GEN 3.4 COMMUNICATION SERVICES

3.4.1 Responsible service

3.4.1.1. The service responsible for the provision of telecommunication and navigation facility services in Saudi Arabia is the General Authority of Civil Aviation (GACA).
Saudi Air Navigation Services / General Authority of Civil Aviation (GACA)
Air Navigation Services
Air Traffic Management
Aeronautical Telecommunication Supervisor
P.O.Box 15441
Jeddah 21444
Saudi Arabia
TEL: +966 12 6848111(24 h)
+966 12 6855611 (From 8 am to 4 pm)
+966 12 6854014 (From 8 am to 4 pm)
FAX: +966 12 6854016
AFTN: OEJNYFYX

3.4.1.2. The service is provided in accordance with the provisions contained in the following ICAO documents:

Annex 10 - *Aeronautical Telecommunications*
Doc 8400 - *Procedures for Air Navigation Services - ICAO Abbreviations and Codes (PANS-ABC)*
Doc 8585 - *Designators for Aircraft Operating - Agencies, Aeronautical Authorities and Services*
Doc 7030 - *Regional Supplementary Procedures*
Doc 7910 - *Location Indicators*

***Note*:** Radio talephony procedures and phraseology shall be in accordance with the ICAO Manual of Radiotelephony, Doc 9432 AN/ 925 and supporting sections of the current ICAO Doc 4444.

3.4.2 Area of responsibility

3.4.2.1. The Head of ATM is the authority responsible for the provision of all telecommunication services.

3.4.2.2. The Head of ESD and MED is responsible for the technical specifications, design, installation and maintenance of communication and radio navigation equipment and circuits.

3.4.2.3. Responsibility for the day-to-day operation of the telecommunication services is vested in the communication centres/ units , and the air traffic control units at various locations and aerodrome throughout Saudi Arabia.

3.4.2.4. Enquiries, suggestions or complaints regarding any telecommunication service should be referred to the Director General, ATM.

3.4.3 Types of services

3.4.3.1 Radio navigation services

3.4.3.1.1. The following types of radio aids to navigation are available:

VHF omni-directional radio range (VOR)
Instrument landing system (ILS)
Distance-measuring equipment (DME)
Tactical air navigation (TACAN)

3.4.3.1.2. The coordinates listed refer to the transmitting antennas.

3.4.3.2 Controller pilot data link communication(CPDLC)

3.4.3.2.1 General

The CPDLC application provides a means of communication between the air traffic controller and the pilot, using a predefined data link message set. This application includes a set of clearance/information/request message elements which correspond to the phraseologies used in the radiotelephony environment.

CPDLC messages and application are implemented in accordance with GACA requirements, ICAO Annex 10, Vol. II, III, and Annex 11 provisions and PANS-ATM procedures published under ICAO Doc 4444. The Global Operational Data Link (GOLD) Manual (Doc 10037) is the primary guidance material that was considered in the development of CPDLC service.

The use of CPDLC is not mandatory within Jeddah FIR and is provided at the discretion of ATC and the pilots.

3.4.3.2.2 Area of application

CPDLC service is available from FL290 and above within Jeddah FIR to all equipped aircraft with FANS1/A and FANS1/A+. The following CPDLC services are provided:

- Data link initiation capability (DLIC).
- ATC clearances and instructions (ACL).
- ATC communications management (ACM).
- ATC Microphone Check (AMC).

3.4.3.2.3 Flight plan

To use the CPDLC service, pilots shall file the respective aircraft equipage in their flight plan (FPL 2012 format), field item 10 with the appropriate J codes and field 18, as defined under ICAO Doc 4444, Appendix 2.

3.4.3.2.4 CPDLC use

Where urgent or time critical communications are required, voice communications must be used. Voice read back is not required for any CPDLC instructions. In cases where uncertainty arises as a result of a data link message, communication shall revert to voice R/T.

3.4.3.2.5 Logon to CPDLC service

The logon is the first step in the data link process and is initiated either by the flight crew, or automatically following data link transfer between Jeddah and Riyadh ACCs. Once the logon is complete, Jeddah or Riyadh ACC will request a CPDLC connection, which the aircraft should automatically accept.

The LOGON addresses to be used for CPDLC service within Jeddah FIR are the following:

- The logon address for the CPDLC service provided by Jeddah ACC is OEJN.
- The logon address for the CPDLC service provided by Riyadh ACC is OERK.

A CPDLC connection immediately becomes active when established if no previous CPDLC connection exists at that time. An active CPDLC connection allows Jeddah or Riyadh ACC and the aircraft to exchange CPDLC messages. Jeddah or Riyadh ACC with which an aircraft has an active CPDLC connection is referred to as the Current Data Authority (CDA).

An inactive connection Next Data Authority (NDA) can be established upon completion of the logon procedure if a previous CPDLC connection exists with the aircraft.

Under the provision of CPDLC service, Jeddah or Riyadh ACC with the CDA connection will manage its CPDLC connections, including transferring and terminating the connection when no longer needed. CPDLC transfers will be initiated before the aircraft transits from the current ATS Unit (Jeddah or Riyadh ACC) to another one and will be terminated the connection as the aircraft leaves the Area of Responsibility of each area control centre. These transfers are automatic and should be seamless for the crew without any action being required.

Should a datalink transfer fail to complete, the transferring ATS Unit (Jeddah or Riyadh ACC) will be alerted, which may result in a request to the crew to disconnect CPDLC and to either perform a re-logon to reinitiate the transferring process, or to logon to the next ATS Unit.

