character 0/2 (STX) other than the one in the origin line;

(iii) character 0/3 (ETX) other than the one in the ending;

(iv) any uninterrupted sequence of characters 5/10, 4/3, 5/10, 4/3 in this order (ZCZC);

(v) any uninterrupted sequence of characters 2/11, 3/10, 2/11, 3/10 in this order (+:+:);

(vi) any uninterrupted sequence of four times character 4/14 (NNNN); and

(vii) any uninterrupted sequence of four times character 2/12 (,,,,).

(5) The text of messages shall be drafted in plain language or in abbreviations and codes as prescribed in regulation 33. The originator shall avoid the use of plain language when reduction in the length of the text by appropriate abbreviations and codes is practicable. Words and phrases which are not essential, such as expressions of politeness, shall not be used.

(6) If the originator of a message wishes alignment functions [<≡] to be transmitted at specific places in the text part of such message, the sequence [<≡] shall be written on each of those places.

SCHEDULE 3

(regulations 26 and 27)

MESSAGE ROUTING

Routing of messages

1. (1) All communications shall be routed by the most expeditious route available to effect delivery to the addressee.

(2) Predetermined diversion routing arrangements shall be made, when necessary, to expedite the movement of communication traffic. Each communication centre shall have the appropriate diversion routing lists, agreed to by the administration(s) operating the communication centres affected and shall use them when necessary.

(3) For purposes of sub-paragraph (2), diversion routing shall be initiated—

(a) in a fully automatic communication centre—

(i) immediately after detection of the circuit outage, when the traffic is to be diverted via a fully automatic communication centre;

(ii) within a 10-minute period after detection of the circuit outage, when the traffic is to be diverted via a non-fully automatic communication centre; and

(b) in a non-fully automatic communication centre within a 10-minute period after detection of the circuit outage.

(4) As soon as it is apparent that it will be impossible to dispose of traffic over the AFS within a reasonable period, and when the traffic is held at the station where it was filed, the originator shall be consulted regarding further action to be taken, unless—

(a) otherwise agreed between the station concerned and the originator; or

(b) arrangements exist whereby delayed traffic is automatically diverted to commercial telecommunication services without reference to the originator.

Note.— The expression "reasonable period" means a period of time such that it seems probable that the traffic will not be delivered to the addressee within any fixed transit period applicable to the category of traffic concerned, or, alternatively, any predetermined period agreed between originators and the telecommunication station concerned.

Supervision of message traffic

2. (1) Continuity of message traffic. The receiving station shall check the transmission identification of incoming transmissions to ensure the correct sequence of channel sequence numbers of all messages received over that channel.

(a) When the receiving station detects that one or more channel-sequence numbers are missing, it shall send a complete service message to the previous station rejecting receipt of any message that may have been transmitted with such missing number(s). The text of this service message shall comprise the signal QTA, the procedure signal MIS followed by one or more missing transmission.

Note.— The following examples illustrate application of the above-mentioned procedure. In example 2) the hyphen (-) separator is understood to mean "through" in plain language.

(1) *when one channel-sequence number is missing—*

SVC→QTA→MIS→ABC↑123↓<≡

(2) *when several channel-sequence numbers are missing—*

SVC→QTA→MIS→ABC↑123-126↓<≡

(b) When the provisions of sub-paragraph (a) are applied, the station notified of the missing message(s) condition by the service message shall reassume its responsibility for transmission of the message (or messages) that it had previously transmitted with the transmission identification concerned, and shall retransmit that message (or those messages) with a new (correct in sequence) transmission identification. The receiving station shall synchronise such that the next expected channel-sequence number is the last received channel-sequence number plus one.

(c) When the receiving station detects that a message has a channel sequence number less than that expected, it shall advise the previous station using a service message with a text comprising—

(i) the abbreviation SVC;

(ii) the procedure signal LR followed by the transmission identification of the received message;

(iii) the procedure signal EXP followed by the transmission identification expected; and

(iv) the end-of-text signal.

Note.— The following example illustrates application of the above- mentioned procedure:

SVC→LR→ABC↑123→↓EXP→ABC↑135↓<≡

(d) When the provisions of sub-paragraph (c) are applied, the station receiving the out-of sequence message shall synchronise such that the next expected channel-sequence number is the last received channel-sequence number plus one. The previous station shall check its outgoing channel-sequence numbers and, if necessary, correct the sequence.

Misrouted messages

3. *Note.— A message is considered to have been misrouted is it contains no relaying instructions, expressed or implied, on which the receiving station can take action.*

(1) When the receiving station detects that a message has been misrouted to it, it shall either—

(a) send a service message to the previous station rejecting receipt of the misrouted message; or

(b) itself assume responsibility for transmission of the message to all addressee indicators.

Note.— The procedure of sub-paragraph (1)(a) immediately above may be preferred at stations using fully automatic relay methods or a semi-automatic relay technique without continuous tape.

(2) When the provisions of sub-paragraph (1) are applied, the text of the service message shall comprise the abbreviation SVC, the signal QTA, the procedure signal MSR followed by the transmission identification and of the misrouted message and the end-of-text signal.

Note.— The following example illustrates application of the above-mentioned procedure:

SVC→QTA→MSR→ABC↑123↓<≡

(3) When, as a result of the provisions of sub-paragraph (2), a sending

station is notified of the misrouted message condition by service message, it shall reassume its responsibility for the message and shall retransmit as necessary on the correct outgoing channel or channels.

(4) When a circuit becomes interrupted and alternative facilities exist, the last channel-sequence numbers sent and received shall be exchanged between the stations concerned. Such exchanges shall take the form of complete service messages with the text comprising the abbreviation SVC, the procedure signals LR and LS followed by the transmission identifications of the relevant messages and the end-of-text signal.

Note.— The following example illustrates application of the above-mentioned procedure:
SVC→LR→ABC↑123↓→LS→BAC↑321↓<≡

Failure of communications

4. (1) Where communication on any fixed service circuit fails, the station concerned shall attempt to re-establish contact as soon as possible.

(2) If contact cannot be re-established within a reasonable period on the normal fixed service circuit, an appropriate alternative circuit shall be used and attempts shall be made to establish communication on any other authorised fixed service circuit available.

(3) If the attempts in sub-paragraphs (1) and (2) fail, use of any available air-ground frequency shall be permitted only as an exceptional and temporary measure when no interference to aircraft in flight is ensured.

(4) Where a radio circuit fails due to signal fadeout or adverse propagation conditions, a receiving watch shall be maintained on the regular fixed service frequency normally in use. In order to re-establish contact on this frequency as soon as possible there shall be transmitted—

(a) the procedure signal DE;

(b) the identification of the transmitting station transmitted three times;

(c) the alignment function [<≡];

(d) the letters RY repeated without separation for three lines of page copy;

(e) the alignment function [<≡]; and

(f) end-of-message signal (NNNN). The foregoing sequence shall be repeated as required.

(5) A station experiencing a circuit or equipment failure shall promptly notify other stations with which it is in direct communication if the failure will affect traffic routing by those stations. Restoration to normal shall also be notified to the same stations.

(6) Where diverted traffic will not be accepted automatically or where a predetermined diversion routing has not been agreed, a temporary diversion routing shall be established by the exchange of service messages. The text of such service messages shall comprise—

(a) the abbreviation SVC;

(b) the procedure signal QSP;

(c) if required, the procedure signal RQ, NO or CNL to request, refuse or cancel a diversion;

(d) identification of the routing areas, States, territories, locations, or stations for which the diversion applies; and

(e) the end-of-text signal.

Note.— The following examples illustrate application of the above-mentioned procedures—

(a) to request a diversion: SVC→QSP→RQ→C→K→BG→BI↓<≡

(b) to accept a diversion: SVC→QSP→C→K→BG→BI↓<≡

(c) to refuse a diversion: SVC→QSP→NO→C→K→BG→BI↓<≡

(d) to cancel a diversion: SVC→QSP→CNL→C→K→BG→BI↓<≡

SCHEDULE 4

(regulation 36)

ATS MESSAGE HANDLING SERVICES (ATSMHS) AND INTER-CENTRE COMMUNICATIONS (ICC)

ATS MESSAGE HANDLING SERVICES (ATSMHS)

(1) The ATS message service of the ATS (air traffic services) message handling service (ATSMHS) application shall be used to exchange ATS messages between users over the Aeronautical Telecommunication Network (ATN) internet.

Note: Connections may be established over the internet communications service between any pair constituted of these ATN end systems as shown in Table 4-1.

Table 4-1: Communications between ATN end systems implementing ATS message handling services

ATN End System 1	ATN End System 2
ATS Message Server	ATS Message Server
ATS Message Server	AFTN / AMHS Gateway
ATS Message Server	ATS Message User Agent
AFTN/AMHS Gateway	AFTN / AMHS Gateway

Inter-Centre Communications (ICC)

(2) The inter-centre communications (ICC) applications set shall be used to exchange ATS messages between air traffic service users over the ATN internet.

Note 1.— The ICC applications set enables the exchange of information in support of the following operational services—

(a) flight notification;

(b) flight coordination;

(c) transfer of control and communications;

(d) flight planning;

(e) airspace management; and

(f) air traffic flow management.

Note 2.— The first of the applications developed for the ICC set is the ATS interfacility data communication (AIDC).

Note 3.— The AIDC application exchanges information between ATS units (ATSUs) for support of critical air traffic control (ATC) functions, such as notification of flights approaching a flight information region (FIR) boundary, coordination of boundary conditions and transfer of control and communications authority.

Note 4.— The AIDC application is strictly an ATC application for exchanging tactical control information between ATS units. It does not support the exchange of information with other offices or facilities.

Note 5.— The AIDC application supports the following operational services—

(a) flight notification;

(b) flight coordination;

(c) transfer of executive control;

(d) transfer of communications; and

(e) transfer of general information (flight-related data or free text messages, i.e. unstructured).

SCHEDULE 5

(regulation 40)

AERONAUTICAL MOBILE SERVICE — VOICE COMMUNICATIONS

Categories of messages in aeronautical mobile service — voice communications

1. The categories of messages handled by the aeronautical mobile service and the order of priority in the establishment of communications and the transmission of messages shall be in accordance with the following table.

