

Publications and Training Solutions

Course Syllabus: 523-0816680

COURSE TITLE: Pro Line 21™ – King Air C90
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 the 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: 6 Hours

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REFERENCES:

1. FMS-3000 for the Beechcraft King Air C90GT/C90GTi/B200/B200C/
B200CGT/B300 Operator's Guide 523-0790066
2. Pro Line 21 Avionics System with IFIS for the Beechcraft King Air
C90GT/C90GTi/B200GT/B200CGT Operator's Guide 523-0808535
3. Pro Line 21 Avionics System with IFIS for the Beechcraft King Air
Operator's Guide 523-0807239
4. FMS-3000 v4.0 Flight Management System for King Air Series Aircraft
Operator's Guide 523-0816977
5. Pro Line 21 Avionics System with IFIS Upgrade for King Air Series
Operator's Guide 523-0817407

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COURSE OUTLINE

0. Welcome & Introductions

- A. Welcome to Rockwell Collins e-Learning

1. Primary Flight Display (PFD)

- A. Introduction
- B. Primary Flight Display (PFD)
 - i. Theory of Operation
 - ii. Description
 - iii. Operation
- C. Display Control Panel (DCP)
 - i. Operation
- D. Summary/Test

2. Multi-Function Display (MFD)

- A. Introduction
- B. Multi-Function Display (MFD)
 - i. Overview
 - ii. Description
 - iii. Operation
- C. Summary/Test

3. Flight Guidance Panel (FGP)

- A. Introduction
- B. Flight Guidance Panel (FGP)
 - i. Description
 - ii. Operation
- C. Flight Control Switches
 - i. Pitch Trim Command Switch

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- ii. Autopilot/Yaw Damper (AP/YD) Disconnect (DISC) Button
- iii. Synchronize (SYNC) Button
- iv. GO AROUND Button

D. Summary/Test

4. Integrated Flight Information System (IFIS)

A. Introduction to IFIS-5000

- i. Key Performance Features

B. IFIS Line Replaceable Unit (LRU) Descriptions

- i. File Server Unit (FSU)
- ii. Adaptive Flight Display (AFD)
- iii. Cursor Control Panel (CCP)
- iv. XM Weather Receiver (XMWR) and Antenna

C. IFIS Operations

- i. Display Formats
- ii. CCP Controls and Functions

D. Summary/Test

5. Radio Sensor System (RSS)

A. Introduction

B. RSS Theory of Operation

C. RSS Overview

- i. Radio Tuning Unit (RTU) Functionality
- ii. Control Display Unit (CDU) Functionality
- iii. Reversionary Tuning

D. RSS Operations

- i. CDU
- ii. RTU

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E. Summary/Test

6. Weather Radar System (WXR)

A. Introduction

B. WXR Description

i. Receiver/Transmitter Antenna (RTA)

C. How Radar Works

i. Performance

ii. Thunderstorms

iii. Reflection

iv. Calibrated Gain

D. WXR Modes of Operation and Features

i. Operational Mode

1. DCP Controls

ii. Standby Mode

iii. Weather Only (WX) Mode

iv. Terrain Mapping (MAP) Mode

v. Test Mode

vi. Antenna Stabilization Feature

E. Summary/Test

7. CDU / Flight Management System (FMS)

A. FMS System Overview

B. CDU Familiarization

i. Operation

ii. Summary/Test

C. FMS System Start-Up/Initialization Procedures (Guided Practice / Assessment)

i. Replace an Active Navigation Database with a Standby Database

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- ii. Load a New Navigation Database
 - iii. Synchronize a Newly Added Flight Plan
 - iv. Initialize the FMS to Current Position
 - v. Initialize the FMS to an Airport Code
 - vi. Delete a Flight Plan
- D. Build a Flight Plan Procedures (Guided Practice / Assessment)
- i. Enter an Origin Airport
 - ii. Enter a Destination Airport
 - iii. Enter an Alternate Airport
 - iv. Enter a Waypoint
 - v. Enter an Airway
 - vi. Delete a Flight Plan Discontinuity
 - vii. Repair a Flight Plan Discontinuity
 - viii. Delete a Flight Plan Waypoint
 - ix. Delete an Airway
 - x. Enter a Departure Runway
 - xi. Enter a Standard Instrument Departure (SID)
 - xii. Enter a Destination Approach and Transition
 - xiii. Adjust the Auto Sequence
 - xiv. Erase a Flight Plan
- E. Save and Load a Flight Plan Procedures (Guided Practice / Assessment)
- i. Save a Flight Plan to a Pilot Route List
 - ii. Customize a Pilot Route Name
 - iii. Save the Flight Plan to a Disk
 - iv. Copy the Active Flight Plan to the Second Flight Plan
 - v. Activate a Second Flight Plan

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- F. Performance Data Procedures (Guided Practice / Assessment)
 - i. Enter the Cruise Altitude
 - ii. Enter the Passenger Weight
 - iii. Enter the Cargo Weight
 - iv. Change the Sensed Fuel Value
- G. Enroute Procedures (Guided Practice / Assessment)
 - i. Delete a Flight Plan Discontinuity
 - ii. Enter a Hold
 - iii. Modify a Hold
 - iv. Insert a Direct-To Waypoint
 - v. Insert a Radial Intercept from a Heading Leg
 - vi. Insert a Radial and Distance Waypoint
 - vii. Insert an Off Airway Waypoint
- H. Missed Approach Procedures (Guided Practice / Assessment)
 - i. View the Missed Approach
 - ii. Sequence to the Missed Approach
 - iii. Sequence to the Alternate Flight Plan

8. Messages and Annunciations

- A. Introduction
- B. Engine Indicating System (EIS) Description
- C. Warning Flags and Alerts Description
- D. Display Reversion Description
- E. Summary/Test

9. Flight Plan Scenarios

- A. Original Flight Plan
- B. Flight Plan Re-Route

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C. Flight Plan Predicted Change

D. Flight Plan Missed Approach

10. Summary

EQUIPMENT TYPE:

EQUIPMENT	NOMENCLATURE	PART NUMBER
Adaptive Flight Display	AFD-3010	822-1084-353 / 359 / 360
Adaptive Flight Display	AFD-3010E	822-1753-353 / 359 / 360
Display Control Panel	DCP-3030	822-1828-061 / 161
Flight Guidance Panel	FGP-3000	822-1107-103
File Server Unit	FSU-5010	822-1543-101
Cursor Control Panel	CCP-3000	822-1746-001
External Compensation Unit	ECU-3000	822-1200-998
XM Weather Receiver	XMWR-1000	822-2031-002
Control Display Unit	CDU-3000	822-0884-491 / 493
Radio Tuning Unit	RTU-4200	822-0668-251 / 261
Radio Tuning Unit	RTU-4220	822-0730-461
Receiver/Transmitter Antenna	RTA-800	822-1050-004
Receiver/Transmitter Antenna	RTA-852	622-8439-004