3.4.3.2.6 CPDLC operational rules

The following rules should be observed during use of CPDLC service:

1. Flight crews must ensure that upon receiving an uplink message, the CPDLC address corresponds to the ATC unit name to which the flight is in voice communications.
2. If a clearance is received that can be automatically loaded into the FMS (e.g., via a LOAD prompt), the flight crew must load the clearance into the FMS and review it before responding with WILCO.
3. If a CPDLC instruction is superseded by a voice instruction, to avoid a time-out, the flight crew are requested to respond ‘UNABLE’ to close the original CPDLC dialogue and follow the voice instruction.

4. Controllers may be required to respond to a downlink request with ‘UNABLE’ to close dialogue.

5. If a flight crew has any doubt regarding the content, validity or execution of a CPDLC massage they must revert to vioce immediately to clarify the situation.

6. CPDLC shall be established in sufficient time to ensure the aircraft communicates with the appropriate ATC unit.

7. Only one CPDLC connection can be active at any given time.

8. A connection is active when CPDLC messages can be exchanged and non-active when CPDLC messages cannot be exchanged.

9. Only one CPDLC connection can be active at any given time. A non-active connection becomes active as soon as the active connection is terminated.

10. An ATS unit should not assume that its CPDLC connection is active unless receipt of any downlink message from the aircraft, either unsolicited or as a response to an uplink message sent for that purpose.

11. CPDLC shall be established in sufficient time to ensure that the aircraft is communicating with the appropriate ATC unit.

12. 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 AUTHORIZED NEXT DATA AUTHORITY, as appropriate.

13. Whenever a correction to a message sent via CPDLC is deemed necessary or the contents of a message need to be clarified, the controller or pilot shall use the most appropriate means available for issuing the correct details or for providing clarification.

14. When a controller or pilot communicates via CPDLC, the response should be via CPDLC. When a controller or pilot communicates via voice, the response should be via voice.

15. 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.

16. If the clearance contained in a downlink request is not available, the controller should uplink UNABLE to deny the request prior to issuing any subsequent clearances.

17. CPDLC should not be used to issue immediate or expeditious clearances unless voice communication is not operationally feasible. If an alternative clearance (intermediate level or deferred climb) is available, the controller may subsequently uplink the clearance in a separate CPDLC message. If an alternative clearance that the flight crew might not be able to accept (higher level or route modification) is available, the controller should negotiate the clearance with the flight crew prior to granting it.

18. ATCO should never issue clearance or instruction to an aircraft outside its control area unless otherwise coordinated.

3.4.3.2.7 CPDLC failure

1. The flight crew must advise ATC immediately of any data link issues that might affect FANS (CPDLC) data link operations.

2. The use of CPDLC to indicate emergency situations shall only be used if other methods are not possible/available.

3.4.3.2.8 CPDLC Messages

The following uplink/downlink messages are processed by the ATM system used at Jeddah and Riyadh ACCs:

Uplink Messages	
Message	**Description**
UM0	UNABLE, indicates that ATC cannot comply with the request
UM1	STANDBY, indicates that ATC has received the message and will respond. Note: The flight crew is informed that the request is being assessed and there will be a short-term delay (e.g. as appropriate, given the situation, but not to exceed 10 minutes). The exchange is not closed and the request will be responded to when conditions allow.
UM3	ROGER, indicates that ATC has received
UM4	AFFIRM Indication that ATC is responding positively to the message.
UM5	NEGATIVE Indication that ATC is responding negatively to the message.
UM19	MAINTAIN [level] used for a single level instruction to maintain the specific level or vertical range.

UM20	CLIMB TO AND MAINTAIN [level] Note:Used for a single level. Instruction that a climb to the specified level or vertical range is to commence and once reached is to be maintained
UM23	DESCEND TO AND MAINTAIN [level] Instruction to descend and maintain the specific level. Note:Used for a single level instruction that decent to the specific level or vertical range is to commence and once reached is to be maintained
UM106	MAINTAIN [speed] KN Instruction increase or decrease speed to the specified number.
UM94	TURN [Direction] [heading] DEGREES Instruction to turn to the specified heading
UM74	PROCEED DIRECT TO [point or NAVAID] Instruction to fly direct to a specific point
UM161	END SERVICE , Notification to the avionics that the data link connection with the current data authority is being terminated.
UM117	CONTACT [unit name frequency] HF CONTACT [unit name frequency] VHF CONTACT [unit name frequency] UHF
UM160	NEXT DATA AUTHORITY [facility designation], Notification to the avionics that the specified data authority is the next data authority. If no data authority is specified, this indicates that any previously specified next data authority is no longer valid.
UM7	EXPECT CLIMB AT (time) Notification that an instruction may be expected for the aircraft to commence climb at the specified time
UM8	EXPECT CLIMB AT (position) Notification that an instruction may be expected for the aircraft to commence climb at the specified position.
UM30	MAINTAIN BLOCK (altitude) TO (altitude) Note: Used for a vertical range.
UM36	EXPEDITE CLIMB TO (altitude) Note:This message element is equivalent to SUPU-3 plus LVLU-6 in Doc 4444.
UM38	IMMEDIATELY CLIMB TO (altitude)
UM21	AT (time) CLIMB TO AND MAINTAIN (altitude) Note: A vertical range can not be provided.
UM22	AT (position) CLIMB TO AND MAINTAIN (altitude) Note:A vertical range can not be provided.
UM24	AT (time) DESCEND TO AND MAINTAIN (altitude). Instruction that at the specified time a descent to the specified level or vertical range is to commence and once reached is to be maintained
UM25	AT (position) DESCEND TO AND MAINTAIN (altitude) Instruction that at the specified position a descent to the specified level or vertical range is to commence and once reached is to be maintained.
UM26	CLIMB TO REACH (level) BY (time) Instruction that a climb is to be completed such that the specified level is reached before the specified time.
UM27	CLIMB TO REACH (level) BY (position) Instruction that a climb is to be completed such that the specified level is reached before passing the specified position.
UM28	DESCEND TO REACH (altitude) BY (time)
UM31	CLIMB TO AND MAINTAIN BLOCK (altitude) TO (altitude) Note:Used for a vertical range.
UM32	DESCEND TO AND MAINTAIN BLOCK (altitude) TO (altitude). Instruction that a descent to the specified level or vertical range is to commence and once reached is to be maintained.
UM171	CLIMB AT (vertical rate) MINIMUM
UM172	CLIMB AT (vertical rate) MAXIMUM
UM9	EXPECT DESCENT AT (time) EXPECT LOWER AT (position) Notification that an instruction may be expected for the aircraft to commence descent at the specified time.
UM10	EXPECT DESCENT AT (position) Notification that an instruction may be expected for the aircraft to commence descent at the specified position
UM37	EXPEDITE DESCENT TO, (altitude) Instruction that a descent to the specified level or vertical range is to commence and once reached is to be maintained.
UM29	DESCEND TO REACH (altitude) BY (position)
UM39	IMMEDIATELY DESCEND TO (altitude)
UM173	DESCEND AT (vertical rate) MINIMUM Instruction to descend at the specified rate or greater
UM174	DESCEND AT (vertical rate) MAXIMUM Instruction to descend at the specified rate or less.
UM46	CROSS (position) AT (altitude)
UM47	CROSS (position) AT OR ABOVE (level single), Instruction that the specified position is to be crossed at or above the specified level.

