



**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

Air Traffic Organization Policy

**ORDER
JO 7110.113F**

Effective Date:
October 2, 2017

SUBJ: Procedures for Issuing Automated Clearances

- 1. Purpose of This Order.** This order prescribes procedures for issuing departure clearances using the pre-departure clearance (PDC) function of the Tower Data Link System (TDLS) between airport traffic control towers (ATCT) and authorized users.
- 2. Audience.** This change applies to all Air Traffic Organization (ATO) personnel and anyone using ATO directives.
- 3. Where Can I Find This Order?** This order is available on the MyFAA employee website at https://employees.faa.gov/tools_resources/orders_notices/ and on the FAA website at http://www.faa.gov/regulations_policies/orders_notices/.
- 4. Cancellation.** FAA Order JO 7110.113E, Procedures for Issuing Automated Clearances, dated April 10, 2015, is cancelled.
- 5. Explanation of Changes.** This order is revised by reorganizing the content. Appendix A has been removed and all content moved into the body of the order. This is necessary since Version 12 of the PDC software is nationally distributed and renders the previous content of the order obsolete. The need to stipulate Top Altitude when issuing Climb Via Standard Instrument Departures (SID) is no longer necessary.
- 6. Procedures.**
 - a. PDC – General.**
 - (1) All clearances must be reviewed for accuracy and route integrity. Action must be taken to ensure all information is complete and understandable to the recipient, and the route of flight is continuous.
 - (2) PDC does not permit amended or revised flight plans to be transmitted. Revised or amended flight plans require the clearance to be verbally issued to the flight crew.

NOTE– A flight plan that initially generates in the Tower, with a route assigned by automation, (for example: ADR) is not considered revised or amended and may be transmitted.

 - (3) PDC clearance information must be operational in nature. All selectable fields will be predefined by the TDLS Application Specialist (TAS) and available from a drop down menu.

- (4) The Air Traffic Manager (ATM) must determine the mode of PDC operation. Prior to use of the "AUTO" mode, facilities must establish procedures to immediately detect and promptly correct any data transmitted in error.
- (5) For a minimum of 60 days following the commissioning of a TDLS system, the facility Automatic Terminal Information Service (ATIS) must broadcast that PDC is available.
- (6) Technical Operations (TO) personnel must be notified when an outage or problem occurs with any element of the TDLS.

b. **Local Directive.** The ATM must establish a facility directive for transmitting automated clearances. The directive must contain local procedures and responsibilities for processing clearances and must include the following:

- (1) Procedures to review clearances for accuracy and route integrity. Include procedures for correcting information prior to transmitting and/or to verbally correct information that has changed or been transmitted in error.
- (2) Procedures for issuing Departure Procedures (DPs), SIDs, climb-out procedures, altitude information, departure frequencies, and other air traffic control information in accordance with this directive.
- (3) Responsible positions and procedures to ensure that all applicable clearance information, in accordance with FAA Order JO 7110.65, Air Traffic Control, is conveyed to the pilot either via Selectable Fields or verbal communication.
- (4) Local procedures for use of Selectable Fields in accordance with this directive.
- (5) Procedures for monitoring and reporting routes which are routinely generated by automation that differ from the filed route (indicated with plus signs on flight progress strip) to the facility TAS, who will report to the appropriate Air Route Traffic Control Center (ARTCC) focal as necessary.
- (6) Only include information that is not contrary to that in an assigned SID and necessary for a facility specific operation. Once transmitted, if any clearance information changes or if it is contrary to that in an assigned SID, that information must be issued verbally.
- (7) DO NOT imply or use terms such as "Cleared as filed" or "As filed" in a PDC automated clearance.
- (8) Only standard contractions found in FAA Order JO 7340.2 must be used in populating Selectable Fields.
- (9) A Letter to Airmen (LTA) outlining the services being provided by PDC must be issued for a minimum of 2 years following commissioning of the system. The LTA must direct applicants who request to participate to contact Mission Support Services, Air Traffic Procedures, AJV-8, at 9-AJV-8-HQ-Correspondence@FAA.gov

c. Controller Pilot Data Link Communications (CPDLC) - General.

