

Publications and Training Solutions

Course Syllabus: 523-0824832

COURSE TITLE: Pro Line II to Pro Line Fusion® – King Air Flight Line Maintenance
Flight Line Maintenance (Level I)

PREREQUISITES: Students should have basic knowledge of aircraft avionics systems and a working command of the English language.

PURPOSE: This course provides line maintenance personnel with training to operate and perform flight line maintenance for the King Air Pro Line Fusion® system.

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

1. Provide an overall understanding of the King Air Pro Line Fusion avionics principles and operation.
2. Identify system components and the functional/operational characteristics of each Line Replaceable Unit (LRU).
3. Identify typical aircraft system interface/system architecture.

COURSE LENGTH: Approximately 4 Hours

REFERENCES:

- | | |
|---|-------------|
| 1. King Air Pro Line 2™ to Pro Line Fusion® Retrofit Fault Isolation Manual | 523-0823130 |
| 2. Pro Line 2™ to Pro Line Fusion® Retrofit Operator Guide | 523-0823131 |
| 3. Pro Line Fusion® for Aftermarket Installation Manual | 523-0823138 |

Publications and Training Solutions

Course Syllabus: 523-0824832

COURSE OUTLINE

0. Introduction to King Air Pro Line Fusion® Avionics System – Video

1. System Overview – Familiarization

- A. Cockpit Orientation
- B. Adaptive Flight Display (AFD)
- C. Flight Display Elements
- D. System Components
 - i. Attitude Heading Computer (AHC)
 - ii. Air Data Computer (ADC)
 - iii. Radio Altimeter (RALT)
 - iv. Global Positioning System (GPS)
 - v. Mode S Transponder (TDR)
 - vi. VHF Communication Transmitter/Receiver
 - vii. Distance Measuring Equipment (DME)
 - viii. VHF Navigation Receiver
 - ix. Flight Display Applications
- E. Summary and Quiz

2. Touchscreen Interface – Video

3. Cursor Control Panel – Video

4. Multifunction Keyboard Panel – Video

5. Baro-Set-Radar Tilt Knobs – Video

6. USB Flight Plan Loading – Familiarization

7. Flight Planning - Video

8. Pre-Flight – Demonstration Performance

- A. Set Com 1 Frequency
- B. Select Initial Cleared Altitude
- C. Set Barometric Pressure

Publications and Training Solutions

Course Syllabus: 523-0824832

- D. View Flight Plan on the Multifunction Display (MFD)
- E. Enter Origin Airport
- F. Enter Estimated Time of Departure
- G. Enter Cruise Altitude
- H. Enter Destination Airport
- I. Enter Alternate Airport
- J. Enter Departure Airport Information
- K. Enter Arrival Airport Information
- L. Enter Waypoint
- M. Resolve Discontinuity
- N. Update Cargo Weight
- O. Enter Average Passenger Weight
- P. Change Fuel On Board Value

9. Engine Start – Demonstration Performance

- A. View Engine Start Checklist

10. Before Taxi – Demonstration Performance

- A. Set Vspeeds
- B. Quick Tune Radios

11. Taxi – Demonstration Performance

- A. Configure Flight Control System
- B. Configure Traffic and Weather Radar

12. Takeoff – Demonstration Performance

- A. Set up Flight Deck for Takeoff

13. Flight Guidance Panel – Video

14. Initial Climb – Demonstration Performance

- A. Set FCS Mode and Enable Autopilot

15. Cruise – Demonstration Performance

- A. Set Primary Flight Display (PFD) and MFD View

Publications and Training Solutions

Course Syllabus: 523-0824832

- B. Modify a Flight Plan for Direct-To
- C. View Graphical Weather Format
- D. Set a Hold

16.Descent – Demonstration Performance

- A. Set FMS for Approach

17.Approach – Demonstration Performance

- A. Configure for NAV Approach

18.Go Around/Missed Approach – Demonstration Performance

- A. Missed Approach

19.Philosophy – Familiarization

- A. Menu Bar
- B. Quick Access Keys
- C. System Components
 - i. Flight Control Panel (FCP)
 - ii. Autopilot Panel (APP)
 - iii. Course Heading Panel (CHP)
 - iv. Cursor Control Panel (CCP)
 - v. Reversion Select Panel (RSP)
 - vi. Multifunction Keyboard Panel (MKP)
- D. Graphical User Interface (GUI)
- E. Display Conventions
- F. Data Entry Conventions
- G. Touchscreen Toolbar
- H. Troubleshooting
- I. Fault Indicators
- J. Reversion
- K. Onboard Maintenance System (OMS) Basic
- L. OMS Advanced