Table 5-1: Categories of Messages

	Message category and order of priority	**Radiotelephony signal**
a)	Distress call, distress messages and distress traffic	MAYDAY
b)	Urgency messages, including messages preceded by the medical transports signals	PAN, PAN or PAN, PAN MEDICAL
c)	Communications relating to direction finding	-
d)	Flight safety messages	-
e)	Meteorological messages	-
f).	Flight regulatory messages	-

SCHEDULE 6

(regulation 48)

RADIOTELEPHONY PROCEDURES

General

1. When a controller or pilot communicates via voice, the response shall be via voice. Except when a controller or pilot communicates via controller-pilot data link communications (CPDLC), the response shall be via controller-pilot data link communications.

Language to be used

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

(2) The English language shall be available, on request from any aircraft station, at all stations on the ground serving designated airports and routes used by international air services.

(3) The languages available at a given station on the ground shall form part of the Aeronautical Information Publications (AIP) and other published aeronautical information concerning such facilities.

(4) When proper names, service abbreviations and words of which the spelling is doubtful are spelled out in radiotelephony the alphabet in Figure 6-1 shall be used.

Letter	Word	Approximate pronunciation	
		International Phonetic Convention	Latin alphabet representation
A	Alfa	'ælfa	AL FAH
B	Bravo	'bra:'vo	BRAH VOH
C	Charlie	'tʃɑ:li *or* 'ʃɑ:li	CHAR LEE *or* SHAR LEE
D	Delta	'deltɑ	DELL TAH
E	Echo	'eko	ECK OH
F	Foxtrot	'fɔkstrɔt	FOKS TROT
G	Golf	gʌlf	GOLF
H	Hotel	ho:'tel	HO TELL
I	India	'indi·ɑ	IN DEE AH
J	Juliett	'dʒu:li·'et	JEW LEE ETT
K	Kilo	'ki:lo	KEY LOH
L	Lima	'li:mɑ	LEE MAH
M	Mike	mɑik	MIKE
N	November	no'vembə	NO VEM BER
O	Oscar	'ɔskɑ	OSS CAH
P	Papa	pə'pɑ	PAH PAH
Q	Quebec	ke'bek	KEH BECK
R	Romeo	'ro:mi·o	ROW ME OH
S	Sierra	si'erɑ	SEE AIR RAH
T	Tango	'tængo	TANG GO
U	Uniform	'ju:nifɔ:m *or* 'u:nifɔrm	YOU NEE FORM *or* OO NEE FORM
V	Victor	'viktɑ	VIK TAH
W	Whiskey	'wiski	WISS KEY
X	X-ray	'eks'rei	ECKS RAY
Y	Yankee	'jænki	YANG KEY
Z	Zulu	'zu:lu:	ZOO LOO

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

Figure 6-1: illustration of service abbreviations and words.

Transmission of numbers

3. All transmission of numbers, except as prescribed in sub-paragraphs (2) to (6) shall be transmitted by pronouncing each digit separately.

The following examples illustrate the application of this procedure

Figure 6-2: Illustration of transmission of numbers except as prescribed in paragraphs 7 and 8

aircraft call signs	*transmitted as*
CCA 238	Air China **two three eight**
OAL 242	Olympic **two four two**
headings	*transmitted as*
100 degrees	heading **one zero zero**
080 degrees	heading **zero eight zero**
wind direction and speed	*transmitted as*
200 degrees 70 knots	wind **two zero zero** degrees **seven zero** knots
160 degrees 18 knots gusting 30 knots	wind **one six zero** degrees **one eight** knots gusting **three zero** knots
runway	*transmitted as*
27	runway **two seven**
30	runway **three zero**

(2) Flight levels shall be transmitted by pronouncing each digit separately except for the case of flight levels in whole hundreds, which shall be transmitted by pronouncing the digit of the whole hundred followed by the word HUNDRED.

Figure 6-3. Example of Flight Level Transmission

Flight Levels	**Transmitted as**
FL180	flight level **one eight zero**
FL 200	flight level **two hundred**

(3) The altimeter setting shall be transmitted by pronouncing each digit separately except for the case of a setting of 1 000 hPa which shall be transmitted as ONE THOUSAND.

Figure 6-4 Example of Altimeter setting Transmission

altimeter setting	*transmitted as*
1009	QNH **one zero zero nine**
1000	QNH **one thousand**
993	QNH **nine nine three**

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

Figure 6-5; Example of transmission of numbers of transponder code

transponder codes	*transmitted as*
2400	squawk **two four zero zero**
1000	squawk **one thousand**
2000	squawk **two thousand**

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

Figure 6-6: Example of transmission of numbers of altitude, cloud height, visibility and RVR.

altitude	*transmitted as*
800	**eight hundred**
3400	**three thousand four hundred**
12000	**one two thousand**
cloud height	*transmitted as*
2200	**two thousand two hundred**
4300	**four thousand three hundred**
visibility	*transmitted as*
1000	visibility **one thousand**
700	visibility **seven hundred**
runway visual range	*transmitted as*
600	RVR **six hundred**
1700	RVR **one thousand seven hundred**

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

(7) Numbers containing a decimal point shall be transmitted as prescribed in sub-paragraph (1) with the decimal point in appropriate sequence being indicated by the word DECIMAL.

Note 1.— The following examples illustrate the application of this procedure—

Number	*Transmitted as*
100.3 ONE	ZERO ZERO DECIMAL THREE,
38143.9	THREE EIGHT ONE FOUR THREE DECIMAL NINE

(8) When transmitting time, only the minutes of the hour shall normally be required. Each digit shall be pronounced separately. However, the hour shall be included when any possibility of confusion is likely to result.

Time	*Statement*
0920 *(9:20 A.M.)*	TOO ZE-RO *or* ZE-RO NIN-er TOO ZE-RO
1643 (4:43 P.M.)	FOW-er TREE *or* WUN SIX FOW-er TREE

Verification and pronunciation of numbers

4. (1) When it is desired to verify the accurate reception of numbers the person transmitting the message shall request the person receiving the message to read back the numbers.

(2) When the language used for communication is English, numbers shall be transmitted using the following pronunciation—

Figure 6-7 Illustration of communication of numbers in English

Numeral or numeral element	*Pronunciation*
0	ZE-RO
1	WUN
2	TOO
3	TREE
4	FOW-er
5	FIFE
6	SIX
7	SEV-en
8	AIT
9	NIN-er
Decimal	DAY-SEE-MAL
Hundred	HUN-dred
Thousand	TOU-SAND

Note.— The syllables printed in capital letters in the above list are to be stressed; for example, the two syllables in ZE-RO are given equal emphasis, whereas the first syllable of FOW-er is given primary emphasis.

Transmission techniques

5. (1) Each written message shall be read prior to commencement of transmission in order to eliminate unnecessary delays in communications.

(2) Transmissions shall be conducted concisely in a normal conversational tone.

(3) Speech transmitting technique shall be such that the highest possible intelligibility is incorporated in each transmission. Fulfilment of this aim requires that air crew and ground personnel shall—

(a) enunciate each word clearly and distinctly;

(b) maintain an even rate of speech not exceeding 100 words per minute. When a message is transmitted to an aircraft and its contents need to be recorded the speaking rate shall be at a slower rate to allow for the writing process. A slight pause preceding and following numerals makes them easier to understand;

(c) maintain the speaking volume at a constant level;

(d) be familiar with the microphone operating techniques particularly in relation to the maintenance of a constant distance from the microphone if a modulator with a constant level is not used; and

(e) suspend speech temporarily if it becomes necessary to turn the head away from the microphone.

(4) Speech transmitting technique shall be adapted to the prevailing communications conditions.

(5) Messages accepted for transmission shall be transmitted in plain language or ICAO phraseologies without altering the sense of the message in any way. Approved ICAO abbreviations contained in the text of the message to be transmitted to aircraft shall normally be converted into the unabbreviated words or phrases which these abbreviations represent in the language used, except for those which, owing to frequent and common practice, are generally understood by aeronautical personnel.

(6) To expedite communication, the use of phonetic spelling shall be dispensed with, if there is no risk of this affecting correct reception and intelligibility of the message.

(7) The transmission of long messages shall be interrupted momentarily from time to time to permit the transmitting operator to confirm that the frequency in use is clear and, if necessary, to permit the receiving operator to request repetition of parts not received.

(8) The following words and phrases shall be used in radiotelephony communications as appropriate and shall have the meaning ascribed hereunder:

Phrase	*Meaning*
ACKNOWLEDGE	"Let me know that you have received and understood this message."
AFFIRM	"Yes."
APPROVED	"Permission for proposed action granted."
	"I hereby indicate the separation between portions of the message."
(To be used where there is no clear distinction between the text and other portions of the message.)	
BREAK BREAK	"I hereby indicate the separation between messages transmitted to different aircraft in a very busy environment."
CANCEL	"Annul the previously transmitted clearance."
CHECK	"Examine a system or procedure."
(Not to be used in any other context. No answer is normally expected.)	
CLEARED	"Authorized to proceed under the conditions specified."
CONFIRM	"I request verification of: (clearance, instruction, action, information)."
CONTACT	"Establish communications with..."
CORRECT	"True" or "Accurate".
CORRECTION	"An error has been made in this transmission (or message indicated). The correct version is..."
DISREGARD	"Ignore."
HOW DOYOU READ	"What is the readability of my transmission?"
ISAY AGAIN	"I repeat for clarity or emphasis."
MAINTAIN	"Continue in accordance with the condition(s) specified" or in its literal sense, e.g. "Maintain VFR".
MONITOR	"Listen out on (frequency)."

NEGATIVE	"No" or "Permission not granted" or "That is not correct" or "Not capable".
OVER	"My transmission is ended, and I expect a response from you."

Note.— Not normally used in VHF or satellite voice communications.

OUT	"This exchange of transmissions is ended and no response is expected."

Note.— Not normally used in VHF or satellite voice communications.

READ BACK	"Repeat all, or the specified part, of this message back to me exactly as received."
RECLEARED	"A change has been made to your last clearance and this new clearance supersedes your previous clearance or part thereof."
REPORT	"Pass me the following information..."
REQUEST	"I should like to know..." or "I wish to obtain..."
ROGER	"I have received all of your last transmission."

Note.— Under no circumstances to be used in reply to a question requiring "READ BACK" or a direct answer in the affirmative (AFFIRM) or negative (NEGATIVE).

SAY AGAIN	"Repeat all, or the following part, of your last transmission."
SPEAK SLOWER	"Reduce your rate of speech."

Note.— For normal rate of speech.

STANDBY	"Wait and I will call you."

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

UNABLE	"I cannot comply with your request, instruction, or clearance."

Note.— UNABLE is normally followed by a reason.

WILCO	(Abbreviation for "will comply".) "I understand your message and will comply with it."

WORDS TWICE

(a) As a request: "Communication is difficult. Please send every word, or group of words, twice."