- (1) All clearances must be reviewed for accuracy and route integrity. Action must be taken to ensure all information is complete and understandable to the recipient, and the route of flight is continuous.
- (2) CPDLC permits amended or revised flight plans to be transmitted. Revised or amended flight plans that cannot be delivered using CPDLC must be verbally issued to the flight crew.
- (3) CPDLC clearance information must be operational in nature. All selectable fields will be pre-defined by the TAS and available from a drop down menu.
- (4) The ATM must determine the mode of CPDLC operation. Prior to use of the "AUTO" mode, facilities must establish procedures to immediately detect and promptly correct any data transmitted in error.
- (5) For a minimum of 60 days following the commissioning of a CPDLC capability, the facility ATIS must broadcast that CPDLC is available.
- (6) TO personnel must be notified when an outage or problem occurs with any element of the TDLS.

d. Local Directive. The ATM must establish a facility directive for transmitting automated clearances. The directive must contain local procedures and responsibilities for processing clearances and must include the following:

- (1) Procedures to review all clearances, initial and revised, for accuracy and route integrity.
- (2) Procedures for correcting errors via voice if unable to use CPDLC. Phraseology: “(aircraft ID) DISREGARD CPDLC MESSAGE”.
- (3) Procedures for issuing DPs, SIDs, climb-out procedures, altitude information, departure frequencies, and other air traffic control information in accordance with this directive.
- (4) Procedures for accomplishing coordination prior to transmitting revised clearances.
- (5) Procedures for ensuring acknowledgment of WILCO, UNABLE, and STANDBY for revised clearances.
- (6) Procedures for handling all flight deck responses.
- (7) Procedures for handling controller alerts, errors, and timeouts.
- (8) Responsible positions and procedures to ensure that all applicable clearance information in accordance with FAA Order JO 7110.65, Air Traffic Control, is conveyed to the pilot either via verbal communication or CPDLC.
- (9) Procedures for operating in "AUTO" mode, when applicable.

e. **DCL Application (PDC/CPDLC) Selectable Fields.** The Departure Clearance (DCL) application provides up to nine Selectable Fields for the tower controller to enter all other clearance information. Each Selectable Field has a purpose and should only be used for that purpose. For standardization, facilities must use DCL Application Selectable Fields as follows:

- (1) Selectable Field 1, SID Field, must contain:
 - (a) The correctly filed SID, or
 - (b) the SID assigned by the En Route Automation System (EAS), or
 - (c) if No SID is filed or assigned by EAS, the controller must either select a SID or, if no SID is to be assigned, select the “NO SID” option.
- (2) Selectable Field 2, Transition Field, is reserved for named Transitions on DPs. Selectable Field 2 must contain:
 - (a) The correctly filed Transition, or
 - (b) the Transition assigned by the EAS, or
 - (c) if No Transition is filed or assigned by EAS, the controller must either select a Transition or, if no Transition is to be assigned, select the “- - - -” option.
- (3) Selectable Field 3, Climb Out Field, is reserved for climb related information, such as heading assignments, expected vector assignments, or defined SID climbs. Climb Out Field instructions must never contradict SID instructions and may reiterate pertinent SID information. This field is limited to 32 characters and only those entries adapted by the TAS will be available for selection.
- (4) Selectable Field 4, CLIMB VIA Field, is reserved for use when a SID is assigned or selected, and will contain CLIMB VIA SID or CLIMB VIA SID EXCEPT MAINTAIN (altitude) information as follows:
 - (a) If the assigned SID contains vertical guidance from take-off to climb to an altitude to maintain, and it is intended that an aircraft vertically navigate in accordance with the SID assigned or entered in Selectable Field 1, then Selectable Field 4 must contain the instruction “CLIMB VIA SID”, or
 - (b) If the assigned SID does not have an initial altitude to maintain, but contains vertical guidance, and it is intended that an aircraft vertically navigate in accordance with the SID assigned or entered in Selectable Field 1, then Selectable Field 4 must contain the instruction “CLIMB VIA SID EXCEPT MAINTAIN (altitude)”, or
 - (c) If the assigned altitude is different from the published altitude in the SID, the altitude may be amended using, CLIMB VIA SID EXCEPT MAINTAIN (altitude).
- (5) Selectable Field 5, Maintain Altitude Field, is reserved for initial altitude Assignment. If NO SID is assigned or the assigned SID does not contain either an initial altitude or vertical guidance, then Selectable Field 5 must contain the instruction “MAINTAIN (assigned altitude)”.

