

Publications and Training Solutions

Course Syllabus: 523-0825401

COURSE TITLE: Bombardier Challenger 604 Pro Line Fusion

PREREQUISITES:

1. Students should have basic knowledge of aircraft avionics systems and experience operating the Challenger 604.

PURPOSE:

This course provides aircrew the training necessary to operate the Rockwell Collins Pro Line Fusion Avionics System in the Challenger 604.

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

1. Identify all Rockwell Collins system and subsystem components and identify their operational characteristics.
2. Understand the features and theory of operation of all Rockwell Collins systems and subsystems.
3. Perform normal and abnormal flight operations using the Rockwell Collins avionics system.

COURSE LENGTH: 5 Days

TRAINING DEVICES:

1. Challenger 604 Pro Line Fusion Desktop Trainer

TRAINING MATERIALS:

1. Student Guide (Electronic) 523-0825401

REFERENCES:

1. Bombardier Challenger 604 Pro Line Fusion® Operator Guide 523-0825299
2. Bombardier Challenger 604 Pro Line Fusion® Flight Management System 523-0825302

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COURSE OUTLINE

0. Welcome & Introductions

- A. Introductions
- B. Policies and Procedures
- C. Course Registration
- D. Course Description
- E. Course Material
- F. Schedule
- G. Course Objectives
- H. Evaluation
- I. Critique
- J. Rockwell Collins Publication and Training Solutions

1. System Overview

- A. Introduction
- B. Flight Deck Layout

2. Adaptive Flight Display (AFD)

- A. Introduction
- B. Theory of Operation
- C. Graphical User Interface (GUI)
- D. Primary Flight Display (PFD)
- E. Multifunction Display (MFD)
- F. Reversion
- G. Care and Cleaning

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3. Cursor Control Panel (CCP) and Multifunction Keyboard Panel (MKP)

- A. Introduction
- B. Cursor Control Panel (CCP)
- C. Multifunction Keyboard Panel (MKP)

4. Integrated Flight Information System (IFIS)

- A. Introduction
- B. Data Link Graphical Weather
- C. XM Graphical Weather
- D. Electronic Charts
- E. Enhanced Maps

5. Automatic Flight Control System (AFCS)

- A. Introduction
- B. System Operation

6. Communication, Navigation, and Surveillance

- A. VHF Radios
- B. HF Radios
- C. Satellite Communication
- D. Datalink
- E. Navigation Radios
- F. Flight Management System
- G. Transponder and TCAS

7. Data Loading

- A. Introduction
- B. System Operation

8. Summary

- A. Summary
- B. Questions

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EQUIPMENT TYPE:

EQUIPMENT	NOMENCLATURE	PART NUMBER
Air Data Computer	ADC-850E	822-0842-421
Automatic Direction Finder	ADF-462	622-7382-101
Distance Measuring Equipment	DME-442	622-7309-101
VHF Comm Transceiver	VHF-422C	822-1115-001
VHF Navigation Receiver	VIR-432	622-7194-201
Diversity Mode S Transponder, ADS-B Out	TDR-94D	622-9210-501
Radio Tuning System Application	RTSA-6000	810-0048-702
Radio Altimeter	ALT-55B	622-2855-011
Radio Altimeter Converter	RAC-870	622-7209-002
Adaptive Flight Display	AFD-3700	822-3065-001
Adaptive Flight Display Runtime	AFDR-3700	810-0346-002
Flight Display System Application	FDSA-6500	810-0234-4B0001
Airframe Parameter Configuration Table	APCT-3700	810-0422-400
Aircraft Personality Module	APM-5000	822-2195-001
Cursor Control Panel	CCP-3500	822-2754-010
Multifunction Keypad	MKP-3500	822-2568-010
Single Knob Panel, Baro	SKP-3500	822-3163-010
Integrated Modular Avionics Table	IMAT-3700	810-0352-100
Advanced Terrain Functions	ATF-3510	810-0391-001

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EQUIPMENT	NOMENCLATURE	PART NUMBER
Engine Indication Crew Alert System	EICAS-6000	810-0245-4B0001
Data Concentration Unit	DCU-4002	822-0179-017
EICAS Routing Unit	ERU-4000	822-0845-001
Lamp Driver Unit	LDU-4000	622-9822-001
Flight Control Computer	FCC-4006	822-0809-810
Flight Control Panel	FCP-4003	822-0182-001
Servo Switching Module	SSM-4000	822-0782-001
Servo, Linear Actuator	SVL-4000	622-9968-002
Primary Servo	SVO-85A	622-4404-101
Primary Servo	SVO-85B	622-5027-101
Flight Management System Application	FMSA-6010	810-0163-4B0001
Protocol Manager Application	PMA-6000	810-0192-040
Onboard Maintenance System Tables	OMST-6000	810-0099-4B0001
Onboard Data Loader Application	ODLA-3500	810-0345-1R0001
Onboard Maintenance System Application	OMSA-6000	810-0106-350
File Server Application	FSA-6000	810-0072-304
Electronic Charts Key	ECH-3500	810-0361-001
Charts Extension Key	CHTX-3500	810-0476-001
Enhanced Map Overlays Key	OVL-3500	810-0360-001
Outboard Enhanced Maps and Graphical Weather Key	FSAX-3500	810-0354-001