UM50	CROSS (position) BETWEEN (altitude) AND (altitude) Instruction that the specified position is to be crossed at the specified level or within the specified vertical range.
UM51	CROSS (position) AT (time) Instruction that the specified position is to be crossed at the specified time
UM52	CROSS (position) BEFORE TIME (time) Instruction that the specified position is to be crossed before the specified time.
UM48	CROSS (position) AT OR BELOW (level single) Instruction that the specified position is to be crossed at or below the specified level.
UM53	CROSS (position) AT OR AFTER (time), Instruction that the specified position is to be crossed at the specified speed.
UM54	CROSS (position) BETWEEN (time) AND (time) Instruction that the specified position is to be crossed between the specified times.
UM55	CROSS (position) AT (speed) Instruction that the specified position is to be crossed at the specified speed.
UM56	CROSS (position) AT OR LESS THAN (speed) Instruction that the specified position is to be crossed at or less than the specified speed.
UM57	CROSS (position) AT OR GREATER THAN (speed) Instruction that the specified position is to be crossed at or greater than the specified speed.
UM58	CROSS (position) AT (time) AT (altitude Instruction that the specified position is to be crossed at the specified time and at the level or within the vertical range as specified. Note:A vertical range cannot be provided.
UM59	CROSS (position) AT OR BEFORE (time) AT (altitude) Instruction that the specified position is to be crossed before the specified time and at the level or within the vertical range as specified. Note:A vertical range cannot be provided.
UM60	CROSS (position) AT OR AFTER (time) AT (altitude) Instruction that the specified position is to be crossed after the specified time and at the level or within the vertical range as specified. Note:A vertical range cannot be provided.
UM61	CROSS (position) AT AND MAINTAIN (altitude) AT (speed) Instruction that the specified position is to be crossed at the level or within the vertical range, as specified, and at the specified speed. Note:A vertical range cannot be provided.
UM63	AT (time) CROSS (position) AT AND MAINTAIN (altitude) AT (speed) Instruction that the specified position is to be crossed at the specified time at the level or within the vertical range, as specified, and at the specified speed. Note:A vertical range cannot be provided.
UM64	OFFSET (distance offset) (direction) OF ROUTE, Instruction to fly a parallel track to the cleared route at a displacement of the specified distance in the specified direction.
UM65	AT (position) OFFSET (distance offset) (direction) OF ROUTE. Instruction to fly a parallel track to the cleared route at a displacement of the specified distance in the specified direction and commencing at the specified position.
UM66	AT (time) OFFSET (distance offset) (direction) OF ROUTE, Instruction to fly a parallel track to the cleared route at a displacement of the specified distance in the specified direction and commencing at the specified time.
UM67	PROCEED BACK ON ROUTE, Instruction to rejoin the cleared route.
UM68	REJOIN ROUTE BEFORE PASSING (position), Instruction to rejoin the cleared route before passing the specified position.
UM69	REJOIN ROUTE BY (time), Instruction to rejoin the cleared route before the specified time.
UM70	EXPECT BACK ON ROUTE BEFORE PASSING (position), Notification that a clearance may be issued to enable the aircraft to rejoin the cleared route before passing the specified position.
UM71	EXPECT BACK ON ROUTE BEFORE TIME (time), Notification that a clearance may be issued to enable the aircraft to rejoin the cleared route before the specified time.
UM72	RESUME OWN NAVIGATION Instruction to resume own navigation following a period of tracking or heading clearances. May be used in conjunction with an instruction on how or where to rejoin the cleared route.
UM82	CLEARED TO DEVIATE UP TO (lateral deviation) OF ROUTE, Instruction allowing deviation up to the specified distance(s) from the cleared route in the specified direction(s).
UM78	AT (level single) PROCEED DIRECT TO (position), Instruction to proceed upon reaching the specified level, directly to the specified position.
UM79	CLEARED TO (position) VIA (departure data[O]) (en-route data), Instruction to proceed to the specified position via the specified route.
UM80	CLEARED (departure data[O]) (en-route data) (arrival approach data) Instruction to proceed via the specified route.
UM81	CLEARED (procedure name) Instruction to proceed in accordance with the specified procedure.
UM83	AT (position) CLEARED (route clearance) Instruction to proceed from the specified position via the specified route.

