

Publications and Training Solutions

Course Syllabus: 523-0816899

COURSE TITLE: Pro Line 21™ - King Air 350

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. Pro Line 21 Avionics System For The Raytheon King Air
Operator's Guide 523-0790065
2. FMS-3000 for the Beechcraft King Air C90GT/C90GTi/B200/B200C/
B200CGT/B300 Operator's Guide 523-0790066
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. Aircraft Control Functions (Video)
- B. Introduction
- C. Primary Flight Display (PFD)
 - i. Description
 - ii. Operation
- D. Display Control Panel (DCP)
 - i. Operation
- E. Reversion Switch Panel (RSP)
 - i. Operation
- F. Summary/Test

2. Multi-Function Display (MFD)

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

3. Flight Guidance Panel (FGP)

- A. Introduction
- B. Flight Guidance Panel (FGP)
 - i. Description
 - ii. Operation

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- C. Flight Control Switches
 - i. Pitch Trim Command Switch
 - 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
 - ii. Hardware and Software
 - iii. 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 Display Formats
 - D. IFIS Operations
 - i. CCP Controls and Functions
 - E. Summary/Test
- 5. Radio Sensor System (RSS)**
- A. Communication Systems (Video)
 - B. Introduction
 - C. RSS Theory of Operation
 - D. RSS LRU Descriptions

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- i. Radio Tuning Unit (RTU)
 - ii. Control Display Unit (CDU)
- E. RSS Operation
 - i. CDU
 - ii. RTU
 - iii. Reversionary Tuning
- F. Summary/Test

6. Weather Radar System (WXR)

- A. Introduction
- B. Turbulence WXR Theory of Operation
- C. WXR Description
 - i. Receiver/Transmitter Antenna (RTA)
- D. How Radar Works
 - i. Performance
 - ii. Thunderstorms
 - iii. Weather Reflectivity
 - iv. Calibrated Gain
- E. 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. Turbulence (TURB) Mode
 - vi. Terrain Mapping (MAP) Mode
 - vii. Test Mode

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- viii. Sector Scan (SEC) Feature
- ix. Target Alert Feature
- x. Antenna Stabilization Feature

F. Summary/Test

7. CDU / Flight Management System (FMS)

- A. Navigation Systems (Video)
- B. CDU Familiarization
 - i. Operation
 - ii. Theory of Operation
 - iii. Summary/Test
- C. Preflight (Video)
- D. FMS System Start-Up/Initialization Procedures (Guided Practice / Assessment)
 - i. Replace an Active Navigation Database with a Standby Database
 - 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
- E. 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

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- 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
- F. Vertical Navigation (Video)
- G. Approaches (Video)
- H. 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
- I. 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
- J. 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

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- vi. Insert a Radial and Distance Waypoint
- vii. 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 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
- C. Flight Plan Predicted Change
- D. Flight Plan Missed Approach

10. Summary

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EQUIPMENT TYPE:

EQUIPMENT	NOMENCLATURE	PART NUMBER
Adaptive Flight Display	AFD-3010	822-1084-354 / 358
Adaptive Flight Display	AFD-3010E	822-1753-354 / 358
Display Control Panel	DCP-3030	822-1828-061
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	822-2031-001
Control Display Unit	CDU-3000	822-0884-491 / 493
Radio Tuning Unit	RTU-4200	822-0668-251 / 261
Radio Tuning Unit	RTU-4220	822-0730-451 / 461
Receiver/Transmitter Antenna	RTA-852	622-8439-004