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EQUIPMENT	NOMENCLATURE	PART NUMBER
Vertical Situation Display Key (Advanced)	VSDK-3500	810-0113-001
Integrated Card Cage	ICC-4007	822-0781-001
IAPS Environmental Controller	IEC-4000	822-0288-001
Lightning/HIRF Protection	LHP-4000	822-0287-702
Lightning/HIRF Protection	LHP-4001	822-0332-702
Power Supply Module	PWR-4000	622-9945-021
Input/Output Concentrator	IOC-4100	822-1362-710
Configuration Strapping Unit	CSU-4100	822-1364-002
Option Control Module	OCM-4100	822-1463-200
Receiver Transmitter Antenna	RTA-854	622-8440-003
AOA Transmitter	SLZ7960	856-0077-010
Avtech Audio Control Panel, Dual VHF	AIS-ACPDV	856-0073-020
Remote Electronics Unit	AIS-REU	856-0073-010
HF Transceiver	HF-9031A	822-0101-002
HF Antenna Coupler	HF-9041	685-0350-002
Inertial Reference Unit	LTN-101	856-0075-010
IRU Mode Select Unit, Dual	MSU	856-0075-020
Global Positioning System, SBAS	GPS-4000S	822-2189-100
TCAS Transmitter / Receiver	TTR-921	822-1293-033
FANS 1/A and Link 2k+	CMU-4000	822-1739-704

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EQUIPMENT	NOMENCLATURE	PART NUMBER
External Compensation Unit	ECU-3000	822-1200-996
VHF Comm Transceiver - 8.33kHz, Data Link	VHF-4000	822-1468-390
Emulated Control Display Application	ECDA-6000	810-0233-120
Emulated Control Display Application	ECDA-6000	810-0233-100
Information Management System	IMS-3500	822-2999-201
Wireless USB Network Adapter	USB Adapter	983-9844-112
Information Management System Application	IMSA-3500E	810-0414-201
Standard Analog Video Key	VID-3500	810-0392-001
TCAS Receiver / Transmitter	TTR-2100	822-2911-001
VHF Comm Transceiver	VHF-422D	822-1116-001
Lightning Detection System Processor	WX-1000E	856-0072-010
Avtech Audio Control Panel, Triple VHF	AIS-ACP3V	856-0073-030

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EQUIPMENT	NOMENCLATURE	PART NUMBER
on Control Module (Exp FDR)	OCM-4100	822-1463-214
Remote Data Concentrator	RDC-4002	822-1533-001
Satellite Communications Data Unit	SDU-906-4	822-0312-101
Radio Frequency Unit	RFU-900	622-8849-100
High Power Amplifier	HPA-901A	822-0953-001
Weather Radar Key-Multiscan Mode w/ Turb	WXRK-4001	810-0267-001
Weather Radar, 14"	RTA-4114	822-2255-001
RNP AR >= 0.3 Key	RNP-6000	810-0201-001
ATN CPDLC Key (Link 2K+)	ATN-6200	810-0187-001
Data Link Communications Application	DLCA-6500	810-0315-360
FANS ATC Data Link Key (CPDLC)	FAN-6200	810-0186-001
SXM Weather Receiver	XMWR-1000S	822-3365-001
XM Weather Key	XMWK-3500	810-0355-001
Data Link Weather Key	DLWX-3500	810-0353-001
Radio Tuning Unit (Dual HF, external disable)	RTU-4220	822-0730-468
VHF Comm Transceiver	VHF-422B	622-7293-121
VHF Comm Transceiver	VHF-422B	622-7293-101
Primary Servo	SVO-85A	622-4404-001
Primary Servo	SVO-85B	622-5027-001
Lightning/HIRF Protection	LHP-4000	822-0287-701
Lightning/HIRF Protection	LHP-4001	822-0332-701

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Air Data Computer	ADC-850E	822-0842-621
Global Positioning System, SBAS	GPS-4000S	822-2189-004
Global Positioning System, SBAS	GPS-4000S	822-2189-010