



COM/NAV supplementary information

Revision No:

1

Issue Date:

02/04/14

Subject:

CPDLC Operation (Maastricht & Karlsruhe UAC / London & Scottish FIRs)

Reference:

Germany & UK AIPs / Eurocontrol Publication

Reason for Issue:

Controller Pilot Data Link Communication (CPDLC) services are available for use in the entire German upper airspace (Maastricht & Karlsruhe UAC) and with London and Scottish FIRs. Etihad Airways is authorized and encouraged to use this service.

Instruction:

CPDLC Airspace

CPDLC services will be provided from FL245 and above within Amsterdam FIR (EHAA), Brussels UIR (EBUR), Hannover UIR (EDVV) and Rhein UIR (EDUU) and FL285 and above when under the control of the UK centers.

LOG ON Address

- | | |
|---------------------------|-------------|
| • Maastricht-UAC | EDYY |
| • Karlsruhe-UAC | EDUU |
| • London Data Authority | EGTT |
| • Scottish Data Authority | EGPX |

LOG-ON and CPDLC connection

LOG-ON shall be initiated by the crew 15 minutes prior to entry into Maastricht & Karlsruhe UAC, while it is at any time prior to the entry for the relevant UK FIR boundary using their ICAO call sign as filed in the flight plan. LOG-ON can also be initiated on the ground when the departure aerodrome is in close proximity to the relevant UAC/ACC or FIR.

Originator:

Captain Giorgio Evangelisti
Chief Pilot A330/A340

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CPDLC connection will be completed automatically. It will likely happen approximately 8-10 minutes prior to being transferred to the respective UAC/ACC or at above FL150.

However when operating over UK airspace, although an aircraft may be logged-on to a Data Authority, no CPDLC service will be available until a CPDLC connection has been established. On transfer from another CPDLC capable unit, it is essential for the ground system to establish that CPDLC instructions may be used with an individual aircraft. This is referred as to establishing Current Data Authority (CDA). Aircraft equipped with FANS must receive and respond to a CPDLC message for CDA to be confirmed as established.

Log-on Call sign / Aircraft ID

Mode-S Aircraft are to use **ICAO Flight Plan Call Sign** only.

E.G. – ETD017 not ETD0017

Common error response: ACFT already LOGGED-ON

This Error message is generated when an aircraft has established DLIC (LOGON request down linked & LOGON response up linked) and then (before the Controller Pilot Communication (CPC) LOG-ON Request has been uplinked) **the pilot tries to LOG ON again before** CPDLC is established by the onboard CMU.

Message latency would be a primary reason for the delay to the uplink. FANS network may be subject to message delays, UAC/FIR Flight Server will not uplink the CPC start request until an aircraft with DLIC is close to the respective UAC/FIR or above FL150.


No Voice Read-Back

Voice read back procedure is not required unless the ATCO exceptionally requests for it.

Data Link Clearance Execution

Clearances should only be executed until a 'WILCO' message is sent.

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Message Restrictions

Free-format or free-text message are not to be used. This will result in an error response.

CPDLC Failure

CPDLC clearances that are not confirmed shall be repeated over radiotelephony.


CPDLC services shall be discontinued or terminated and revert to voice communication when the crew or ATC is of the opinion that CPDLC should no longer be used under a given circumstance, during a planned shutdown or unexpected failure of the CPDLC system and onboard failure of the CPDLC.

ATC Uplink Clearances and Instructions (Germany):

Crews can expect the following CPDLC clearances and instructions:

- MAINTAIN (level)
- CLIMB TO (level)
- DESCEND TO (level)
- PROCEED DIRECT TO (point)
- CONTINUE PRESENT HEADING
- MAINTAIN (speed)
- MAINTAIN PRESENT SPEED
- MAINTAIN (speed) OR GREATER
- MAINTAIN (speed) OR LESS
- RESUME NORMAL SPEED
- CONTACT (unit name) (frequency)
- SQUAWK (code)
- CHECK STUCK MICROPHONE (frequency)
- SQUAWK IDENT
- FLY HEADING (degrees)
- TURN (direction) HEADING (degrees)

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Downlink (Germany)

Crews may send the following downlink messages:

- REQUEST LEVEL
- REQUEST CLIMB TO (level)
- REQUEST DESCENT TO (level)
- REQUEST DIRECT TO

Downlink Responses (Germany)

The appropriate downlink responses to uplinks received from Maastricht and/or Karlsruhe-UAC are:

- WILCO / ACCEPT (ROGER)
- STANDBY
- UNABLE / REJECT

For FANS 1/A aircraft, a ROGER response to an uplink is appropriate.

