
Subject: Controller Pilot Data Link Communications - Departure Clearance (CPDLC-DCL)

Introduction

Beginning in early October, the 737-900ER fleet will commence participation in the Controller Pilot Data Link Communications - Departure Clearance (CPDLC-DCL) program.

Note: Aircraft 3601-3610 and 3701-3773 are not currently CPDLC capable and will not be able to participate. Pilots should use normal ACARS PDC procedures on these aircraft.

The specific turn on date will be implemented via an Electronic Fleet Bulletin. **Do not attempt logon until the EFB is issued.** This bulletin summarizes the process and preflight duties required to successfully accomplish Departure Clearances via CPDLC.

When a station offers the CPDLC-DCL procedure to participating aircraft, crews will no longer have access to domestic ACARS PDC clearances, thus, the backup for CPDLC-DCL will be to revert to voice. The following ACARS message will be uplinked after initialization.

```
ACARS BEGIN 10:01:27 01SEP16  
  
THIS STATION UTILIZES CPDLC  
CLRN PROCEDURES. PDC CLRN IS  
NOT AVAILABLE. REVERT TO VOICE  
IF UNABLE CPDLC-DCL.  
  
ACARS END
```

Airports will also broadcast CPDLC-DCL availability via ATIS.

Note: Forty seven airports currently offer CPDLC-DCL services. Eight additional airports will commence operations later this year.

Flight crews will logon to CPDLC using the ICAO station code (i.e., KSLC) versus requesting an ACARS PDC. Note that CPDLC-DCL is not the ACARS DEPARTURE CLX utilized at many foreign airports (i.e., Bogota, Mexico City, Panama, and Europe).

Basic clearance information like transponder, departure frequency, and runway/SID/Transition changes will be displayed as text while route changes beyond the SID/Transition will be provided as a LOADable route.

When the CPDLC-DCL is received, the last page may contain ACCEPT SEND, STANDBY SEND, REJECT, and LOAD prompts. Only clearances which contain a LOADable route change from the filed route will display the LOAD FMC prompt. This will likely occur less than 10% of the time either at the gate or during taxi out (i.e., weather or traffic congestion).

Note: Always scroll to the last page to find the LOAD prompt.

Once the clearance is accepted, the ACCEPT prompt will disappear. The LOAD FMC prompt will remain available to LOAD or reLOAD the route as desired. Expect to verify a CPDLC-DCL via voice for the first week after each station goes live.

Normal Preflight Duties

- Route Uplink or load manually
The route must be loaded prior to receiving a DCL.
- PERF INIT Uplink or load manually
- Winds Uplink or load manually

Establishing a CPDLC Connection

The flight crew must send a CPDLC logon request with the ICAO airport code (i.e. KSLC) prior to being issued a DCL. The logon request should be sent approximately no later than 30 minutes prior to departure. Crews may receive an immediate clearance if logon is accomplished less than 30 minutes prior to pushback.

ATC MCDU key Select

LOGON/STATUS page 1 Displayed

DATA LINK Status (6R) “READY”

LOGON TO (1L) Enter airport ICAO code (i.e., KSLC)

FLT NO (i.e. DAL217) (2L) Verify/Enter

Use format DALxxxx where xxxx is the flight number. Do not enter any leading zeros or spaces.

TAIL NO (i.e. N819DZ) (3L) Verify/Enter

LOGON SEND (1R) Select

The ATC COMM ESTABLISHED scratchpad message will display when the clearance is ready for uplink. **No action is required; the clearance will uplink automatically.** If the ATC COMM ESTABLISHED scratchpad message is not displayed by 20 minutes prior to scheduled departure time or the logon is REJECTED, re-enter the logon information and attempt one additional logon. If the second attempt fails, revert to voice and contact Clearance Delivery.

When DCL is Received

Receipt of an uplinked CPDLC message is indicated by an •ATC message on the Upper Display Unit, an ATC MESSAGE MCDU scratchpad message, and a HI/LOW chime.

Unlike a PDC or ACARS DEPARTURE CLX, which can only be sent once, ATC can send revised DCLs during taxi out to help expedite departures. Additionally, LOADable routes reduce key strokes to eliminate typing errors.

A DCL is uplinked directly to the FMC by ATC and therefore, a paper copy is not required. However, a printable copy of the ATC Clearance, a CPDLC-DCL Verification message, will be sent to the ACARS to enhance crew confidence in the process. The transponder code will only be displayed on the FMS DCL. ATC deliberately will not provide the transponder code to the ACARS copy as the FMC DCL Departure Clearance remains the source document clearance. This practice is to ensure that crews review, LOAD (if applicable), and ACCEPT the FMC DCL Departure Clearance.

With DCL, ATC has the ability to directly uplink a clearance change to the FMS by the LOAD prompt. If there is a LOAD prompt, pilots must use this option to update the FMS with the latest clearance. Like the ACCEPT prompt the LOAD prompt will always be on the last page of the DCL Departure Clearance. A best practice is to select “top to bottom” - LOAD, ACCEPT, REVIEW, EXECUTE.

Operational Procedures

Both PF/PM should be present to accept the clearance.

ATC keySelect
 Navigate to the last page.

LOAD prompt (4R) (if displayed)Select

Note: If ATC has approved the filed flight plan without changes there will not be a LOAD prompt on the last page of the ATC Uplink.

ACCEPT SEND prompt (5R) Select

Note: Use the REJECT prompt only when a scratchpad message
UNABLE TO LOAD or PARTIAL CLEARANCE displays.
Revert to voice if clearance is rejected. See the next page to
REJECT a DCL clearance.