(b) As information: "Since communication is difficult, every word, or group of words, in this message will be sent twice."

Composition of Messages

6. (1) Messages handled entirely by the aeronautical mobile service shall comprise the following parts in the order stated—

(a) call indicating the addressee and the originator; and

(b) text.

Note.— The following examples illustrate the application of this procedure—

(call) NEW YORK RADIO SWISSAIR ONE ONE ZERO
(text) REQUEST SELCAL CHECK
or
(call) SWISSAIR ONE ONE ZERO NEW YORK RADIO
(text) CONTACT SAN JUAN ON FIVE SIX

(2) Messages requiring handling by the AFTN for part of their routing and similarly messages which are not handled in accordance with predetermined distribution arrangements shall be composed as follows—

(3) When originated in an aircraft—

(a) call;

(b) the word FOR;

(c) the name of the organisation addressed;

(d) the name of the station of destination; and

(e) the text.

(4) The text shall be as short as practicable to convey the necessary information; full use shall be made of ICAO phraseologies.

Note.— The following example illustrates the application of this procedure:

(call) BOSTON RADIO SWISSAIR ONE TWOEIGHT
(address) FOR SWISSAIR BOSTON
(text) NUMBER ONE ENGINE CHANGE REQUIRED

(5) When addressed to an aircraft. When a message is retransmitted by an aeronautical station to an aircraft in flight, the heading and address of the AFTN message format shall be omitted during the retransmission on the aeronautical mobile service.

(6) When the provisions of sub-paragraph (5) directly above are applied, the aeronautical mobile service message transmission shall comprise—

(a) the text [incorporating any corrections (COR) contained in the AERONAUTICAL FIXED TELECOMMUNICATION NETWORK message];

(b) the word FROM;

(c) the name of the originating organisation and its location (taken from the origin section of the AFTN message).

(7) When the text of a message to be transmitted by an aeronautical station to an aircraft in flight contains approved ICAO abbreviations, these abbreviations shall normally be converted during the transmission of the message into the unabbreviated words or phrases which the abbreviations represent in the language used, except for those which, owing to frequent or common practice, are generally understood by aeronautical personnel.

Radiotelephony call signs for aeronautical stations

7. (1) Aeronautical stations in the aeronautical mobile service shall be identified by—

(a) the name of the location; and

(b) the unit or service available.

(2) The unit or service shall be identified in accordance with the table below except that the name of the location or the unit or service may be omitted provided satisfactory communication has been established.

Unit/ service available	**Call Sign suffix**
area control centre	CONTROL
approach control	APPROACH

approach control radar arrivals	ARRIVAL
approach control radar departures	DEPARTURE
aerodrome control	TOWER
surface movement control	GROUND
radar (in general)	RADAR
precision approach radar	PRECISION
direction finding station	HOMER
flight information service	INFORMATION
clearance delivery	DELIVERY
apron control	APRON
company dispatch	DISPATCH
aeronautical station	RADIO

Radiotelephony call signs for aircraft

8. (1) An aircraft radiotelephony call sign shall be one of the following types—

(a) Type a) — the characters corresponding to the registration marking of the aircraft; or

(b) Type b) — the telephony designator of the aircraft operating agency, followed by the last four characters of the registration marking of the aircraft; and

(c) Type c) — the telephony designator of the aircraft operating agency, followed by the flight identification.

*Note 1.— The name of the aircraft manufacturer or of the aircraft model may be used as a radiotelephony prefix to the Type a) call sign (*see *Table 5-1).*

Note 2.— The telephony designators referred to in Types b) and c) are contained in Doc 8585 — Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services.

Note 3.— Any of the foregoing call signs may be inserted in field 7 of the ICAO flight plan as the aircraft identification. Instructions on the completion of the flight plan form are contained in the PANS-ATM (Doc 4444).

(2) The aircraft radiotelephony call signs shown in sub-paragraph 8(1) directly above, with the exception of Type c), may be abbreviated in the circumstances prescribed in paragraph 10 (1). Abbreviated call signs shall be in the following form—

(a) Type a) — the first character of the registration and at least the last two characters of the call sign;

(b) Type b) — the telephony designator of the aircraft operating agency, followed by at least the last two characters of the call sign; and

(c) Type c) — no abbreviated form.

Table 5-1: Examples of full call signs and abbreviated call signs

		Type a)		*Type b)*	*Type c)*
Full call sign	N 57826	*CESSNA FABCD	*CITATION FABCD	VARIG PVMA	SCANDINAVIAN 937
Abbreviated call sign	N26 or N826	CESSNA CD or CESSNA BCD	CITATION CD or CITATION BCD	VARIG MA or VARIG VMA	(no abbreviated form)

Note.— Either the name of the aircraft manufacturer or of the aircraft model may be used in place of the first character in Type a).

Radiotelephony procedures

9. (1) An aircraft shall not change the type of its radiotelephony call sign during flight, except temporarily on the instruction of an air traffic control unit in the interests of safety.

(2) Except for reasons of safety no transmission shall be directed to an aircraft during take-off, during the last part of the final approach or during the landing roll.

(3) Full radiotelephony call signs shall always be used when establishing communication. The calling procedure of an aircraft establishing communication shall be in accordance with Table 5-2.

Table 5-2 Radiotelephony calling procedure

	Type a)	*Type b)*	*Type c)*
Designation of the station called	NEW YORK RADIO	NEW YORK RADIO	NEW YORK RADIO
Designation of the station calling	GABCD**	SPEEDBIRD ABCD**	AEROFLOT 321**

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

** *With the exception of the telephony designators and the type of aircraft, each character in the call sign shall be spoken separately. When individual letters are spelled out, the radiotelephony spelling alphabet prescribed in Sub-paragraph 2.(4) shall be used. Numbers are to be spoken in accordance with Paragraph 3*

(4) Stations having a requirement to transmit information to all stations likely to intercept shall preface such transmission by the general call ALL STATIONS, followed by the identification of the calling station.

(5) The reply to the above calls shall be in accordance with Table 5-3. The use of the calling aeronautical station's call sign followed by the answering aeronautical station's call sign shall be considered the invitation to proceed with transmission by the station calling.

Table 5-3. Radiotelephony reply procedure

Table 5-3. Radiotelephony reply procedure **(*see* paragraph 9(5))**

	Type a)	*Type b)*	*Type c)*
Designation of the station called	GABCD*	SPEEDBIRD ABCD*	AEROFLOT 321*
Designation of the answering station	NEW YORK RADIO	NEW YORK RADIO	NEW YORK RADIO

* *With the exception of the telephony designators and the type of aircraft, each character in the call sign shall be spoken separately. When individual letters are spelled out, the radiotelephony spelling alphabet prescribed in Sub-paragraph 2.(4) shall be used. Numbers are to be spoken in accordance with Paragraph 3.*

(6) When a station is called but is uncertain of the identification of the calling station, it shall reply by transmitting the following—

STATION CALLING . . . (station called) SAY AGAIN YOUR CALL SIGN

Note.— The following example illustrates the application of this procedure:

(CAIRO station replying)

STATION CALLING CAIRO *(pause)* SAY AGAIN YOUR CALL SIGN

(7) Communications shall commence with a call and a reply when it is desired to establish contact, except that, when it is certain that the station called will receive the call, the calling station may transmit the message, without waiting for a reply from the station called.

(8) Interpilot air-to-air communication shall be established on the air-to-air channel 123.45 MHz by either a directed call to a specific aircraft station or a general call, taking into account conditions pertaining to use of this channel.

(9) As the aircraft may be guarding more than one frequency, the initial call shall include the distinctive channel identification "INTERPILOT".

Note.— The following examples illustrate the application of this calling procedure.

CLIPPER 123 — SABENA 901 — INTERPILOT — DO YOU READ

or

ANY AIRCRAFT VICINITY OF 30 NORTH 160 EAST — JAPANAIR 401— INTERPILOT — OVER

Subsequent radiotelephony communications

10. (1) Abbreviated radiotelephony call signs shall be used only after satisfactory communication has been established and provided that no confusion is likely to arise. An aircraft station shall use its abbreviated call sign only after it has been addressed in this manner by the aeronautical station.

(2) After contact has been established, continuous two-way communication shall be permitted without further identification or call until termination of the contact.

(3) In order to avoid any possible confusion, when issuing ATC clearances and reading back such clearances, controllers and pilots shall always add the call sign of the aircraft to which the clearance applies.

Indication of transmitting channels

11. (1) As the aeronautical station operator generally guards more than one frequency, the call shall be followed by an indication of the frequency used, unless other suitable means of identifying the frequency are known to exist.

(2) When no confusion is likely to arise, only the first two digits of the High Frequency (in kHz) shall be used to identify the transmitting channel.

Note.— The following example illustrates the application of this procedure:

(PAA 325 calling Kingston on 8 871 kHz)

KINGSTON CLIPPER THREE TWO FIVE — ON EIGHT EIGHT

(3) Except as specified in sub-paragraph (3) below all six digits of the numerical designator shall be used to identify the transmitting channel in VHF radiotelephony communications, except in the case of both the fifth and sixth digits being zeros, in which case only the first four digits shall be used.

Note 1.— The following examples illustrate the application of the procedure in sub-paragraph (3) above:

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

Note 2.— Caution must be exercised with respect to the indication of transmitting channels in VHF radiotelephony communications when all six digits of the numerical designator are used in airspace where communication channels are separated by 25 kHz, because on aircraft installations with a channel separation capability of 25 kHz or more, it is only possible to select the first five digits of the numerical designator on the radio management panel.

(4) In airspace where all VHF voice communications channels are separated by 25 kHz or more and the use of six digits as in sub-paragraph is not substantiated by the operational requirement determined by the appropriate authorities, the first five digits of the numerical designator shall be used, except in the case of both the fifth and sixth digits being zeros, in which case only the first four digits shall be used.

Note 1.— The following examples illustrate the application of the procedure in sub-paragraph (4) and the associated settings of the aircraft radio management panel for communication equipment with channel separation capabilities of 25 kHz and 8.33/25 kHz:

Channel	Transmitted as	Radio management panel setting for communication equipment with	
		25 kHz (5 digits)	8.33/ 25 kHz (6 digits)
118.000	ONE ONE EIGHT DECIMAL ZERO	118.00	118.000
118.025	ONE ONE EIGHT DECIMAL ZERO TWO	118.02	118.025
118.050	ONE ONE EIGHT DECIMAL ZERO FIVE	118.05	118.050
118.075	ONE ONE EIGHT DECIMAL ZERO SEVEN	118.07	118.075
118.100	ONE ONE EIGHT DECIMAL ONE	118.10	118.100

Note 2.— Caution must be exercised with respect to the indication of transmitting channels in VHF radiotelephony communications when five digits of the numerical designator are used in airspace where aircraft are also operated with channel separation capabilities of 8.33/25 kHz. On aircraft installations with a channel separation capability of 8.33 kHz and more, it is possible to select six digits on the radio management panel. It should therefore be ensured that the fifth and sixth digits are set to 25 kHz channels (see Note 1 above).