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CPDLC MESSAGE SET used in UK Center

CPDLC MESSAGE SET

Downlink Messages (London and Scottish)

Message Number	Message
DM0	WILCO
DM1	UNABLE
DM2	STANDBY
DM3	ROGER (FANS ONLY)
DM4	AFFIRM (FANS ONLY)
DM5	NEGATIVE (FANS ONLY)
DM6	REQUEST (LEVEL)
DM9	REQUEST CLIMB TO (LEVEL)
DM10	REQUEST DESCENT TO (LEVEL)
DM22	REQUEST DIRECT TO (POSITION)
DM62	ERROR (ERROR INFORMATION)
DM63	NOT CURRENT DATA AUTHORITY
DM64	(FACILITY DESIGNATION) (FANS ONLY)
DM65*	DUE TO WEATHER*
DM66*	DUE TO AIRCRAFT PERFORMANCE*
DM67	(FREETEXT) (FANS ONLY)
DM98	FREETEXT (FOR ADDITIONAL ERROR INFO)
DM99	CURRENT DATA AUTHORITY
DM100	LOGICAL ACKNOWLEDGMENT
DM107	NOT AUTHORISED NEXT DATA AUTHORITY

Note: *DM65 and DM66 can be combined with other Downlinked messages. See ICAO documentation for a complete list of messages that may be concatenated.

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Uplink Messages (London and Scottish)

Message Number	Message
UM0	UNABLE
UM1	STANDBY
UM20	CLIMB TO (LEVEL)
UM23	DESCEND TO (LEVEL)
UM29	DESCEND TO REACH (LEVEL) BY (POSITION)
UM74	PROCEED DIRECT TO (POSITION)
UM79	CLEARED TO (POSITION) VIA (ROUTE CLEARANCE)
UM96	CONTINUE PRESENT HEADING
UM106	MAINTAIN (SPEED)
UM108	MAINTAIN (SPEED) OR GREATER
UM109	MAINTAIN (SPEED) OR LESS
UM116	RESUME NORMAL SPEED
UM117	CONTACT (UNIT NAME) (FREQUENCY)
UM157	CHECK STUCK MICROPHONE (FREQUENCY)
UM159	ERROR (ERROR INFORMATION)
UM160	NEXT DATA AUTHORITY
UM162	SERVICE UNAVAILABLE
UM169	(FREETEXT)
UM183	(FREETEXT) for additional error information
UM190	<i>FLY HEADING (DEGREES) (ATN ONLY)</i>
UM196	(FREETEXT)
UM203	(FREETEXT)
UM227	LOGICAL ACKNOWLEDGMENT
UM237	REQUEST AGAIN WITH NEXT UNIT

Errors

If a flight crew receives an 'ERROR' response to a downlink message it should not be re-sent as this may generate another 'ERROR' and a possible time-out.

In case of any doubt or error crews shall revert to voice to clarify the situation.

Note: CPDLC is only allowed when flights are under the control of the respective UAC/FIR, so only send these messages when you are "talking" to Maastricht or Karlsruhe-UAC or UK Center.

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Important Notes:

Data link is a supplemental strategic secondary means of communication. Voice communication remains the primary tactical means of communication.

If the crew has any doubt regarding the content, validity or execution of a data link message they must go to voice to clarify the situation with ATC ASAP.

Crews should refrain from making technical enquiries on frequency as controllers will not have any further information available.

Vigilance shall be exercised by aircrew in order not to misinterpret old CPDLC message in the LOG with actual CPDLC clearances.


Check in by voice prior to the use of CPDLC following a change of frequency is still a requirement.

If a CPDLC instruction is superseded by a voice instruction, crews are to respond 'UNABLE' to close the dialog and avoid a time-out.

Crews should ensure that the CPDLC address corresponds to the unit name to which the flight is in voice communications.

Due to the unavailability of a ROGER uplink, controllers may be required to respond to a downlink request with UNABLE to close the dialogue.

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CPDLC Phraseology

The following phraseology shall be used in case of CPDLC problems and communication will revert to voice.