Publications and Training Solutions Course Syllabus: 523-0824832

- M. AFD Cleaning
- N. Summary and Quiz

20.PFD – Familiarization

- A. PFD COM Tuning
- B. Flight Mode Annunciators
- C. Airspeed Indicator
- D. Attitude Direction Indicator (ADI)
- E. Altitude Display
- F. Horizontal Situational Display
- G. Synthetic Vision System (SVS)
- H. Traffic Alert Collision Avoidance System (TCAS)
- I. Summary and Quiz

21.MFD – Familiarization

- A. Engine Indicating Crew Alerting System (EICAS)
- B. Map
- C. Quick Tune
- D. Tune Format
- E. SVS
- F. Terrain Awareness Warning System (TAWS)
- G. Electronic Charts
- H. Data Link Graphical Weather
- I. XM Graphical Weather
- J. Electronic Checklist
- K. Summary and Quiz

22.System Block Diagram – Familiarization

- A. Multifunction Display
- B. Primary Flight Display
 - i. Databuses

Publications and Training Solutions

Course Syllabus: 523-0824832

- ii. Traffic Data
 - iii. Inputs and Data
 - iv. ADC/AHRS/Pilot Display
 - v. Input/Output Concentrator (IOC)
 - vi. Flight Guidance Panel (FGP)
 - vii. Radio/Altimeter/Radio Sensor System
 - viii. Display Dim Knob
 - ix. Flight Management System Application (FMSA)
 - x. Attitude Heading Computer (AHC)
 - xi. Attitude Heading Revision System
 - xii. Cursor Control Panel Discrete
 - xiii. Flight Guidance Computer (FGC)
 - xiv. MFD/DCP Connection
- C. Flight Guidance Panel (FGP)
- i. Inputs/Signals
 - ii. Aircraft Servos
 - iii. Flight Guidance Computer (FGC)
- D. Radio System
- i. Very High Frequency (VHF)
 - ii. Global Positioning System (GPS)
 - iii. Navigation/Automatic Direction Finder (NAV/ADF)
 - iv. Distance Measuring Equipment (DME)
 - v. Transponder (XPDR)
- E. Weather Introduction
- i. Radio Overview
 - ii. Weather
 - iii. Pilot Radar Control
 - iv. Copilot Radar Control

Publications and Training Solutions Course Syllabus: 523-0824832

23.Data Loading – Video

24.Software Loading – Video

25.OMS – Video

26.Options – Familiarization

- A. S-AHRS
- B. 3rd GNSS
- C. Ex Controlled Transponder
- D. Extended Frequency VHF
- E. Stormscope
- F. Direction Finder
- G. TACAN
- H. ASE
- I. Special Mission CAS Msg

27.Tips and Tricks – Video

- A. Touch Screen Toolbar
- B. Range to Altitude Arc
- C. Map Features
- D. SVS – Airport Dome
- E. Map Rerouting
- F. Memory Keys

Publications and Training Solutions

Course Syllabus: 523-0824832

EQUIPMENT TYPE:

EQUIPMENT	NOMENCLATURE	PART NUMBER
Attitude Heading Computer	AHC-3000A	822-1378-001
External Compensation Unit	ECU-3000	822-1200-209/-999
Modular Mounting Tray	MMT-3000	822-1227-001
Flux Detector Unit	FDU-70	622-5812-001
Air Data Computer	ADC-3000	822-1109-131/-132
Modular Mounting Tray	MMT-3000	822-1227-001
Autopilot Computer	APC-65J	622-9785-436
Autopilot Computer	APC-65H	622-9724-140
Flight Control Panel	FCP-65	622-5798-008
Autopilot Panel	APP-65A	622-6684-002/-005
Air Data Sensor	ADS-65	622-5797-001
Slip Skid Sensor	SSS-65	622-6019-001
Primary Servo	SVO-65	622-5734-001/-002
Servo Mount	SMT-65	622-5735-001/-002
Primary Servo	SVO-85B	622-5027-001
Servo Mount	SMT-85B	622-5029-002
Global Positioning System	GPS-4000S	822-2189-010/-011
Equipment 2 MCU ARINC Tray	MCU Tray	270-2712-010
Radio Tuning System Application	RTSA-6000	810-0048-701
VOR/LOC/GS Receiver	VIR-32	622-6137-001/-201
VHF COMM Transceiver	VHF-22C	822-1113-001/021
Radio Receiver	ADF-60A	622-2362-001