CAUTION: The CPDLC terminology is different from AIM
terminology. Some of the new terminology is not
intuitive; therefore, the crew must be attentive to
these changes.

AIM Terminology	CPDLC Terminology
Cleared As Filed	Then As Filed
Revised Initial Route Clearance	Via Route Clearance
Full Route Clearance	Cleared Route Clearance

PF

DEP ARR key Select

Runway, SID, transition Verify/Select

CAUTION: FMC software U10.8A is not able to delete a
previously entered SID when loading a revision. To
safeguard against this, pilots are required to re-enter
the SID, transition, and runway even though they
may show <ACT>.

FMS route discontinuities Close

MCDU EXEC key (if a new SID/route loaded) Select

Note: ATC reroutes of SID/transitions, or other close in fixes, are not
uncommon and should be accepted. For significant route
changes, contact the dispatcher for route/fuel legality as well as
to obtain a new wind package.

Note: Pilots should wait for the amended flight plan (i.e. ACARS 22
message received via printer) prior to requesting new winds.

See Clearance Verification Procedures on page 7.

If the ATC clearance is not acceptable:

- Note:** Use the REJECT prompt when the UNABLE TO LOAD or PARTIAL CLEARANCE message displays.
- REJECT prompt (5L)Select
- Note:** DUE TO prompts (1L, 1R, 2L, and 3L) are not supported. An automatic SERVICE UNAVAILABLE message will be uplinked if these keys are selected.
- Note:** Do not enter free text on line 4. Entry will result in the ground system sending the auto reply MESSAGE NOT SUPPORTED BY THIS ATS UNIT.
- VERIFY prompt (6R)Select
- RESPONSE SEND (5R)Select
- ROUTE keySelect
- ERASE prompt (6L)Select
- Removes revised ATC clearance from the FMC.
- Clearance DeliveryContact via voice

Clearance Verification Procedures

PF/PM verify ATC clearance. Refer to Volume 1, NP.12, Clearance Verification Procedure.

Revert to voice to confirm clearance if needed.

Since DCL Departure Clearance uplinks cannot be printed, a printable copy of this information will be uplinked automatically from the company via ACARS. This message is called the CPDLC-DCL Verification message.

Pilots should compare the FMC routing with the FMC DCL Departure Clearance and the CPDLC-DCL Verification message (if available).

```
ACARS BEGIN 10:12:35 01SEP16

DCL 217 SLC 0207Z
CPDLC DCL VERIFICATION-NOT TO BE USED AS A
CLEARANCE
B739/L P0235 /AN N819DZ
CLEARED TO KLAX AIRPORT EDETH2.BERYL
THEN AS FILED
CLB VIA SID EXC MAINT 10000FT
DEP FREQ 128.1

KSLC.EDETH2.BERYL.J107.HEC.RIIVR3.KLAX

ACARS END
```

CLEARED AS FILED

```
ACARS BEGIN 10:12:35 01SEP16

DCL 217 SLC 0207Z
CPDLC DCL VERIFICATION-NOT TO BE USED AS A
CLEARANCE
B739/L P0235 /AN N819DZ
CLEARED TO BLD VIA FFU8.BCE,
AFTER BLD CLEARED TO KLAX ARPT AS FILED
CLB VIA SID EXC MAINT 10000FT
DEP FREQ 128.1

KSLC.FFU8.BCE.BLD.HEC.RIIVR3.KLAX

ACARS END
```

REVISION TO THE FLIGHT PLAN

Note: The CPDLC-DCL Dispatch Message is not a clearance. It is an ACARS message that should be used during Clearance Verification Procedures (if available).

Note: The Transponder code is not included in the CPDLC-DCL Verification message, to ensure the flight crew views the DCL clearance on the MCDU.

Note: The CPDLC-DCL Verification message is not required for departure and is only for convenience; the actual DCL clearance on the MCDU is required. ATC is aware of the clearance delivered to the FMC, but not the OCC clearance copy.

CPDLC Termination

Once instructed to contact the tower, all CPDLC-DCL uplinks will be suspended. After takeoff, expect an MCDU scratchpad message (ATC COMM TERMINATED) 10 minutes after takeoff indicating termination of the CPDLC connection.

Summary

CPDLC-DCL clearances will replace PDCs at domestic airports.

- LOAD and ACCEPT a DCL clearance.
- ACCEPT prompt goes away when the clearance is accepted.
- LOAD prompt, if displayed, always remains available and can be selected to reload a route.
- Verify/load the SID/transition.
- Close route discontinuities.
- Execute changes (Load, Accept, Review, Execute).
- Verify departure instructions (heading, altitude, airspeed, frequencies, squawk).
- Any clearance **MAY** include a revised SID/transition.
- A LOADable DCL **WILL** always require selection of a SID/transition.
- When a clearance is loaded but not executed, the revised route can be viewed on the ND.
- Once a LOADED clearance is executed, new winds may be required.
- Dispatcher approval and wind updates for fixes prior to the Top of Climb are generally not required.
- Winds for new fixes will be available after the dispatcher uplinks a revised flight plan in the ACARS 22 format via printer.
- All pilots should view and confirm DCL clearances on the MCDU.
- ACARS printing of a CPDLC-DCL Verification message does not always produce an exact copy of the clearance.
- The transponder code will not be on the paper copy.
- A paper copy of the DCL is not required (similar to receiving a PDC with the printer inop).
- Check FMS mileage and destination fuel against the flight plan for reasonableness. Contact the dispatcher if fuel or routing is a concern.

Deltanet Reference Material

Pilots are strongly encouraged to review the CPDLC - DCL (Departure Clearances) presentation located on Deltanet on the 737 fleet page under TRAINING, Reference Material, Supplemental Training Docs.

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