Test procedures

12. (1) The form of test transmissions shall be as follows—

(a) the identification of the station being called;

(b) the aircraft identification;

(c) the words “RADIO CHECK”; and

(d) the frequency being used.

(2) The reply to a test transmission shall be as follows—

(a) the identification of the aircraft;

(b) the identification of the aeronautical station replying; and

(c) information regarding the readability of the aircraft transmission.

(3) The test transmission and reply thereto shall be recorded at the aeronautical station.

(4) When the tests are made, the following readability scale shall be used—

Readability Scale

1. Unreadable
2. Readable now and then
3. Readable but with difficulty
4. Readable
5. Perfectly readable

Exchange of communications

13. (1) Communications shall be concise and unambiguous, using standard phraseology whenever available.

(2) Abbreviated procedures shall only be used after initial contact has been established and where no confusion is likely to arise. Channel Transmitted as Radio management panel setting for communication equipment with

(3) Acknowledgement of receipt. The receiving operator shall make certain that the message has been received correctly before acknowledging receipt.

Note.— Acknowledgement of receipt is not to be confused with acknowledgement of intercept in radiotelephony network operations.

(a) When transmitted by an aircraft station, the acknowledgement of receipt of a message shall comprise the call sign of that aircraft.

(b) An aircraft station shall acknowledge receipt of important air traffic control messages or parts thereof by reading them back and terminating the readback by its radio call sign.

Note 1.— Air traffic control clearances, instructions and information requiring readback are specified in ICAO Doc 4444.

Note 2.— The following example illustrates the application of this procedure—

(ATC clearance by network station to an aircraft)

Station:

TWA NINE SIX THREE MADRID

Aircraft:

MADRID TWA NINE SIX THREE

Station:

TWA NINE SIX THREE MADRID — ATC CLEARS TWA NINE SIX THREE TO DESCEND TO NINE THOUSAND FEET

Aircraft (acknowledging)
CLEARED TO DESCEND TO NINE THOUSAND FEET — TWA NINE SIX THREE

Station (denoting accuracy of readback):
MADRID

(c) When acknowledgement of receipt is transmitted by an aeronautical station—

(i) to an aircraft station: it shall comprise the call sign of the aircraft, followed if considered necessary by the call sign of the aeronautical station;

(ii) to another aeronautical station: it shall comprise the call sign of the aeronautical station that is acknowledging receipt.

(4) An aeronautical station shall acknowledge position reports and other flight progress reports by reading back the report and terminating the readback by its call sign, except that the readback procedure may be suspended temporarily whenever it will alleviate congestion on the communication channel.

(5) It is permissible for verification for the receiving station to read back the message as an additional acknowledgement of receipt. In such instances, the station to which the information is read back shall acknowledge the correctness of readback by transmitting its call sign.

(6) If both position report and other information — such as weather reports — are received in the same message, the information shall be acknowledged with the words such as “WEATHER RECEIVED” after the position report has been read back, except when intercept of the information is required by other network stations. Other messages shall be acknowledged, the aeronautical station transmitting its call sign only.

(7) End of conversation. A radiotelephone conversation shall be terminated by the receiving station using its own call sign.

Corrections and repetitions

14. (1) When an error has been made in transmission, the word "CORRECTION" shall be spoken, the last correct group or phrase repeated, and then the correct version transmitted.

(2) If a correction can best be made by repeating the entire message, the operator shall use the phrase "CORRECTION, I SAY AGAIN" before transmitting the message a second time.

(3) When an operator transmitting a message considers that reception is likely to be difficult, he shall transmit the important elements of the message twice.

(4) If the receiving operator is in doubt as to the correctness of the message received, he shall request repetition either in full or in part.

(5) If repetition of an entire message is required, the words "SAY AGAIN" shall be spoken. If repetition of a portion of a message is required, the operator shall state: "SAYAGAIN ALL BEFORE (first word satisfactorily received)"; or "SAY AGAIN (word before missing portion) TO...(word after missing portion)"; or "SAY AGAIN ALL AFTER...(last word satisfactorily received)".

(6) Specific items shall be requested, as appropriate, such as "SAY AGAIN ALTIMETER", "SAY AGAIN WIND".

(7) If, in checking the correctness of a readback, an operator notices incorrect items, he shall transmit the words "NEGATIVE I SAY AGAIN" at the conclusion of the readback followed by the correct version of the items concerned.

Operations normal reports

15. When "operations normal" reports are transmitted by aircraft, they shall consist of the prescribed call followed by the words "OPERATIONS NORMAL".

Communications watch/hours of service

16. (1) During flight, aircraft stations shall maintain watch as required by the appropriate authority and shall not cease watch, except for reasons of safety, without informing the aeronautical station(s) concerned.

(2) Aircraft on long over-water flights, or on flights over designated areas over which the carriage of an emergency locator transmitter (ELT) is required, shall continuously guard the VHF emergency frequency 121.5 MHz, except for those periods when aircraft are carrying out communications on other VHF channels or when airborne equipment limitations or cockpit duties do not permit simultaneous guarding of two channels.

(3) Aircraft shall continuously guard the VHF emergency frequency 121.5 MHz in areas or over routes where the possibility of interception of aircraft or other hazardous situations exist, and a requirement has been established by the appropriate authority.

(4) Aircraft on flights other than those specified in sub-paragraphs (2) and (3) shall guard the emergency frequency 121.5 MHz to the extent possible.

(5) The user of the air-to-air VHF communications channel shall ensure that adequate watch is maintained on designated ATS frequencies, the frequency of the aeronautical emergency channel, and any other mandatory watch frequencies.

(6) The Authority shall require that Aeronautical stations be continuously monitored on the VHF emergency channel 121.5 MHz during the hours of service as required by the appropriate Authority.

Aeronautical stations shall maintain a continuous listening watch on VHF emergency channel 121.5 MHz during the hours of service of the units at which it is installed.

(7) When it is necessary for an aircraft station or aeronautical station to suspend operation for any reason, it shall, if possible, so inform other stations concerned, giving the time at which it is expected that operation will be resumed. When operation is resumed, other stations concerned shall be so informed.

(8) When it is necessary to suspend operation beyond the time specified in the original notice, a revised time of resumption of operation shall, if possible, be transmitted at or near the time first specified.

(9) When two or more ATS frequencies are being used by a controller, consideration shall be given to providing facilities to allow ATS and aircraft transmissions on any of the frequencies to be simultaneously retransmitted on the other frequencies in use thus permitting aircraft stations within range to hear all transmissions to and from the controller.

Principles of network operation (HF communications)

17. (1) The aeronautical stations of a radiotelephony network shall assist each other in accordance with the following network principles, in order to provide the air-ground communication service required of the network by aircraft flying on the air routes for which the network is responsible.

(2) When the network comprises a large number of stations, network communications for flights on any individual route segment shall be provided by selected stations, termed “regular stations” for that segment.

Note 1.— The selection of stations to act as regular stations for a particular route segment will, where necessary, be undertaken by regional or local agreement, after consultation, if necessary, between the States responsible for the network.

Note 2.— In principle, the regular stations will be those serving the locations immediately concerned with flights on that route segment, i.e. points of take-off and landing, appropriate flight information centres or area control centres and, in some cases, additional suitably located stations required to complete the communication coverage or for intercept purposes.

Note 3.— In selecting the regular stations, account will be taken of the propagation characteristics of the frequencies used.

(3) In areas or on routes where radio conditions, length of flights or distance between aeronautical stations require additional measures to ensure continuity of air-ground communication throughout the route segment, the regular stations shall share between them a responsibility of primary guard whereby each station will provide the primary guard for that portion of the flight during which the messages from the aircraft can be handled most effectively by that station.

(4) During its tenure of primary guard, each regular station shall, among other things—

(a) be responsible for designating suitable primary and secondary frequencies for its communications with the aircraft;

(b) receive all position reports and handle other messages from and to the aircraft essential to the safe conduct of the flight; and

(c) be responsible for the action required in case of failure of communications.

(5) The transfer of primary guard from one station to the next will normally take place at the time of the traversing of flight information region or control area boundaries, this guard being provided at any time, as far as possible, by the station serving the flight information centre or area control centre in whose area the aircraft is flying. However, where communication conditions so demand, a station shall be required to retain primary guard beyond such geographical boundaries or release its guard before the aircraft reaches the boundary, if appreciable improvement in air-ground communication can be effected thereby.

Frequencies to be used

18. (1) Aircraft stations shall operate on the appropriate radio frequencies.

(2) The air-ground control radio station shall designate the frequency (ies) to be used under normal conditions by aircraft stations operating under its control.

(3) In network operation, the initial designation of primary and secondary frequencies shall be made by the network station with which the aircraft makes pre-flight check or its initial contact after take-off. This station shall also ensure that other network stations are advised, as required, of the frequency(ies) designated.

(4) An aeronautical station, when designating frequencies in accordance with sub-paragraphs (2) or (3) above, shall take into account the appropriate propagation data and distance over which communications are required.

(5) If a frequency designated by an aeronautical station proves to be unsuitable, the aircraft station shall suggest an alternative frequency.

(6) When, notwithstanding regulation 38 (1), air-ground frequencies are used for the exchange between network stations of messages essential for coordination and cooperation between the stations, such communication shall, so far as possible, be effected over network frequencies not being used at that time for the bulk of the air-ground traffic. In all cases, the communication with aircraft stations shall take priority over the inter-ground station communications.

Establishment of communications

19. (1) Aircraft stations shall, if possible, communicate directly with the air-ground control radio station appropriate to the area in which the aircraft are flying. If unable to do so, aircraft stations shall use any relay means available and appropriate to transmit messages to the air-ground control radio station.

(2) When normal communications from an aeronautical station to an aircraft station cannot be established, the aeronautical station shall use any relay means available and appropriate to transmit messages to the aircraft station. If these efforts fail, the originator shall be advised in accordance with procedures prescribed by the appropriate authority.