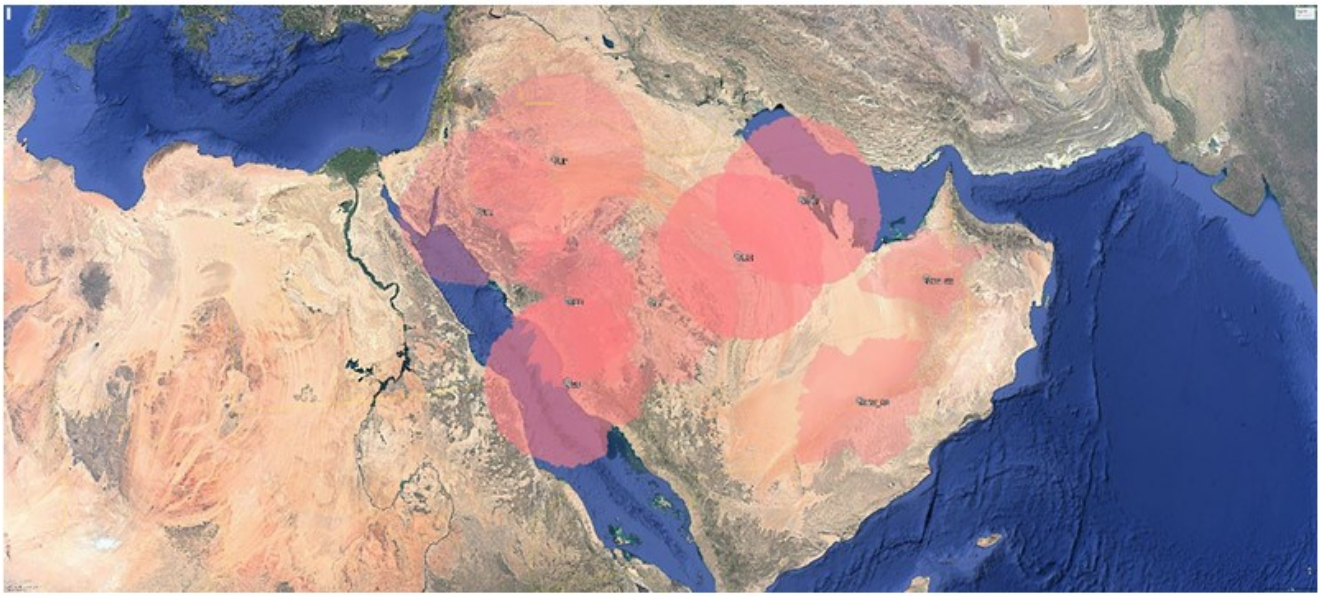
UM84	AT (position) CLEARED (procedure name), Instruction to proceed from the specified position via the specified procedure.
UM91	HOLD AT (position) MAINTAIN (altitude) INBOUND TRACK (degrees) (direction) TURN LEG TIME (leg type), Instruction to enter a holding pattern at the specified position in accordance with the specified instructions.
UM92	HOLD AT (position) AS PUBLISHED MAINTAIN (altitude), Instruction to enter a holding pattern at the specified position in accordance with the published holding instructions.
UM93	EXPECT FURTHER CLEARANCE AT (time), Notification that an onwards clearance may be issued at the specified time.
UM75	WHEN ABLE PROCEED DIRECT TO (position)
UM76	AT (time) PROCEED DIRECT TO (position) Instruction to proceed, at the specified time, directly to the specified position.
UM77	AT (position) PROCEED DIRECT TO (position) Instruction to proceed, at the specified position directly to the next specified position.
UM95	TURN (direction) GROUND TRACK (degrees) Instruction to turn left or right as specified on to the specified track.
UM215	TURN (direction) (degrees) Instruction to turn the specified number of degrees left or right.
UM96	FLY PRESENT HEADING, Instruction to continue to fly the present heading.
UM97	AT (position) FLY HEADING (degrees) Instruction to fly the specified heading upon reaching the specified position.
UM98	IMMEDIATELY TURN (direction) HEADING (degrees), Instruction to turn left or right as specified on to the specified heading.
UM99	EXPECT (named instruction) Notification that a clearance may be issued for the aircraft to fly the specified procedure or clearance name. Note:Used when a published procedure is designated.
UM100	AT (time) EXPECT (speed) Notification that a speed instruction may be issued to take effect at the specified time.
UM101	AT (position) EXPECT (speed) Notification that a speed instruction may be issued to take effect at the specified position.
UM102	AT (altitude) EXPECT (speed) Notification that a speed instruction may be issued to take effect at the specified level.
UM107	MAINTAIN PRESENT SPEED Instruction to maintain the present speed.
UM108	MAINTAIN (speed) OR GREATER, Instruction to maintain the specified speed or greater.
UM109	MAINTAIN (speed) OR LESS Instruction to maintain the specified speed or less.
UM110	MAINTAIN (speed) TO (speed) Instruction to maintain the specified speed range.
UM111	INCREASE SPEED TO (speed), Instruction that the present speed is to be increased to the specified speed and maintained until further advised.
UM112	INCREASE SPEED TO (speed) OR GREATER, Instruction that the present speed is to be increased to the specified speed or greater and maintained at or above the specified speed until further advised.
UM113	REDUCE SPEED TO (speed) Instruction that the present speed is to be reduced to The specified speed and maintained until further advised
UM114	REDUCE SPEED TO (speed) OR LESS Instruction that the present speed is to be reduced to the specified speed or less and maintained at or below the specified speed until further advised.
UM116	RESUME NORMAL SPEED, Instruction to resume a normal speed. The aircraft no longer needs to comply with a previously issued speed restriction.
UM134	CONFIRM SPEED
UM136	CONFIRM ASSIGNED SPEED Request to confirm the assigned speed.
UM118	AT (position) CONTACT (ICAO unit name) (frequency) Instruction at the specified position to establish voice contact with the specified ATS unit on the specified frequency.
UM119	AT (time) CONTACT (ICAO unit name) (frequency), Instruction at the specified time to establish voice contact with the specified ATS unit on the specified frequency.
UM120	MONITOR (ICAO unit name) (frequency) Instruction to monitor the specified ATS unit on the specified frequency. The flight crew is not required to establish voice contact on the frequency.
UM121	AT (position) MONITOR (ICAO unit name) (frequency) Instruction at the specified position to monitor the specified ATS unit on the specified frequency. The flight crew is not required to establish voice contact on the frequency.
UM122	AT (time) MONITOR (ICAO unit name) (frequency) Instruction at the specified time to monitor the specified ATS unit on the specified frequency. The flight crew is not required to establish voice contact on the frequency.
UM124	STOP SQUAWK Instruction to disable SSR transponder responses.