Operational Circumstance	Phraseology
When voice Com are used to correct a CPDLC message:	<i>"C/S DISREGARD CPDLC (message type) MESSAGE, BREAK followed by the correct clearance, instruction information or request."</i>
Notified CPDLC Failure	<i>"C/S or ALL STATIONS CPDLC FAILURE ." followed by the appropriate clearance, instruction information or request."</i>
Discontinuation or Resumption of the normal use of CPDLC	<i>"ALL STATIONS STOP/RESUME NORMAL CPDLC OPERATIONS."</i>
In case of any possible Uplink message latency	<i>"C/S Report CPDLC (climb/route/etc.) message received"</i>
Command Termination of CPDLC, e.g. due operational time out.	<i>'C/S, CPDLC terminated, DISCONNECT and revert to voice.</i>

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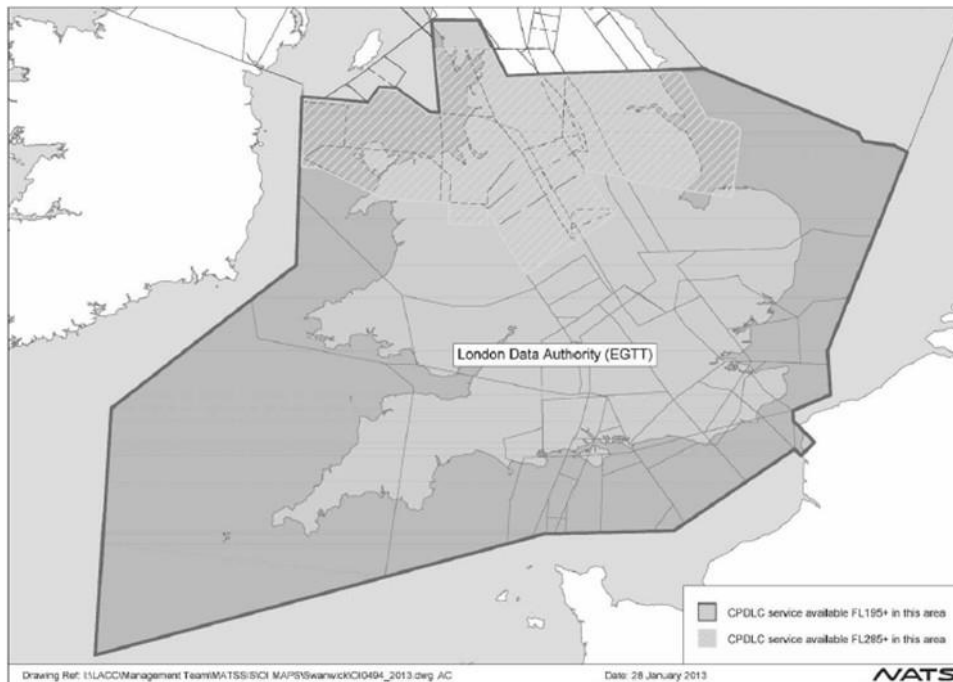
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Current and future CPDLC areas:



LONDON DATA AUTHORITY:



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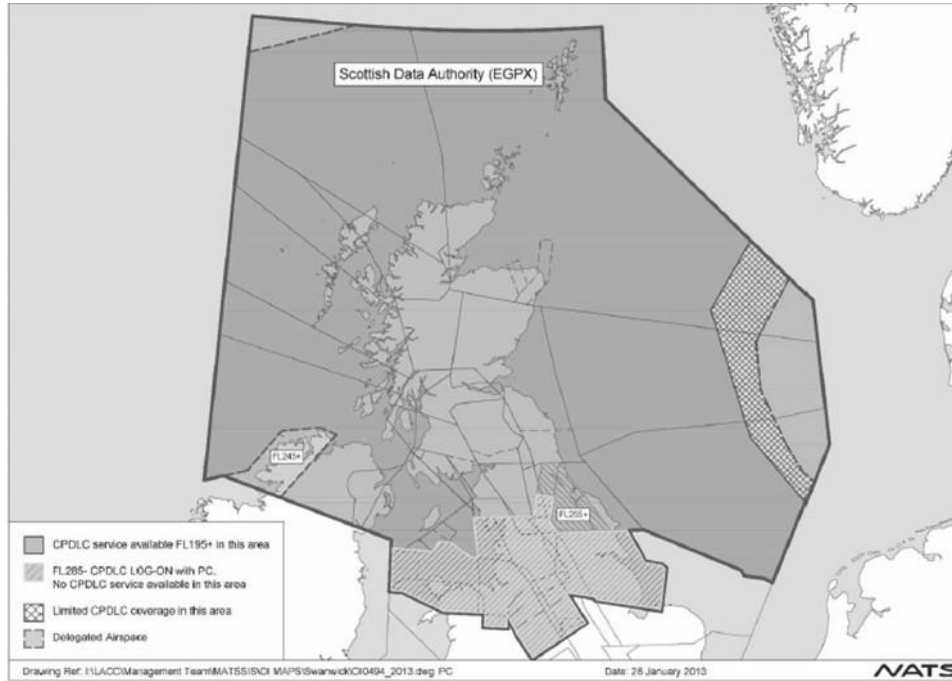
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SCOTTISH DATA AUTHORITY:



Follow Up Plan:

Nil

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