(3) When, in network operation, communication between an aircraft station and a regular station has not been established after calls on the primary and secondary frequencies, aid shall be rendered by one of the other regular stations for that flight, either by calling the attention of the station first called or, in the case of a call made by an aircraft station, by answering the call and taking the traffic.

(4) Other stations of the network shall render assistance by taking similar action only if attempts to establish communications by the regular stations have proved unsuccessful.

(5) Sub-paragraphs (3) and (4) shall also be applied—

(a) on request of the air traffic services unit concerned;

(b) when an expected communication from an aircraft has not been received within a time period such that the occurrence of a communication failure is suspected.

Note.— A specific time period may be prescribed by the appropriate ATS authority.

Transfer of HF communications

20. (1) An aircraft station shall be advised by the appropriate aeronautical station to transfer from one radio frequency or network to another. In the absence of such advice, the aircraft station shall notify the appropriate aeronautical station before such transfer takes place.

(2) In the case of transfer from one network to another, the transfer shall preferably take place while the aircraft is in communication with a station operating in both networks to ensure continuity of communications. If, however, the change of network must take place concurrently with the transfer of communication to another network station, the transfer shall be coordinated by the two network stations prior to advising or authorizing the frequency change. The aircraft shall also be advised of the primary and secondary frequencies to be used after the transfer.

(3) An aircraft station which has transferred communications watch from one radio frequency to another shall, when so required by the appropriate ATS authority, inform the aeronautical station concerned that communications watch has been established on the new frequency.

(4) When entering a network after take-off, an aircraft station shall transmit its take-off time or time over the last check-point, to the appropriate regular station.

(5) When entering a new network, an aircraft station shall transmit the time over the last checkpoint, or of its last reported position, to the appropriate regular station.

(6) Before leaving the network, an aircraft station shall in all cases advise the appropriate regular station of its intention to do so by transmitting one of the following phrases, as appropriate—

(a) when transferring to a pilot-to-controller channel—

Aircraft: CHANGING TO . . . (air traffic services unit concerned)

(b) after landing—

Aircraft: LANDED . . . (location) . . . (time)

Transfer of VHF communications

21. (1) An aircraft shall be advised by the appropriate aeronautical station to transfer from one radio frequency to another in accordance with agreed procedures. In the absence of such advice, the aircraft station shall notify the appropriate aeronautical station before such a transfer takes place.

(2) When establishing initial contact on, or when leaving, a VHF frequency, an aircraft station shall transmit such information as may be prescribed by the appropriate authority.

Voice communications failure

22. (1) When an aircraft station fails to establish contact with the appropriate aeronautical station on the designated channel, it shall attempt to establish contact on the previous channel used and, if not successful, on another channel appropriate to the route. If these attempts fail, the aircraft station shall attempt to establish communication with the appropriate aeronautical station, other aeronautical stations or other aircraft using all available means and advise the aeronautical station that contact on the assigned channel could not be established. In addition, an aircraft operating within a network shall monitor the appropriate VHF channel for calls from nearby aircraft.

(2) If the attempts specified under sub-paragraph (1) fail, the aircraft station shall transmit its message twice on the designated channel(s), preceded by the phrase "TRANSMITTING BLIND" and, if necessary, include the addressee(s) for which the message is intended.

(3) In network operation, a message which is transmitted blind shall be transmitted twice on both primary and secondary channels. Before changing channel, the aircraft station shall announce the channel to which it is changing.

(4) When an aircraft station is unable to establish communication due to receiver failure, it shall transmit reports at the scheduled times, or positions, on the channel in use, preceded by the phrase "TRANSMITTING BLIND DUE TO RECEIVER FAILURE". The aircraft station shall transmit the intended message, following this by a complete repetition. During this procedure, the aircraft shall also advise the time of its next intended transmission.

(5) An aircraft which is provided with air traffic control or advisory service shall, in addition to complying with sub-paragraph (4), transmit information regarding the intention of the pilot-in-command with respect to the continuation of the flight of the aircraft.

(6) When an aircraft is unable to establish communication due to airborne

equipment failure it shall, when so equipped, select the appropriate SSR code to indicate radio failure.

(7) When an aeronautical station has been unable to establish contact with an aircraft station after calls on the frequencies on which the aircraft is believed to be listening, it shall—

(a) request other aeronautical stations to render assistance by calling the aircraft and relaying traffic, if necessary; and

(b) request aircraft on the route to attempt to establish communication with the aircraft and relay traffic, if necessary.

(8) The provisions of sub-paragraph (7) shall also be applied—

(a) on request of the air traffic services unit concerned; or

(b) when an expected communication from an aircraft has not been received within a time period such that the occurrence of a communication failure is suspected.

(9) If the attempts specified in sub-paragraph (7) fail, the aeronautical station shall transmit messages addressed to the aircraft, other than messages containing air traffic control clearances, by blind transmission on the frequency (ies) on which the aircraft is believed to be listening.

(10) Blind transmission of air traffic control clearances shall not be made to aircraft, except at the specific request of the originator.

(11) Notification of communications failure. The air-ground control radio station shall notify the appropriate air traffic services unit and the aircraft operating agency, as soon as possible, of any failure in air-ground communication.

HF message handling

23. (1) When operating within a network, an aircraft station shall, in principle, whenever communications conditions so permit, transmit its messages to the stations of the network from which they can be most readily delivered to their ultimate destinations. In particular, aircraft reports required by air traffic services shall be transmitted to the network station serving the flight information centre or area control centre in whose area the aircraft is flying. Conversely, messages to aircraft in flight shall, whenever possible, be transmitted directly to the aircraft by the network station serving the location of the originator.

Note.— Exceptionally, an aircraft may need to communicate with an aeronautical station outside the network appropriate to its particular route segment. This is

permissible, provided it can be done without interrupting the continuous watch with the communication network appropriate to the route segment, when such watch is required by the appropriate ATS authority, and provided it does not cause undue interference with the operation of other aeronautical stations.

(2) Messages passed from an aircraft to a network station shall, whenever possible, be intercepted and acknowledged by other stations of the network, which serve locations where the information is also required.

Note 1.— Determination of the arrangements for dissemination of air- ground messages without address will be a matter for multilateral or local agreement.

Note 2.— In principle, the number of stations required to intercept are to be kept to a minimum consistent with the operational requirement.

(a) Acknowledgement of intercept shall be made immediately after the acknowledgement of receipt by the station to which the message was passed.

(b) Acknowledgement of an intercept message shall be made by transmitting the radio call sign of the station having intercepted the message, followed by the word ROGER, if desired, and the call sign of the station having transmitted the message.

(3) In the absence of acknowledgement of intercept within one minute, the station accepting the message from the aircraft shall forward it, normally over the aeronautical fixed service, to the station(s) which have failed to acknowledge intercept.

(4) If, in abnormal circumstances, forwarding is necessary using the air-ground channels, the provisions of sub-paragraph 18 (4) shall be observed.

(5) When such forwarding is done over the AFTN, the messages shall be addressed to the network station(s) concerned.

(6) The station(s) to which the messages have been forwarded shall carry out local distribution of them in the same way as if they had been received directly from the aircraft over the air-ground channel.

(7) The aeronautical station receiving an air-report or a message containing meteorological information transmitted by an aircraft in flight shall forward the message without delay—

(a) to the air traffic services unit and meteorological offices associated with the station; and

(b) to the aircraft operating agency concerned or its representative when that agency has made a specific request to receive such messages.

(8) The provisions of paragraph 23 (2) shall also be applied, if practicable, in non-network operation.

(9) When a message addressed to an aircraft in flight is received by the aeronautical station included in the address, and when that station is not able to establish communication with the aircraft to which the message is addressed, the message shall be forwarded to those aeronautical stations on the route which may be able to establish communication with the aircraft.

(10) If the aeronautical station to which the message is addressed is unable to dispose of the message in accordance with sub-paragraph (9) immediately above, the station of origin shall be advised.

(11) The aeronautical station forwarding the message shall amend the address, by substituting for its own location indicator the location indicator of the aeronautical station to which the message is being forwarded.

Transmission of ATS messages to aircraft

24. (1) If it is not possible to deliver an ATS message to the aircraft within the time specified by ATS, the aeronautical station shall notify the originator. Thereafter, it shall take no further action with respect to this message unless specifically instructed by ATS.

(2) If delivery of an ATS message is uncertain because of inability to secure an acknowledgement, the aeronautical station shall assume that the message has not been received by the aircraft and shall advise the originator immediately that, although the message has been transmitted, it has not been acknowledged.

(3) The aeronautical station, having received the message from ATS, shall not delegate to another station the responsibility for delivery of the message to the aircraft. However, in case of communication difficulties, other stations shall assist, when requested, in relaying the message to the aircraft. In this case, the station having received the message from ATS shall obtain without delay definite assurance that the aircraft has correctly acknowledged the message.

SELCAL procedures

25. (1) With the selective calling system known as SELCAL, the voice calling is replaced by the transmission of coded tones to the aircraft over the radiotelephony channels. A single selective call consists of a combination of four pre-selected audio tones whose transmission requires approximately 2 seconds. The tones are generated in the aeronautical station coder and are received by a decoder connected to the audio output of the airborne receiver. Receipt of the assigned tone code (SELCAL code) activates a cockpit call system in the form of light or chime signals.

(2) SELCAL shall be utilised by suitably equipped stations for ground-to-air selective calling on the en-route HF and VHF radio channels.

(3) On aircraft equipped with SELCAL, the pilot is still able to keep a conventional listening watch if required.

Notification to aeronautical stations of aircraft SELCAL codes

26. (1) It shall be the responsibility of the aircraft operating agency and the aircraft to ensure that all aeronautical stations, with which the aircraft would normally communicate during a particular flight, know the SELCAL code associated with its radiotelephony call sign.

(2) When practicable, the aircraft operating agency shall disseminate to all aeronautical stations concerned, at regular intervals, a list of SELCAL codes assigned to its aircraft or flights.

(3) The aircraft shall—

(a) include the SELCAL code in the flight plan submitted to the appropriate air traffic services unit; and

(b) ensure that the HF aeronautical station has the correct SELCAL code information by establishing communications temporarily with the HF aeronautical station while still within VHF coverage.

SELCAL pre-flight check

27. (1) The aircraft station shall contact the appropriate aeronautical station and request a pre-flight SELCAL check and, if necessary, give its SELCAL code.

(2) When primary and secondary frequencies are assigned, a SELCAL check shall normally be made first on the secondary frequency and then on the primary frequency. The aircraft station shall then be ready for continued communication on the primary frequency.