UM125	SQUAWK MODE C W/U SQUAWK ALTITUDE Instruction to include level information in the SSR transponder responses.
UM126	STOP ALTITUDE SQUAWK Instruction to stop including level information in the SSR transponder responses.
UM127	REPORT BACK ON ROUTE Instruction to report when the aircraft is back on the cleared route. Note:R response attribute.
UM144	CONFIRM SQUAWK CODE Request to confirm the selected SSR code.
UM179	SQUAWK IDENT Instruction that the 'ident' function on the SSR transponder is to be actuated.
UM123	SQUAWK (SSR code) Instruction to select the specified SSR code.
UM128	REPORT LEAVING (altitude) Instruction to report upon leaving the specified level. Note:R response attribute.
UM180	REACHING BLOCK (altitude) Instruction to report upon reaching the specified vertical range. Note:R response attribute.
UM135	CONFIRM ASSIGNED ALTITUDE, Request to confirm the assigned level. Note:NE response attribute.
UM169	ADVISE TOP OF DESCENT Request to provide the preferred time and/or position to commence descent to the aerodrome of intended arrival. Note:R response attribute.
UM170	REVISED (revision reason[O]) Indication that the associated instruction is either a revision to a previously issued instruction or is different from the requested clearance. Note:R response attribute.
UM130	REPORT PASSING (position) Instruction to report upon passing the specified position.
UM131	REPORT REMAINING FUEL AND SOULS ON BOARD Request to provide the fuel remaining (time) and the number of persons on board. Y Note:NE response attribute.
UM129	REPORT LEVEL (altitude) Instruction to report upon maintaining the specified level.
UM143	CONFIRM REQUEST, Request to confirm the referenced request since the initial request was not understood. The request should be clarified and resubmitted.
UM147	REQUEST POSITION REPORT Request to make a position report.
UM137	CONFIRM ASSIGNED ROUTE Request to confirm the assigned route. Note:NE response attribute.
UM148	WHEN CAN YOU ACCEPT Request for the earliest time or position when the specified level can be accepted. Note:NE response attribute.
UM149	CAN YOU ACCEPT (level single) AT (position) Request to indicate whether or not the specified level can be accepted at the specified position.
UM150	CAN YOU ACCEPT (level single) AT TIME (time) Request to indicate whether or not the specified level can be accepted at the specified time.
UM151	WHEN CAN YOU ACCEPT (speed), Request for the earliest time or position when the specified speed can be accepted. Note:NE response attribute.
UM153	ALTIMETER (altimeter) Advisory providing the specified altimeter setting for the specified facility (facility designation). Note:The facility designation and the time of measurement cannot be provided.
UM154	RADAR SERVICES TERMINATED Advisory that the ATS surveillance service is terminated.
UM155	RADAR CONTACT (position) Advisory that ATS surveillance service has been established. A position may be specified position. Note:The provision of the position is required.
UM156	RADAR CONTACT LOST Advisory that ATS surveillance contact has been lost.
UM157	CHECK STUCK MICROPHONE (frequency), Instruction to check the microphone due to detection of a continuous transmission on the specified frequency. Note: R response attribute.
UM158	ATIS (ATIS code) ATS advisory that the current ATIS code is as specified. Note:The airport is not provided.
UM159	ERROR (error information) System-generated notification of an error.
UM164	WHEN READY Indication that the associated instruction is to be executed when the flight crew is ready.
UM166	DUE TO TRAFFIC Indication that the associated message is issued due to the specified reason.
UM167	DUE TO AIRSPACE RESTRICTION Indication that the associated message is issued due to the specified reason.

