



SUMMARY

This course is intended for flight crew operating CPDLC equipped aircraft. It covers the components and operation of Controller Pilot Data Link Communications (CPDLC) equipment. These systems are part of the Future Air Navigation (FANS 1/A) system, now in common use throughout the world.

TARGET POPULATION

The CPDLC course is designed for Professional Pilots requiring initial or recurrent training.

REGULATORY COMPLIANCE

- ICAO / EASA / FAA
- Maintenance compliance with IOSA standards

Versions Available:
CPDLC

Course Length:
1 hr 25 min

LESSON 01: System Components / Ground Service Providers

In this lesson we discuss:

- CNS / ATM
- Ground service providers
- FANS 1 / 1A
- ADS General
- ADS and CPDLC similarities
- Aircraft communications capability
- Communications equipment
- Satellite network
- Navigational capability
- Data authority
- Equipment requirements (ground, airborne and space-based)
- PBCS standards, including:
 - RCP
 - RSP

LESSON 02: General Procedures

In this lesson we discuss:

- Flight planning requirements
- Communications / CPDLC / ADS
- Oceanic procedures

LESSON 03: Equipment Installation

In this lesson we discuss:

- CPDLC crew interfaces
- Navigational accuracy
- Datalink communication
- Multi-function displays with CPDLC
- SATCOM
- Control Display Unit (CDU)
- Accessing ADS – manager menu
- Performing a CPDLC lateral request

LESSON 04: CPDLC Operation

In this lesson we discuss:

- Typical CPDLC operations (based on Boeing 777 installation)
- Flight identification
- CPDLC connection
- Guidance
- U.S. CPDLC-DCL logon
- Altitude / route requests
- Weather deviation procedures
- Free text message
- Arm-able report
- Manual position report
- Automatic position report
- Datalink failures
- System failures

LESSON 05: ADS-B and ADS-C Operation

In this lesson we discuss:

- Initialization
- ADS manager function (using Boeing 777 examples)
- ICAO 24-bit identifier
- Flight identification
- ADS-B definitions and terminology
- ADS OFF and datalink failure
- GPS position errors
- Contingency procedures
- ADS emergency mode, including:
 - Inadvertent activation

LEARNING TIME AND RUN TIME

This course has a learning time of: (run time plus additional time per page to account for understanding learning points)

- 1 hr 25 min

This course has a run time of: (the base time for each page to be completed)

- 42 min

Exam Generation System (EGS) Banked Questions

The total amount of banked questions for this course is:

Lesson Title	Standard Questions
System Components / Ground Service Providers	17
General Procedures	4
Equipment Installation	4
CPDLC Operation	6
ADS-B and ADS-C Operation	4
	35

REFERENCE MATERIAL

This course provides the core elements of the CPDLC training, ground school component outlined in the:

ICAO

- ICAO Doc Global Operational Data Link Document (GOLD)
- ICAO Doc 9869 Performance based Communications and Surveillance
- ICAO Data Communications Implementation Team Tower Data Link Services Controller Pilot Data Link Communication Departure Clearance Service (CPDLC-DCL) Flight Deck User Guide

EASA

- EASA GM1 SPA.PBN.100 PBN Operations
- EASA Acceptable Means of Compliance (AMC) 20-24

FAA

- FAA AC 90-117
- FAA AC 20-160A
- FAA AC 90-114
- FAA A056 – Compliance Guide

The operator remains responsible for obtaining approval from the regulatory authority.

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