(3) If the pre-flight check reveals that either the ground or airborne SELCAL installation is inoperative, the aircraft shall maintain a continuous listening watch on its subsequent flight until SELCAL again becomes available.

Establishment of communication with SELCAL

28. When an aeronautical station initiates a call by SELCAL, the aircraft shall reply with its radio call sign, followed by the phrase “GO AHEAD”.

SELCAL enroute procedures

29. (1) Aircraft stations shall ensure that the appropriate aeronautical station(s) are aware that SELCAL watch is being established or maintained.

(2) When so prescribed on the basis of regional air navigation agreements, calls for scheduled reports from aircraft shall be initiated by an aeronautical station by means of SELCAL.

(3) Once SELCAL watch has been established by a particular aircraft station, aeronautical stations shall employ SELCAL whenever they require to call aircraft.

(4) In the event the SELCAL signal remains unanswered after two calls on the primary frequency and two calls on the secondary frequency, the aeronautical station shall revert to voice calling.

(5) Stations in a network shall keep each other immediately advised when malfunctioning occurs in a SELCAL installation on the ground or in the air. Likewise, the aircraft shall ensure that the aeronautical stations concerned with its flight are immediately made aware of any malfunctioning of its SELCAL installation, and that voice calling is necessary.

(6) All stations shall be advised when the SELCAL installation is again functioning normally.

SELCAL code assignment to aircraft

30. In principle, the SELCAL code in the aircraft shall be associated with the radiotelephony call sign, i.e. where the flight number (service number) is employed in the radio call sign, the SELCAL code in the aircraft shall be listed against the flight number. In all other cases, the SELCAL code in the aircraft shall be listed against the aircraft registration.

Note.— The use of aircraft radio call signs, consisting of the airline abbreviation followed by the flight service number, is increasing among aircraft operators throughout the world. The SELCAL equipment in aircraft should, therefore, be of a type which permits a particular code being associated with a particular flight number, i.e. equipment which is capable of adjustment in code combinations. At this stage, however, many aircraft still carry SELCAL equipment of the single code type, and it will not be possible for aircraft with such equipment to satisfy the principle set out above. This should not militate against use of the flight number type of radio call sign by an aircraft so equipped if it wishes to apply this type of call sign, but it is essential when a single code airborne equipment is used in conjunction with a flight number type radio call sign that the ground stations be advised in connection with each flight of the SELCAL code available in the aircraft.

SCHEDULE 7

(regulation 49)

DISTRESS AND URGENCY RADIOTELEPHONY COMMUNICATION PROCEDURES

General

1. (1) Distress and urgency traffic shall comprise all radiotelephony messages relative to the distress and urgency conditions respectively. Distress and urgency conditions are defined as—

(a) *Distress:* a condition of being threatened by serious or imminent danger and of requiring immediate assistance.

(b) *Urgency:* a condition concerning the safety of an aircraft or other vehicle, or of some person on board or within sight, but which does not require immediate assistance.

(2) The radiotelephony distress signal MAYDAY and the radiotelephony urgency signal PAN PAN shall be used at the commencement of the first distress and urgency communication respectively. At the commencement of any subsequent communication in distress and urgency traffic, it shall be permissible to use the radiotelephony distress and urgency signals.

(3) The originator of messages addressed to an aircraft in distress or urgency condition shall restrict to the minimum the number and volume and content of such messages as required by the condition.

(4) If no acknowledgement of the distress or urgency message is made by the station addressed by the aircraft, other stations shall render assistance, as prescribed in paragraphs 3 and paragraph 7 (8) respectively.

(5) Distress and urgency traffic shall normally be maintained on the frequency on which such traffic was initiated until it is considered that better assistance can be provided by transferring that traffic to another frequency.

Note.— 121.5 MHz or alternative available VHF or HF frequencies may be used as appropriate.

(6) In cases of distress and urgency communications, in general, the transmissions by radiotelephony shall be made slowly and distinctly, each word being clearly pronounced to facilitate transcription.

Radiotelephony distress communications

2. In addition to being preceded by the radiotelephony distress signal MAYDAY, preferably spoken three times, the distress message to be sent by an aircraft in distress shall—

(a) be on the air-ground frequency in use at the time; and

(b) consist of as many as possible of the following elements spoken distinctly and, if possible, in the following order—

(i) name of the station addressed (time and circumstances permitting);

(ii) the identification of the aircraft;

(iii) the nature of the distress condition;

(iv) intention of the person in command; and

(v) present position, level (i.e. flight level, altitude, etc., as appropriate) and heading.

Note 1.— The foregoing provisions may be supplemented by the following measures:

(a) the distress message of an aircraft in distress being made on the emergency frequency 121.5 MHz or another aeronautical mobile frequency, if considered necessary or desirable. Not all aeronautical stations maintain a continuous guard on the emergency frequency;

(b) the distress message of an aircraft in distress being broadcast, if time and circumstances make this course preferable;

(c) the aircraft transmitting on the maritime mobile service radiotelephony calling frequencies;

(d) the aircraft using any means at its disposal to attract attention and make known its conditions (including the activation of the appropriate SSR mode and code);

(e) any station taking any means at its disposal to assist an aircraft in distress;

(f) any variation on the elements listed under sub-paragraph 2 (b) above, when the transmitting station is not itself in distress, provided that such circumstance is clearly stated in the distress message.

Note 2.— The station addressed will normally be that station communicating with the aircraft or in whose area of responsibility the aircraft is operating.

Action by the station addressed or first station acknowledging the distress message

3. The station addressed by aircraft in distress, or first station acknowledging the distress message, shall—

(a) immediately acknowledge the distress message;

(b) take control of the communications or specifically and clearly transfer that responsibility, advising the aircraft if a transfer is made;

(c) take immediate action to ensure that all necessary information is made available, as soon as possible, to—

(i) the ATS unit concerned; and

(ii) the aircraft operating agency concerned, or its representative, in accordance with pre-established arrangements; and

Note.— The requirement to inform the aircraft operating agency concerned does not have priority over any other action which involves the safety of the flight in distress, or of any other flight in the area, or which might affect the progress of expected flights in the area.

(d) warn other stations, as appropriate, in order to prevent the transfer of traffic to the frequency of the distress communication.

Imposition of silence after distress communication

4. (1) The station in distress, or the station in control of distress traffic, shall be permitted to impose silence, either on all stations of the mobile service in the area or on any station which interferes with the distress traffic. It shall address these instructions "to all stations", or to one station only, according to circumstances. In either case, it shall use—

(a) STOP TRANSMITTING; and

(b) the radiotelephony distress signal MAYDAY.

(2) The use of the signals specified in sub-paragraph 4 (1) immediately above shall be reserved for the aircraft station in distress and for the station controlling the distress traffic.

Action by all other stations after a distress communication

5. (1) The distress communications have absolute priority over all other communications, and a station aware of them shall not transmit on the frequency concerned, unless—

(a) the distress is cancelled or the distress traffic is terminated;

(b) all distress traffic has been transferred to other frequencies;

(c) the station controlling communications gives permission; or

(d) it has itself to render assistance.

(2) Any station which has knowledge of distress traffic, and which cannot itself assist the station in distress, shall nevertheless continue listening to such traffic until it is evident that assistance is being provided.

Termination of distress communications and of silence

6. (1) When an aircraft is no longer in distress, it shall transmit a message cancelling the distress condition.

(2) When the station which has controlled the distress communication traffic becomes aware that the distress condition is ended, it shall take immediate action to ensure that this information is made available, as soon as possible, to—

(a) the ATS unit concerned; or

(b) the aircraft operating agency concerned, or its representative, in accordance with pre-established arrangements.

(3) The distress communication and silence conditions shall be terminated by transmitting a message, including the words "DISTRESS TRAFFIC ENDED", on the frequency or frequencies being used for the distress traffic. This message shall be originated only by the station controlling the communications when, after the reception of the message prescribed in paragraph 6 (1), it is authorized to do so by the appropriate authority.

Radiotelephony urgency communications

7. (1) Action by the aircraft reporting an urgency condition except as indicated in paragraph 10 shall be as mentioned in sub-paragraph (2) below.

(2) In addition to being preceded by the radiotelephony urgency signal PAN PAN preferably spoken three times and each word of the group pronounced as the French word "panne", the urgency message to be sent by an aircraft reporting an urgency condition shall—

(a) be on the air-ground frequency in use at the time; and

(b) consist of as many as required of the following elements spoken distinctly and, if possible, in the following order—

(i) the name of the station addressed;

(ii) the identification of the aircraft;

(iii) the nature of the urgency condition;

(iv) the intention of the person in command;

(v) present position, level (i.e. flight level, altitude, etc., as appropriate) and heading; and

(vi) any other useful information.

Action by station addressed or first station acknowledging urgency message

8. The station addressed by an aircraft reporting an urgency condition, or first station acknowledging the urgency message, shall—

(a) acknowledge the urgency message;

(b) take immediate action to ensure that all necessary information is made available, as soon as possible, to—

(i) the ATS unit concerned; or

(ii) the aircraft operating agency concerned, or its representative, in accordance with pre-established arrangements; and

Note.— The requirement to inform the aircraft operating agency concerned does not have priority over any other action which involves the safety of the flight in distress, or of any other flight in the area, or which might affect the progress of expected flights in the area.

(c) if necessary, exercise control of communications.

Action by all other stations

9. The urgency communications have priority over all other communications, except distress, and all stations shall take care not to interfere with the transmission of urgency traffic.

Action by an aircraft used for medical transports

10. (1) The use of the signal described in sub-paragraph (2) shall indicate that the message which follows concerns a protected medical transports pursuant to the 1949 Geneva Conventions and Additional Protocols.

(2) For the purpose of announcing and identifying aircraft used for medical transports, a transmission of the radiotelephony urgency signal PAN PAN, preferably spoken three times, and each word of the group pronounced as the French word “panne”, shall be followed by the radiotelephony signal for medical transports MAY-DEE-CAL, pronounced as in the French “médical”. The use of the signals described above indicates that the message which follows concerns a protected medical transport. The message shall convey the following data—

(a) the call sign or other recognised means of identification of the medical transports;

(b) position of the medical transports;

(c) number and type of medical transports;

(d) intended route;

(e) estimated time en-route and of departure and arrival, as appropriate; and

(f) any other information such as flight altitude, radio frequencies guarded, languages used, and secondary surveillance radar modes and codes.

Action by station addressed or by other stations receiving a medical message

11. The provisions of paragraphs 8 and 9 shall apply as appropriate to stations receiving a medical message

SCHEDULE 8

(regulation 55)

RADIOTELEPHONE BROADCAST PROCEDURES

Broadcast technique

1. (1) Transmissions by radiotelephone shall be as natural, short and concise as practicable consistent with clarity.