- (6) Selectable Field 6, Expected Altitude Field, is reserved for specifying when the Expected Altitude would be used in the event of lost communications.
 - (7) Selectable Field 7, Departure Frequency Field, is reserved for Departure Control Frequency Assignment. The selection of “SEE SID” may be used if the SID contains Departure Control Frequency Assignment specific to the intended departure procedure.
 - (8) Selectable Field 8, Contact Field, is reserved for additional contact information in accordance with facility directives. This field is limited to 32 characters.
 - (9) Selectable Field 9, Local Information Field, is reserved for additional information in accordance with facility directives. This field is limited to 34 characters and must not contradict information contained elsewhere in a departure clearance.
- f. **TAS.** The ATM must designate two air traffic personnel as facility TASs. The TASs must:
- (1) Configure air traffic components of TDLS, incorporate air traffic operational data, monitor data and configurations to ensure accuracy and currency, make adjustments to TDLS as required, and maintain the TDLS adaptation for currency and optimum usability.
 - (2) Share responsibility and coordinate with the TO TDLS System Administrator(s) as necessary.
 - (3) Receive reports and monitor routes which are routinely generated by automation that differ from the filed route (indicated with plus signs on flight progress strip). Investigate likely causes of multiple, repeated occurrences. Report the findings to appropriate ARTCC DCL point of contact.

g. **Coordination.** All matters pertaining to the PDC/CPDLC/TDLS of system-wide interest, including notification of new participants, must be coordinated through the headquarters air traffic PDC/CPDLC/TDLS coordinator in Air Traffic Procedures, Mission Support, AJV-8.

7. Distribution. This order is distributed to the following ATO service units: Terminal, En Route and Oceanic, Technical Operations, System Operations, and Mission Support; the ATO Office of Safety and Technical Training; the Air Traffic Safety Oversight Service; the William J. Hughes Technical Center; and the Mike Monroney Aeronautical Center.

8. Background. The automated PDC/TDLS is a data link between the ATCT Flight Data Input/Output System (FDIO) and specially equipped aircraft, or the User Flight Planning Computer System. The data is presented to the clearance delivery (CD) position on a terminal display in the form of a tabular list and flight plan display area. A CD specialist may append the flight plan by including approved information before relaying the clearance. The resulting departure clearance is then transmitted to the participant network computer via a data communication transfer. The PDC process virtually eliminates the need for verbal communications with participating aircraft and reduces the amount of frequency congestion, especially during peak traffic periods.

The TDLS system currently deployed at select airports throughout the NAS is being upgraded to include delivering DCL to equipped aircraft using CPDLC. The software upgrade to accommodate CPDLC has changed the display and adaptation of the legacy PDC service and is a major change for the clearance delivery controller and the TAS of the TDLS system.

The primary difference between the PDC function and the new CPDLC service is the PDC service depends on the Airlines/Flight Operations Center or other third party to deliver the pre-departure clearance to the aircraft, while the CPDLC service is a direct connection from the tower automation to the flight deck avionics. The direct connection between the tower automation and the flight deck allows for revised data to be delivered to the aircraft up to the point of departure. The PDC function is still prohibited from delivering revised clearances.

The pre-departure clearance data from the EAS is presented to the CD position on a terminal display in the pick list and flight plan display area. The pick list will indicate which flights will receive a CPDLC clearance and which flights will receive a PDC clearance. The presentation of departure clearances to the controller will remain virtually the same, with a few minor changes for the CPDLC clearances. The CD specialist may append the flight plan by including approved information before sending the clearance. The resulting DCL is then transmitted to the participant network computer for PDC clearances, or to the flight deck avionics for CPDLC clearances, via a data communication transfer.

Indications of revised flight data from the EAS will be presented to the controller in the pick list. CPDLC clearances will be selected and displayed in the flight plan display area. Flight data that has been revised by the EAS or by the CD specialist will be highlighted, and the CD specialist may append the flight plan by including approved information prior to up linking the revised data.

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Date Signed