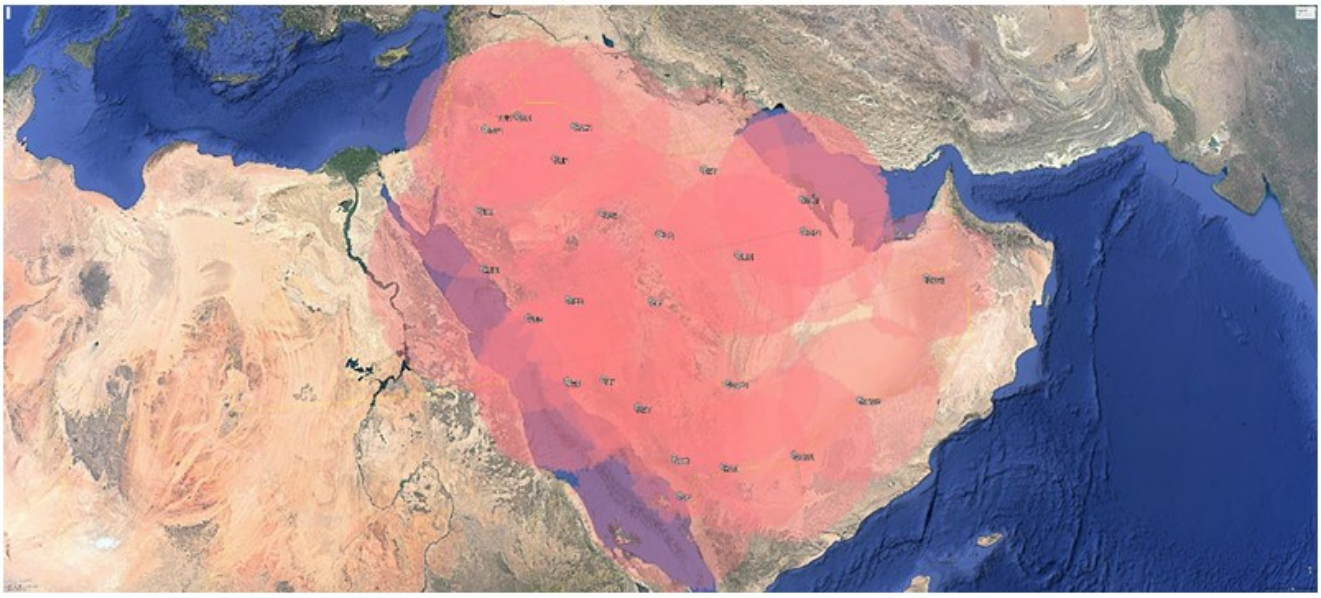
Downlink Messages	
Message	**Description**
DM0	WILCO, the instruction is understood and will be complied with.
DM1	UNABLE, the instruction cannot be complied with.
DM2	STANDBY , Wait for a reply. Note:The controller is informed that the request is being assessed and there will be a short-term delay (within 10 minutes). The exchange is not closed, and the request will be responded to when conditions allow.
DM4	AFFIRM, Yes. Note:AFFIRM is an appropriate response to an uplinked negotiation request message (e.g. UM150 CAN YOU ACCEPT [level] at [time]).
DM5	NEGATIVE, NO Note:NEGATIVE is an appropriate response to an uplinked negotiation request message (e.g. UM 150 CAN YOU ACCEPT [level] at [time]).
DM3	ROGER, Message received and understood. Note:ROGER is the only correct response to an uplink free text message. Under no circumstances will ROGER be used instead of AFFIRM.
DM6	REQUEST [level] – Request to fly at the specified level Request to fly at the specified level or vertical range.
DM9	REQUEST CLIMB TO [level] - Request to climb to the specified level
DM10	REQUEST DESCENT TO [level] Request to descend to the specified level
DM22	REQUEST DIRECT TO [position] Request to track from the present position direct to the specified position.
DM66	DUE TO AIRCRAFT PERFORMANCE, Used to explain reasons for pilot’s message.
DM65	DUE TO WEATHER, Used to explain reasons for pilot’s message.
DM48	POSITION REPORT [position report], Position report. Note:Reports the current position of the aircraft when the flight crew presses the button to send this message. ATC expects position reports based on this downlink message.
DM50	WHEN CAN WE EXPECT (speed) TO (speed) Use of SPDD-1 REQUEST (speed) is recommended.
DM55	PAN PAN PAN, Urgency prefix. FANS 1/A .Ground system will display message to controller for FANS 1/A aircraft.
DM56	MAYDAY MAYDAY MAYDAY, Distress prefix. FANS 1/A .Ground system will display message to controller for FANS 1/A aircraft.
DM62	ERROR [error information], A system-generated message that the avionics has detected an error.
DM112	SQUAWKING 7500, indicates specifically that the aircraft is being subjected to unlawful interference

Note: Flight crews must be familiar with the proper loading and execution of the above CPDLC uplink messages.

3.4.3.2.9 CPDLC coverage



VDL Coverage



ACARS (POA) F/L Coverage

3.4.3.3 *Mobile/fixed service*

3.4.3.3.1 *Mobile service*

Air traffic control units maintain continuous watch on their stated frequencies during the published hours of service, unless otherwise noted. It is advised to check NOTAM for current information regarding this service. An aircraft should normally communicate with the air traffic control unit which that exercises control in the area in which the aircraft is flying. Aircraft should maintain continuous listening and watch on the appropriate frequency of the ATC unit, and should not cease listening, except for reasons of safety, without informing the ATC unit.

3.4.3.3.2 *Fixed service*

The messages to be transmitted over the Aeronautical Fixed Service (AFS) are accepted only if:

a. they satisfy the requirements of ICAO Annex 10, Vol. II, Chapter 3, 3.3;

b. they are prepared in the form specified in ICAO Annex 10, Volume II.

3.4.3.4 *Broadcasting service*

ATIS broadcasts in Saudi Arabia are made on VOR voice channels on VHF frequencies and should be satisfactorily received at a maximum range of 100 NM at FL 300, reducing accordingly at lower altitudes to 60 NM at FL 100. Beyond these ranges, ATIS broadcast may be received, but not necessarily satisfactorily.

3.4.3.5. *Language used* : English

3.4.3.6. *Where detailed information can be obtained*

3.4.3.6.1. Details of the various facilities available for the enroute traffic can be found in Part 2, **ENR 4**.

3.4.3.6.2. Details of the facilities available at the individual aerodromes can be found in the relevant sections of Part 3 (AD). In cases where a facility is serving both the enroute traffic and the aerodromes, details are given in the relevant sections of Part 2 (ENR) and Part 3 (AD).

3.4.4 Requirements and conditions

3.4.4.1. The requirements and the general conditions under which the telecommunication services are available for international use are contained in section **GEN 1.7** of this publication. The requirements for the carriage of radio equipment are contained in section **GEN 1.5** of this publication. The following conditions should be noted and complied with and/or considered, as appropriate.