(2) Rate of speech on radiotelephone broadcasts shall not exceed 100 words per minute.

Preamble of general call

2. The preamble of each radiotelephone broadcast shall consist of the general call, station name, and optionally the time of broadcast (UTC).

Note.— The following example illustrates the application of this procedure:

(general call) ALL STATIONS

(the words) THIS IS) THIS IS

(station name) NEW YORK RADIO

(time of broadcast) TIME, ZERO ZERO FOUR FIVE

SCHEDULE 9

(regulations 57 and 59)

AERONAUTICAL MOBILE SERVICE — DATA LINK COMMUNICATIONS

General

1. (1) While the provisions of this Schedule are based primarily on the use of controller-pilot data link communications (CPDLC), the provisions of paragraph 2 would apply to other data link applications, where applicable, including Data link—flight information services (e.g. D-ATIS, DVOLMET, etc.).

(2) Before entering an airspace where data link applications are used by the ATS unit, data link communications shall be initiated between the aircraft and the ATS unit in order to register the aircraft and, when necessary, allow the start of a data link application. This shall be initiated by the aircraft, either automatically or by the pilot, or by the ATS unit on address forwarding.

(3) The logon address associated with an ATS unit shall be published in the Aeronautical Information Publications in accordance with the Civil Aviation (Aeronautical Telecommunications) Regulations, 2025.

Aircraft Initiation

(4) On receipt of a valid data link initiation request from an aircraft approaching or within a data link service area, the ATS unit shall accept the request and, if able to correlate it with a flight plan, shall establish a connection with the aircraft.

ATS Unit Forwarding

(5) The ground system initially contacted by the aircraft shall provide to the next ATS unit any relevant updated aircraft information in sufficient time to permit the establishment of data link communications.

Failure

(6) In the case of a data link initiation failure, the data link system shall provide an indication of the failure to the appropriate ATS unit(s). The data link system shall also provide an indication of the failure to the flight crew when a data link initiation failure results from a logon initiated by the flight crew.

Note.— When the aircraft's logon request results from responding to a contact request by a transferring ATS unit, then both ATS units will receive the indication.

(7) The ATS unit shall establish procedures to resolve, as soon as practicable, data link initiation failures. Procedures shall include, as a minimum, verifying

that the aircraft is initiating a data link request with the appropriate ATS unit (i.e. the aircraft is approaching or within the ATS unit's control area); and if so—

(a) when a flight plan is available, verify that the aircraft identification, aircraft registration, or aircraft address and other details contained in the data link initiation request correspond with details in the flight plan, and where differences are detected verify the correct information and then make the necessary changes; or

(b) when a flight plan is not available, create a flight plan with sufficient information in the flight data processing system, to achieve a successful data link initiation; then

(c) arrange for the re-initiation of data link.

(8) *The aircraft operator shall establish procedures to resolve, as soon as practicable, data link initiation failures. Procedures shall include, as a minimum, that the pilot—*

(a) verify the correctness and consistency of the flight plan information available in the FMS or equipment from which data link is initiated, and where differences are detected make the necessary changes; and

(b) verify the correct address of the ATS unit; then

(c) re-initiate data link.

Composition of data link messages

2. (1) The text of messages shall be composed in standard message format (e.g. CPDLC message set), in plain language or in abbreviations and codes, as prescribed in regulation 16. Plain language shall be avoided when the length of the text can be reduced by using appropriate abbreviations and codes. Nonessential words and phrases, such as expressions of politeness, shall not be used.

(2) The following characters are allowed in the composition of messages—

Letters: ABCDEFGHIJKLMNOPQRSTUVWXYZ
(upper case only);

Figures: 1 2 3 4 5 6 7 8 9 0;

Other signs:
- (hyphen)
? (question mark)

: (colon)
((open bracket)
) (close bracket)
. (full stop, period, or decimal point)
, (comma)
’ (apostrophe)
= (double hyphen or equal sign)
/ (oblique)
+ (plus sign)

and the space character.

Characters other than those listed above shall not be used in messages.

(3) Roman numerals shall not be employed. If the originator of a message wishes the addressee to be informed that Roman figures are intended, the Arabic figure or figures shall be written and preceded by the word ROMAN.

(4) Display of data link messages

(a) Ground and airborne systems shall allow for data link messages to be appropriately displayed, printed when required, and stored in a manner that permits timely and convenient retrieval should such action be necessary.

(b) Whenever there is a display of data link messages, it is required to be displayed at minimum in the English Language and in textual format.

CPDLC procedures

3. (1) In all communications the highest standard of discipline shall be observed at all times.

(2) Consequences of human performance, which could affect the accurate reception and comprehension of messages, shall be taken into consideration when composing a message.

Note. — Guidance material on human performance can be found in the Human Factors Training Manual *(Doc 9683) and* Human Factors Guidelines for Air Traffic Management (ATM)Systems *(Doc 9758).*

(3) Ground and airborne systems shall provide controllers and pilots with the capability to review and validate any operational messages they send.

(4) Ground and airborne systems shall provide controllers and pilots with the capability to review, validate and when applicable, acknowledge any operational messages they receive.

(5) The controller shall be provided with the capability to respond to messages, including emergencies, to issue clearances, instructions and advisories, and to request and provide information, as appropriate.
(6) The pilot shall be provided with the capability to respond to messages, to request clearances and information, to report information, and to declare or cancel an emergency.

(7) The pilot and the controller shall be provided with the capability to exchange messages which do not conform to defined formats (i.e. free text messages).

(8) Unless specified by the appropriate ATS authority, voice read- back of CPDLC messages shall not be required.

Establishment of CPDLC
4. (1) The controller and the pilot shall be informed when CPDLC has been successfully established.

(2) CPDLC shall be established in sufficient time to ensure that the aircraft is communicating with the appropriate ATC unit.

(3) The controller and pilot shall be informed when CPDLC is available for operational use, at initial establishment, as well as on resumption of CPDLC after a failure.

(4) The pilot shall be able to identify the air traffic unit providing the air traffic control service at any time while the service is being provided.

(5) When the airborne system detects that CPDLC is available for operational use, it shall send the CPDLC downlink message element CURRENT DATA AUTHORITY.

Airborne-initiated CPDLC
5. (1) When an ATC unit receives an unexpected request for CPDLC from an aircraft, the circumstances leading to the request shall be obtained from the aircraft to determine further action.

(2) When the ATC unit rejects a request for CPDLC, it shall provide the pilot with the reason for the rejection using an appropriate CPDLC message.

ATC unit-initiated CPDLC
6. (1) An ATC unit shall only establish CPDLC with an aircraft if the aircraft has no CPDLC link established, or when authorised by the ATC unit currently having CPDLC established with the aircraft.

(2) When a request for CPDLC is rejected by an aircraft, the reason for the rejection shall be provided using CPDLC downlink message element NOT CURRENT DATA AUTHORITY or message element NOT AUTHORISED NEXT DATA AUTHORITY, as appropriate. Local procedures shall dictate whether the reason for rejection is presented to the controller. No other reasons for airborne rejection of ATC unit initiation of CPDLC shall be permitted.

Exchange of operational CPDLC messages

7. (1) Controllers and pilots shall construct CPDLC messages using the defined message set, a free text message or a combination of both.

(2) When CPDLC is being used, and the intent of the message is included in the CPDLC message set contained in the PANS- ATM, Appendix 5, the associated message shall be used.

(3) Except as provided by paragraph 11 (1) when a controller or pilot communicates via CPDLC, the response shall be via CPDLC. When a controller or pilot communicates via voice, the response shall be via voice.

(4) Whenever a correction to a message sent via CPDLC is deemed necessary or the contents of a message needs to be clarified, the controller or pilot shall use the most appropriate means available for issuing the correct details or for providing clarification.

(5) When voice communications are used to correct a CPDLC message for which no operational response has yet been received, the controller's or pilot's transmission shall be prefaced by the phrase: "DISREGARD CPDLC (message type) MESSAGE, BREAK" — followed by the correct clearance, instruction, information or request.

(6) When referring to and identifying the CPDLC message to be disregarded, caution shall be exercised in its phrasing so as to avoid any ambiguity with the issuance of the accompanying corrected clearance, instruction, information or request.

Note.— For example, if SAS445, maintaining FL290, had been instructed via CPDLC to climb to FL350, and the controller needs to correct the clearance utilizing voice communications, the following phrase might be used:

SAS445 DISREGARD CPDLC CLIMB CLEARANCE MESSAGE, BREAK, CLIMB TO FL310.

(7) If a CPDLC message that requires an operational response is subsequently negotiated via voice, an appropriate CPDLC message closure response shall be sent to ensure proper synchronisation of the CPDLC dialogue. This could be achieved either by explicitly instructing the recipient of the message via voice to close the dialogue or by allowing the system to automatically close the dialogue.

(8) The composition of a CPDLC message shall not exceed five message elements, only two of which may contain the route clearance variable.

(9) The use of long messages or messages with multiple clearance elements, multiple clearance request elements or messages with a combination of clearances and information shall be avoided where possible.

Note.— Guidance material on the development of local operating procedures and CPDLC good operating technique can be found in the Human Factors Guidelines for Air Traffic Management (ATM) Systems *(Doc 9758).*

(10) CPDLC ground systems and airborne systems shall be capable of using the CPDLC message urgency and alert attributes to alter presentations in order to draw attention to higher priority messages.

Note. — Message attributes dictate certain message handling requirements for the CPDLC user receiving a message. Each CPDLC message has three attributes: urgency, alert and response attributes. When a message contains multiple message elements, the highest precedence message element attribute type becomes the attribute type for the entire message.

(11) The alert attribute shall delineate the type of alerting required upon message receipt. Alert types are presented in Table 9-1.

Table 9-1 Alert Attribute (uplink and downlink)

Type	*Response required*	*Valid responses*	*Precedence*
Y	Yes	Any CPDLC uplink message, LOGICAL ACKNOWLEDGEMENT (only if required)	1
N	No, unless logical acknowledgement required	LOGICAL ACKNOWLEDGEMENT (only if required), MESSAGE NOT SUPPORTED BY THIS ATC UNIT, ERROR	2

(12) The response attribute shall delineate valid responses for a given message element. Response types are presented in Table 9-2 for uplink messages and Table 9-3 for downlink messages.

(13) When a multi-element message requires a response, and the response is in the form of a single message element, the response shall apply to all message elements.

