

Publications and Training Solutions

Course Syllabus: 523-0809252

COURSE TITLE: Pro Line 21™ – Cessna CJ3
Operator/Pilot Training

PREREQUISITES:

Students should have a basic knowledge of aircraft avionics systems and a working command of the English language. Students should be familiar with MS Windows® based Operating Systems.

PURPOSE:

This course provides training to familiarize pilots with the functionality of the Pro Line 21™ instrumentation.

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

1. Identify Pro Line 21 instrumentation.
2. Comprehend how Pro Line 21 components function in unison to provide pilot flight information.
3. Perform the steps to:
 - a. Power up the Flight Management System (FMS)
 - b. Build a Flight Plan
 - c. Save and Load a Flight Plan
 - d. Enter Performance Data
 - e. Conduct Enroute Procedures
 - f. Execute a Missed Approach Procedure

COURSE LENGTH: 5 Hours

REFERENCES:

1. Pro Line 21 Avionics System for the Cessna CJ1+/CJ2+/CJ3 Operator's Guide 523-0806480
2. FMS-3000 Flight Management System for the Cessna Citation CJ1+/CJ2+/CJ3 Operator's Guide 523-0806481
3. FMS-3000 v4.0 Flight Management System for the Cessna Citation CJ1+/CJ2+/CJ3/Encore+ Operator's Guide 523-0810168

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COURSE OUTLINE

0. Welcome & Introductions

- A. Welcome to Rockwell Collins e-Learning

1. Primary Flight Display (PFD)

- A. Introduction
- B. PFD Familiarization
 - i. Operation
 - ii. Theory of Operation
- C. Display Control Panel (DCP) Familiarization
 - i. Operation
 - ii. Theory of Operation
- D. Summary/Test
- E. Navigation/Bearing (NAV)/(BRG) Operation Procedures (Guided Practice / Assessment)
 - i. Select a Navigation Source
 - ii. Select a Bearing Source

2. Multi-Function Display (MFD)

- A. Introduction
- B. MFD Familiarization
 - i. Operation
 - ii. Theory of Operation
- C. DCP Familiarization
 - i. Operation
 - ii. Theory of Operation
- D. Summary/Test

3. Integrated Flight Information System (IFIS)

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- A. Introduction
 - i. Key Performance Features
 - ii. Preconditions
 - B. IFIS Line Replaceable Unit (LRU) Descriptions
 - i. File Server Unit (FSU)
 - ii. Adaptive Flight Display (AFD)
 - iii. Cursor Control Panel (CCP)
 - iv. External Compensation Unit (ECU)
 - v. XM Weather Receiver (XMWR) and Antenna
 - C. IFIS Operations
 - i. CCP Controls and Functions
 - D. IFIS Theory of Operation
 - E. Summary/Test
- 4. Radio Sensor System (RSS)**
- A. Introduction
 - B. Radio Tuning Unit (RTU) Familiarization
 - i. Operation
 - C. Control Display Unit (CDU) Familiarization
 - i. Operation
 - D. Audio Control Panel (ACP) Familiarization
 - i. Operation
 - E. RSS Theory of Operation
 - F. Summary/Test
- 5. Weather Radar System (WXR)**
- A. Introduction
 - B. WXR LRU Overview

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- i. Display Control Panel (DCP)
 - ii. Flat Plate Receiver/Transmitter Antenna (RTA)
 - C. How Radar Works
 - i. Thunderstorms
 - ii. Reflection
 - iii. Calibrated Gain
 - D. WXR Modes of Operation and Features
 - i. Operational Mode
 - 1. DCP Controls
 - ii. Standby Mode
 - iii. Weather Only (WX) Mode
 - iv. Weather Plus Turbulence (WX-T) Mode
 - v. Terrain Mapping (MAP) Mode
 - vi. Sector Scan (SEC) Feature
 - vii. Antenna Stabilization Feature
 - viii. Target Alert Feature
 - ix. Test Mode
 - E. Turbulence WXR Theory of Operation
 - F. Summary/Test
- 6. Control Display Unit (CDU) / Flight Management System (FMS)**
 - A. Overview (Video)
 - B. CDU Familiarization
 - i. Operation
 - ii. Theory of Operation
 - iii. Summary/Test
 - C. Preflight (Video)

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- D. FMS Power-Up Initialization Procedures (Guided Practice / Assessment)
 - i. CDU Power-Up Page
 - ii. Check for a Current NAV Database
 - iii. Swap the Current and Second NAV Database
 - iv. Synchronize FMS1 and FMS2
 - v. Initialize the FMS Position
- E. Build a Flight Plan Procedures (Guided Practice / Assessment)
 - i. Enter the Departure Airport
 - ii. Enter the Destination Airport
 - iii. Enter an Alternate Airport
 - iv. Enter a Waypoint
 - v. Enter an Airway
 - vi. Delete a Flight Plan Discontinuity
 - vii. Enter a Delete Command
 - viii. Enter the Departure Runway
 - ix. Enter the Standard Instrument Departure (SID)
 - x. Enter the Destination Approach and Transition
 - xi. View the Flight Plan on the Plan Map
 - xii. View Other Airport Data
- F. Vertical Navigation (Video)
- G. Approaches (Video)
- H. Save and Load a Flight Plan Procedures (Guided Practice / Assessment)
 - i. Save the Flight Plan to a Pilot Route List
 - ii. Copy the Active Flight Plan to the Second Flight Plan
 - iii. Activate the Second Flight Plan
- I. Uploading Performance Data Procedures (Guided Practice / Assessment)

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- i. Enter the Cruise Altitude
 - ii. Enter the Passenger Weight
 - iii. Enter the Cargo Weight
 - iv. Check the Total Fuel Onboard
 - v. Check the Performance Mode
- J. Enroute Procedures (Guided Practice / Assessment)
 - i. View the Legs Page
 - ii. Delete a Flight Plan Discontinuity
 - iii. Enter a Hold
 - iv. Modify a Hold
 - v. Insert a Direct-To Waypoint
 - vi. Insert a Radial Intercept from a Heading Leg
 - vii. Insert a Radial and Distance Waypoint
 - viii. Insert an Off Airway Waypoint
- K. Missed Approach Procedures (Guided Practice / Assessment)
 - i. View the Missed Approach
 - ii. Sequence to the Missed Approach
 - iii. Sequence to the Alternate

7. Summary/Test

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EQUIPMENT TYPE:

EQUIPMENT	NOMENCLATURE	PART NUMBER
Adaptive Flight Display	AFD-3010	822-1084-124 / 131 / 506
Adaptive Flight Display	AFD-3010E	822-1753-124 / 131 / 506
Display Control Panel	DCP-3030	822-1828-002 / 102
File Server Unit	FSU-5010	822-1543-101 / 201
Cursor Control Panel	CCP-3000	822-1746-102
External Compensation Unit	ECU-3000	822-1200-003
XM Receiver	XMWR-1000	822-2031-002
GPS/WAAS/XM Antenna	XMA-1000G	866-5010-010
Radio Tuning Unit	RTU-4210	822-0836-434
Radio Tuning Unit	RTU-4220	822-0730-442
Control Display Unit	CDU 3000	822-0884-362 / 364
Audio Control Panel	ACP-4110	822-1861-010 / 020 / 030 / 040 / 050 / 060 / 070 / 080 / 090 / 100 / 110 / 120 / 130 / 140 / 150 / 160
Receiver/Transmitter Antenna	RTA-800	822-1050-004
Receiver/Transmitter Antenna (w/Turbulence)	RTA-852	622-8439-004