

## Publications and Training Solutions

### Course Syllabus: 523-0790279

**COURSE TITLE:** FMS 3000  
Raytheon Premier Operations Training

**PREREQUISITES:** Students should have basic knowledge of aircraft avionics systems and a working command of the English language (interpreters are available for special cases).

**PURPOSE:** This course provides training to familiarize Flight Crews with the functionality of the Flight Management System (FMS-3000). The FMS-3000 system consists of the line replaceable units (LRUs) identified in the section titled EQUIPMENT TYPE by nomenclature and part number, including associated peripheral equipment identified as deliverable hardware.

**OBJECTIVES:** Upon completing this course, the student will be able to:

1. Provide an overall understanding of the FMS-3000 principles and operations
2. Identify system components and functional/operational characteristics
3. Identify typical aircraft interface/operational characteristics.

**COURSE LENGTH:** 1 Day

**TRAINING DEVICES:**

1. VISTA Demonstration and Exercise

**TRAINING MATERIALS:**

1. PowerPoint Presentation with LCD/Box Light projector
2. Student Guide – Flash drive (pdf) – FMS Training Presentation

**REFERENCES:**

1. FMS-3000 Pilot's Guide 523-0788735
2. Raytheon Premier I Pro Line 21 Avionics System Operator's Guide 523-0778814

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### COURSE OUTLINE

#### **0. Welcome & Introductions**

- A. Course Overview
  - i. Welcome
  - ii. Student Registration

#### **1. Chapter 1 – Introduction to FMS-3000**

- A. Objectives
- B. Collins FMS Product Line
- C. Equipment Description
- D. ARINC

#### **2. Chapter 2 – Theory of Operation**

- A. Basic Theory
  - i. FMS Concept
  - ii. Position Estimate and External Navigation Sources
  - iii. Autotune
- B. GPS Theory
  - i. Three Dimensional Position
  - ii. Required Navigation Performance
  - iii. Deviation Scaling
  - iv. RAIM
  - v. International Airports

#### **3. Chapter 3 – Data Entry**

- A. CDU Orientation
  - i. Scratchpad
  - ii. Message Line
  - iii. Execute Function
  - iv. Index Page/Main Menu

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- B. Status Page
  - i. Database
  - ii. Exchanging Databases
  - iii. Time and Date
  - iv. Software
- C. Position Initialization
  - i. FMS Position
  - ii. Airport Reference Point
  - iii. Pilot Defined Waypoint
  - iv. GPS Position
  - v. Lat/Long Position
- D. Flight Planning
  - i. Basics
  - ii. Origin/Destination
  - iii. Alternate
  - iv. Departure/Arrivals Index
  - v. Flight Plan Pages
  - vi. Legs Pages
  - vii. Flight Plan and Waypoint Modifications
- E. VNAV
  - i. VNAV Theory
  - ii. VNAV Climbs
  - iii. VNAV Descents
  - iv. Altitude Constraint Modifications
  - v. Vertical Direct TO

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- F. Approaches
  - i. Approach Types
- G. Holds
  - i. Hold Setup
- H. Fix Page

#### 4. Chapter 4 – Review

#### 5. Chapter 5 – VISTA Presentation and Exercise

#### EQUIPMENT TYPE:

EQUIPMENT	NOMENCLATURE	PART NUMBER
Control Display Unit	CDU-3000	822-0884-112
Data Base Unit	DBU-4100	822-0014-104
Flight Management Computer	FMC-6000	822-0883-701
Adaptive Flight Display	AFD-3010	822-1084-014
Display Control Panel	DCP-3000	822-1134-012
Flight Guidance Panel	FGP-3000	822-1107-012 (Single Flight Director) 822-1107-112 (Dual Flight Director)