Note.— For example, a multi-element message containing CLIMB TO FL310 MAINTAIN MACH.84*, a* WILCO *response applies to, and indicates compliance with, both elements of the message.*

(14) When a single message element clearance or any part of a multi-element clearance message cannot be complied with, the pilot shall send an UNABLE response for the whole message.

(15) The controller shall respond with an UNABLE message that applies to all elements of the request when no element(s) of a single or multi-element clearance request can be approved. The current clearance(s) shall not be restated.

(16) When a multi-element clearance request can only be partially accommodated, the controller shall respond with an UNABLE message applying to all the message elements of the request and, if appropriate, include a reason and/or information on when a clearance may be expected.

Table 9-2. Response Attribute (uplink)

Type	Response required	Valid responses	Precedence
W/U	Yes	WILCO, UNABLE, STANDBY, NOT CURRENT DATA AUTHORITY, NOT AUTHORISED NEXT DATA AUTHORITY, LOGICALACKNOWLEDGEMENT (only if required), ERROR	1
A/N	Yes	AFFIRM, NEGATIVE, STANDBY, NOT CURRENT DATAAUTHORITY, NOT AUTHORISED NEXT DATAAUTHORITY, LOGICALACKNOWLEDGEMENT (only if required), ERROR	2
R	Yes	ROGER, UNABLE, STANDBY, NOT CURRENT DATAAUTHORITY, NOT AUTHORISED NEXT DATAAUTHORITY, LOGICALACKNOWLEDGEMENT (only if required), ERROR	3
Y	Yes	Any CPDLC downlink message, LOGICALACKNOWLEDGEMENT (only if required)	4

N	No, unless logical acknowledgement required	LOGICALACKNOWLEDGEMENT (only if required), NOT CURRENT DATA AUTHORITY, NOT AUTHORISED NEXT DATAAUTHORITY, ERROR	5

Table 9-3. Response Attribute (downlink)

Type	**Response required**	**Valid responses**	**Precedence**
Y	Yes	Any CPDLC uplink message, LOGICAL ACKNOWLEDGEMENT (only if required)	1
N	No unless logical acknowledgement required	LOGICAL ACKNOWLEDGEMENT (only if required), MESSAGE NOT SUPPORTED BY THIS ATC UNIT, ERROR	2

Note.— A separate CPDLC message (or messages) may subsequently be transmitted to respond to those elements that can be accommodated.

(17) When all elements of a single or multi-element clearance request can be accommodated, the controller shall respond with clearances corresponding to each element of the request. This response shall be a single uplink message.

Note.— For example, while messages containing multi-element clearance requests are to be avoided, a multi-element downlink message containing the indicated message elements:

REQUEST CLEARANCE YQM YYG YYT YQX TRACK X EINN EDDF
REQUEST CLIMB TO FL350
REQUEST MACH 0.84

could be responded to with

CLEARED YQM YYG YYT YQX TRACK X EINN EDDF
CLIMB TO FL350
REPORT MAINTAINING
CROSS YYG AT OR AFTER 1150
NO SPEED RESTRICTION.

(18) When a CPDLC message contains more than one message element and the response attribute for the message is Y, when utilized, the single response message shall contain the corresponding number of replies in the same order.

Note.— For example, a multi-element uplink message containing —

CONFIRM SQUAWK
WHEN CAN YOU ACCEPT FL410

could be responded to with

SQUAWKING 5525
WE CAN ACCEPT FL410 AT 1636Z

(19) When a ground or airborne system generates the CPDLC message ERROR, the reason for the error shall be included in the message.

(20) The appropriate ATS authority shall select those message elements contained in PANS-ATM, Appendix 5 that support operations in their airspace. Should an ATS authority choose to select a subset of the message elements, and a received message does not belong to this subset, the ATC unit shall respond by up linking the message element **MESSAGE NOT SUPPORTED BY THIS ATC UNIT**.

(21) Only the uplink messages appropriate to a particular control sector's operations shall be provided to the controller.

(22) When considered necessary by the appropriate ATS authority, additional pre-formatted free text messages shall be made available to the controller for those occasions where the CPDLC message set contained in the PANS-ATM does not provide for specific requirements. In such cases, a list of pre-formatted free text messages shall be established by the appropriate ATS authority, in consultation with operators and other ATS authorities that may be concerned.

(23) Information concerning CPDLC message element subsets utilised and, if applicable, any additional preformatted free text messages, shall be published in Aeronautical Information Publications (AIPs).

Transfer of CPDLC

8. (1) When CPDLC is transferred, the transfer of voice communications and CPDLC shall commence concurrently.

(2) When an aircraft is transferred from an ATC unit where CPDLC is available to an ATC unit where CPDLC is not available, CPDLC termination shall commence concurrent with the transfer of voice communications.

(3) When a transfer of CPDLC results in a change of data authority, and there are still messages for which the closure response has not been received (i.e. messages outstanding), the controller transferring the CPDLC shall be informed.

(4) If the controller needs to transfer the aircraft without replying to any downlink message(s) outstanding, the system shall have the capability to automatically send the appropriate closure response message(s). In such cases, the contents of any automatically sent closure response message(s) shall be promulgated in local instructions.

(5) When the controller decides to transfer the aircraft without receiving pilot responses to any uplink message(s) outstanding, the ground system shall have the capability to automatically end the dialogue for each message prior to the transfer.

(6) The controller shall revert to voice communications to clarify any ambiguity associated with the message(s) outstanding.

(7) When a transfer of CPDLC does not result in a change of data authority, and there are still messages outstanding, these messages shall either be forwarded to the appropriate controller or shall be closed in accordance with local instructions and, if necessary, letters of agreement.

Display of CPDLC messages

9. ATC units utilising a CPDLC message contained in the PANS-ATM shall display the associated text pertaining to that message as presented in the PANS-ATM, Appendix 5.

Free text messages

10. (1) The use of free text message elements by controllers or pilots, shall be avoided.

(2) When the CPDLC message set contained in the PANS-ATM (Doc 4444) does not provide for specific circumstances, the appropriate ATS Authority may determine that it is acceptable to use free text message elements. In such cases, the appropriate ATS Authority, in consultation with operators and other ATS authorities that may be concerned, shall define display format, intended use and attributes for each free text message element and publish them with relevant procedures in the AIPs.

(3) Free text message elements should be stored for selection within the aircraft or ground system to facilitate their use.

Emergencies, hazards and equipment failure procedures

11. (1) When a CPDLC emergency message is received, the controller shall acknowledge receipt of the message by the most efficient means available.

(2) When responding via CPDLC to a report indicating unlawful interference, uplink message ROGER 7500 shall be used.

(3) When responding via CPDLC to all other emergency or urgency messages, uplink message ROGER shall be used.

(4) When a CPDLC message requires a logical acknowledgement and/or an operational response, and such a response is not received, the pilot or controller, as appropriate, shall be alerted.

Failure of CPDLC

12. (1) A CPDLC failure shall be detected in a timely manner.

(2) The controller and pilot shall be alerted to a failure of CPDLC as soon as a failure has been detected.

(3) When a controller or pilot is alerted that CPDLC has failed, and the controller or pilot needs to communicate prior to CPDLC being restored, the controller or pilot shall revert to voice, if possible, and preface the information with the phrase:

CPDLC FAILURE

(4) Controllers having a requirement to transmit information concerning a complete CPDLC ground system failure to all stations likely to intercept shall preface such a transmission by the general call ALL STATIONS CPDLC FAILURE, followed by the identification of the calling station.

(5) When CPDLC fails and communications revert to voice, all CPDLC messages outstanding shall be considered not delivered and the entire dialogue involving the messages outstanding shall be recommenced by voice.

(6) When CPDLC fails but is restored prior to a need to revert to voice communications, all messages outstanding shall be considered not delivered and the entire dialogue involving the messages outstanding shall be recommenced via CPDLC.

Intentional shutdown of CPDLC

13. (1) When a system shutdown of the communications network or the CPDLC ground system is planned, a NOTAM shall be published to inform all affected parties of the shutdown period and if necessary, the details of the voice communication frequencies to be used.

(2) Aircraft currently in communication with the ATC unit shall be informed by voice or CPDLC of any imminent loss of CPDLC service.

(3) The controller and pilot shall be provided with the capability to abort CPDLC.

Failure of a single CPDLC message

14. When a controller or pilot is alerted that a single CPDLC message has failed, the controller or pilot shall take one of the following actions, as appropriate—

(a) via voice, confirm the actions that will be undertaken with respect to the related dialogue, prefacing the information with the phrase—

CPDLC MESSAGE FAILURE;

(b) via CPDLC, reissue the CPDLC message that failed.

Discontinuation of use of CPDLC pilot requests

15. (1) When a controller requires all stations or a specific flight to avoid sending CPDLC requests for a limited period of time, the following phrase shall be used—

((call sign) or ALL STATIONS) STOP SENDING CPDLCREQUESTS [UNTIL ADVISED] [(reason)]

(2) The resumption of the normal use of CPDLC shall be advised by using the following phrase—

((call sign) or ALL STATIONS) RESUME NORMAL CPDLC OPERATIONS

(3) Where the testing of CPDLC with an aircraft could affect the air traffic services being provided to the aircraft, coordination shall be effected prior to such testing.

SCHEDULE 10

GUIDANCE MATERIAL FOR THE TRANSMISSION OF LONG MESSAGES ON THE AFTN

Introduction

1. The requirement for the transmission of separate messages over the AFTN when a text exceeding 1 800 characters is encountered is detailed in paragraph 1. (4) (k) of Schedule 1. When messages have to be divided into two or more parts, the following procedure should be applied.

Procedure

2. Each message part should carry the same address and origin with the sequence of each part indicated on the last line of text as follows—

(End of first message) / / END PART 01 / /
(End of second message) / / END PART 02 / /
... etc. ...
(End of last message) / / END PART XX/XX / /

Note.— The following example illustrates the application of the above procedure, for a three-part message. The message part sequence information is included in the text character count.

(a) First message:

(Address) GG EGLLYMYX
(Origin) 102030 KWBCYMYX
(Text) text
/ / END PART 01 / /
(Ending) NNNN

(b) Second message:

(Address) GG EGLLYMYX
(Origin) 102030 KWBCYMYX
(Text) text continued
/ / END PART 02 / /
(Ending) NNNN

(c) Third and last message:

(Address) GG EGLLYMYX
(Origin) 102030 KWBCYMYX
(Text) remainder of text
/ / END PART 03/03 / /
(Ending) NNNN

Made by the Director General this 11th day of July, 2025.

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