3.4.4.2 TIBA frequency in uncontrolled airspace and at uncontrolled aerodromes

The published TIBA frequency is the designated air-to-air frequency to be used by aircraft when flying in uncontrolled airspace (Class G) and is also the designated ground-to-air frequency for use between authorized ground agencies and aircraft operating within aerodrome traffic zones as listed in the AIP. The TIBA procedures are specified in ENR 1.1.

3.4.4.3 Fire rescue services frequency at uncontrolled aerodromes

All fire rescue services units at uncontrolled aerodromes monitor and transmit on frequency 133.5 MHZ.

3.4.4.4 Aerodrome ground control frequency

VHF Frequency 121.9 is aerodrome ground control. Pilots are urgently requested to refrain from using it on the air. The misuse of this frequency will cause interference to users at other aerodroms.

3.4.4.5 Prohibition of non-emergency transmission on emergency frequencies

121.500 MHZ and 243.000 MHZ are reserved for emergency use only. Non-emergency transmission on these frequencies is strictly prohibited. Any person/agency making test or inadvertent transmission on these frequencies shall immediately inform JEDDAH ACC (Tel. +966 12 6855006) of the following:

a. time and duration of transmission;

b. frequency used;

c. exact location;

d. reason; and

e. person or agency concerned.

3.4.5 Miscellaneous

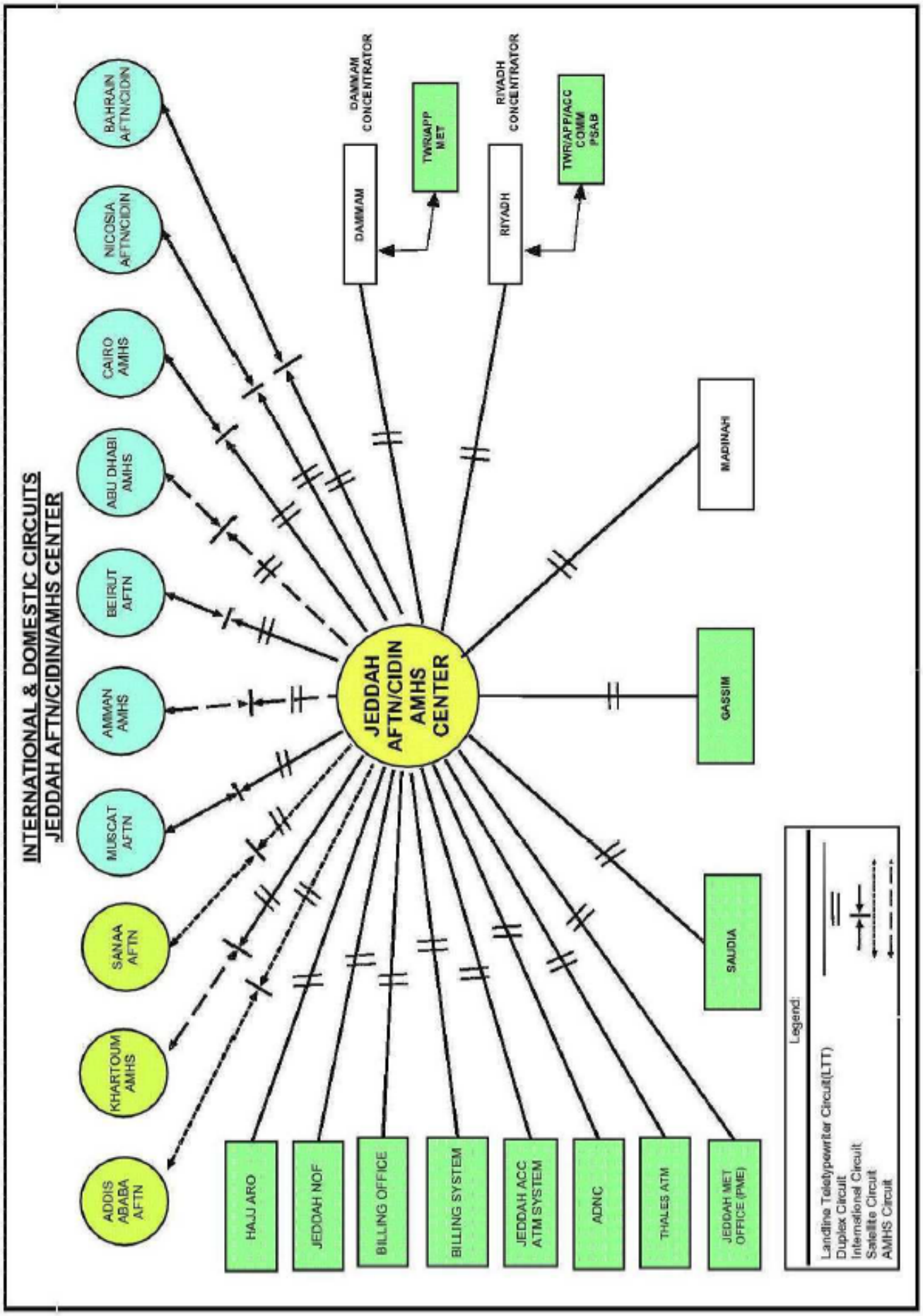
3.4.5.1 Communication watch

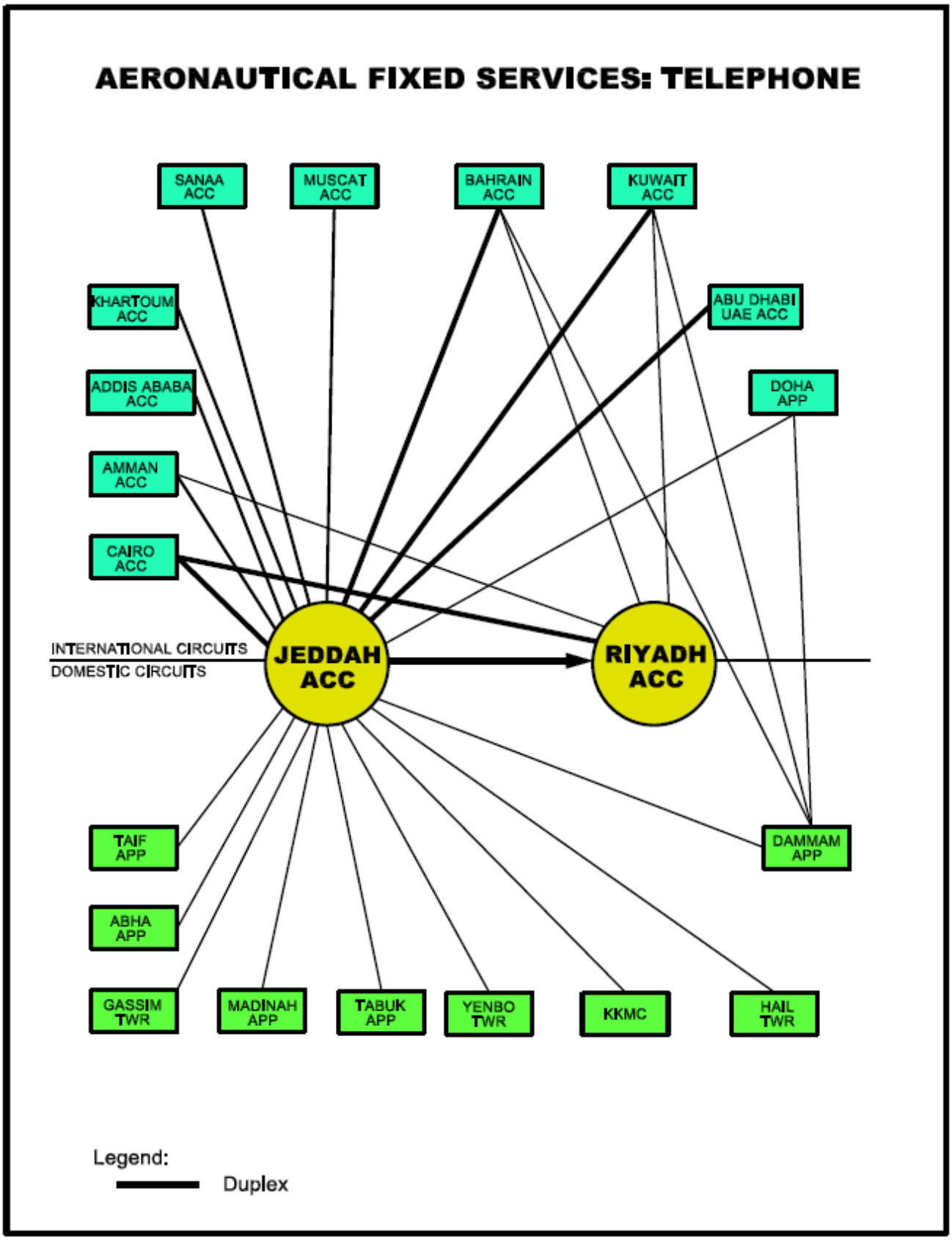
During flight, Pilots shall continuously guard the emergency channel 121.500 and /or 243.000 MHZ, except for those periods when they are carrying out communications on other VHF channels.

