

# Publications and Training Solutions

## Course Syllabus: 523-0810946

**COURSE TITLE:** Pro Line 21™ – King Air B200  
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. 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 C90GT/C90GTi/B200GT/B200CGT Operator's Guide 523-0808535
4. Pro Line 21 Avionics System with IFIS for the Beechcraft King Air Operator's Guide 523-0807239
5. FMS-3000 v4.0 Flight Management System for King Air Series Aircraft Operator's Guide 523-0816977
6. 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. Description
  - ii. Operation
- C. Display Control Panel (DCP)
  - i. Operation
- D. Reversion Switch Panel (RSP)
  - i. Operation
- E. Summary/Test

#### **2. Multi-Function Display (MFD)**

- A. Introduction
- B. Multi-Function Display (MFD)
  - i. Description
  - ii. 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
- 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

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

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

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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

viii. Delete a Flight Plan Waypoint

ix. Delete an Airway

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- 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
  - vi. Insert a Radial and Distance Waypoint
  - vii. Insert an Off Airway Waypoint

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- 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	822-1084-353 / 354 / 358
Adaptive Flight Display	AFD-3010E	822-1753-353 / 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 / 201
Cursor Control Panel	CCP-3000	822-1746-001
External Compensation Unit	ECU-3000	822-1200-998 / 999
XM Weather Receiver	XMWR-1000	822-2031-001 / 002
Control Display Unit	CDU-3000	822-0884-493
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