Publications and Training Solutions

Course Syllabus: 523-0824832

EQUIPMENT	NOMENCLATURE	PART NUMBER
Control Adapter	CAD-62	622-6590-001/-002
Distance Measuring Equipment	DME-42	622-6263-001/003
DME Mount	UMT-13	622-5213-003
Transponder	TDR-94	622-9352-501
Transponder	TDR-94D	622-9210-501
Altimeter	ALT-50A	622-3201-001
Radio Altimeter	ALT-55B	622-2855-001/-002/-011/-012
Weather Radar Receiver/Transmitter Antenna	RTA-842	622-9301-003/-004-/011/-203/-204
Weather Radar Receiver/Transmitter Antenna, Turbulence	RTA-852	622-8493-003/-004/-011/-203/-204
Data Concentrator Unit	DCU-3110	822-2575-261
Adaptive Flight Display	AFD-3700	822-3065-001
Software: Adaptive Flight Display Runtime	AFDR-3700	810-0346-001
Cursor Control Panel	CCP-3500	822-27544-010
Multifunction Keyboard Panel	MKP-3500	822-2568-010
Aircraft Personality Module	APM-5000	822-2195-001
Single Knob Panel – Barometric	SKP-3500	822-3163-010
Single Knob Panel – Tilt	SKP-3500	822-3163-020
Advanced Terrain Functions	ATF-3500	810-0348-001
Software: Engine Indication and Crew Alert System (EICAS) Application	EICAS-6000	810-0245-1H0001/-2H0001

Publications and Training Solutions

Course Syllabus: 523-0824832

EQUIPMENT	NOMENCLATURE	PART NUMBER
Software: Airframe Parameter Configuration Table	APCT-3700	810-0422-510
Software: Advanced Terrain Functions Tables	ATFT-3700	810-0385-1H0001
Software: Integrated Modular Avionics Table	IMAT-3700	810-0352-001
Software: File Server Application	FSA-6000	810-0072-302
Software: Outboard IFIS Key	FSAX-3500	810-0354-001
Software: Protocol Manager Application	PMA-6000	810-0192-100
Software: Flight Display System Application	FDSA-6500	810-0234-2H0001
Software: Emulated Control Display Application	ECDA-6000	810-0233-100
Display Interface Unit	DIU-3110	822-2576-251/-261
Course Heading Panel	CHP-3010	822-1280-003
Kit for ICIT, APMT, and LCT	KIT-3700	659-00A1-2H0101
Software: Flight Management System Application	FMSA-6010	810-0163-1H0003
Software: Onboard Maintenance System Application	OMSA-6000	810-0106-250
Software: Onboard Maintenance System Table	OMST-6000	810-0099-2H0001
Software: Onboard Data Loader Application	ODLA-3500	810-0345-1H0001
TCAS Transmitter/Receiver	TTR-4100	822-3075-001

Publications and Training Solutions

Course Syllabus: 523-0824832

EQUIPMENT	NOMENCLATURE	PART NUMBER
TCAS Directional Antenna	TRE-920	622-8973-001
Remote Data Concentrator	RDC-4002	822-1533-301
Software: Electronic Charts Key	ECH-3500	810-0361-001
Software: Enhanced Map Overlays Key	OVL-3500	810-0360-001
Software: Data Link Weather Key	DLWX-3500	810-0353-001
Software: XM Weather Key	XMWX-3500	810-0355-001
XM Weather Receiver	XMWR-1000	822-2031-003
Information Management System	IMS-3500	822-2999-101
Software: Information Management System Application	IMSA-3500E	810-0414-001
Software: Information Management System Operating System	IMSOS-3500E	810-0415-001
Software: Video Key	VID-3500	810-0392-001
VHF Comm Transceiver – 8.33 kHz, Data Link	VHF-4000	822-1468-310
Mount – Single Installation	MMT-125	622-9670-002
Communications Management Unit	CMU-4000	822-1739-003
Mount – Single Installation	MMT-130	622-9671-002
Software: Chart Extension Key	CHTX-3500	810-0476-001
Software: FMS Search and Rescue Key	SARK-3500	810-0387-001

**Publications and Training Solutions
Course Syllabus: 523-0824832**