3.4.5.2 D-ATIS services

GACA started the operation of the D-ATIS CATS system located in Jeddah ACC. All airlines with ACFT whose avionics are AEEC-623 and ED89A compliant, and equipped with datalink facilities (ACARS, VDL), and that have passed the VAQ (validation, assessment and qualification) requirements to use SITA aircom datalink network, are authorized to use the D-ATIS CATS system.

No participation requirements are identified. The D-ATIS system will automatically handle the acquisition of the meteorological information from the ATIS equipment systems located in (OEJN, OERK, OEDF, OEMA , OETF, OEGN, OEYN, OEGS, OEAB and OEAH) and the distribution of the ATIS information via air - ground datalink to ACFT which have requested an ATIS information.


INTERNATIONAL & DOMESTIC CIRCUITS
JEDDAH AFTN/CIDIN/AMHS CENTER
JEDDAH AFTN/CIDIN AMHS CENTER
BAHRAIN AFTN/CIDIN
NICOSIA AFTN/CIDIN
CAIRO AMHS
ABU DHABI AMHS
BEIRUT AFTN
AMMAN AMHS
MUSCAT AFTN
SANAA AFTN
KHARTOUM AMHS
ADDIS ABABA AFTN
DAMMAM CONCENTRATOR
DAMMAM
TWR/APP MET
RIYADH CONCENTRATOR
RIYADH
TWR/APP/ACC COMM PSAB
MADINAH
GASSIM
SAUDIA
HAJJ ARO
JEDDAH NOF
BILLING OFFICE
BILLING SYSTEM
JEDDAH ACC ATM SYSTEM
ADNC
THALES ATM
JEDDAH MET OFFICE (PME)
Legend:
Landline Teletypewriter Circuit(LTT)
Duplex Circuit
International Circuit
Satellite Circuit
AMHS Circuit


AERONAUTICAL FIXED SERVICES: TELEPHONE
SANAA ACC
MUSCAT ACC
BAHRAIN ACC
KUWAIT ACC
KHARTOUM ACC
ABU DHABI UAE ACC
ADDIS ABABA ACC
DOHA APP
AMMAN ACC
CAIRO ACC
INTERNATIONAL CIRCUITS
DOMESTIC CIRCUITS
JEDDAH ACC
RIYADH ACC
TAIF APP
DAMMAM APP
ABHA APP
GASSIM TWR
MADINAH APP
TABUK APP
YENBO TWR
KKMC
HAIL TWR
Legend:
Duplex