



Rockwell Collins Services Training and Information Solutions Course Syllabus: 523-0808075

COURSE TITLE: Challenger 605 Pro Line 21
Level I Operations & Flightline Maintenance

EQUIPMENT TYPES:

LRU	NOMENCLATURE	PART NUMBER
FCC-4006	Flight Control Computer	822-0809-510
FCP-4003	Flight Control Panel	822-0182-001
SMT-87A	Servo Mount	822-0260-001
SMT-87B	Servo Mount	822-0260-001
SSM-4000	Servo Switching Module	822-0782-001
SVL-4000	Linear Actuator	622-9968-002
SVO-85A	Primary Servo	622-4404-101
SVO-85B	Primary Servo	622-5027-101
CSU-4100	Configuration Strapping Unit	822-1364-002
ICC-4007	Integrated Card Cage	822-0781-001
IEC-4000	IAPS Environmental Controller	822-0288-001
IOC-4100	Input/Output Concentrator	822-1362-080
MDC-3110	Maintenance Diagnostic Computer	822-1987-004
LHP-4001	Lightning/HIRF Protection	822-0332-702
LHP-4000	Lighting/HIRF Protection	822-0287-702
OCM-4100	Options Control Module	822-1463-218
PWR-4000	Power Supply Module	622-9945-021
VHF-4000	VHF Comm Transceiver	822-1468-102
HF-9031A	HF Receiver/Transmitter	822-0101-002
HF-9041	HF Antenna Coupler	822-0350-002
DCU-4002	Data Concentrator Unit	822-0179-201
RDC-4002	Remote Data Concentrator	822-1533-101
ERU-4000	EICAS Routing Unit	822-0845-001
LDU-4000	Lamp Driver Unit	622-9822-001
ADF-5220	Adaptive Flight Display	822-1577-202



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LRU	NOMENCLATURE	PART NUMBER
CCP-5060	Cursor Control Panel	822-2164-002
DCP-5060	Display Control Panel	822-2165-002
ADC-850E	Air Data Computer	822-0842-621
ANT-462B	ADF Antenna	622-7384-001
DME-4000	DME Transceiver	822-1466-001
NAV-4000	VOR/ILS/MB/ADF Receiver	822-1465-001
ALT-4000	Radio Altimeter Receiver/Transmitter	822-0615-202
RTA-854	Receiver Transmitter Antenna	622-8440-004
TRE-920	TCAS Directional Antenna	622-8973-001
TTR-4000	TCAS II Receiver/Transmitter	822-1294-002
TDR-94D	Diversity Transponder	622-9210-008
CDU-62XX	Control Display Unit	822-1485-402
FMC-6000	Flight Management Computer	822-0868-074
GPS-4000A	GPS Receiver	822-1377-001
DBU-4100	Data Base Unit	822-0014-104
CMU-4000	Comm Management Unit	822-1739-003

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PURPOSE: This course provides line maintenance personnel with training to operate and perform flight line maintenance for the Pro Line 21 avionics system.
This course is designed to teach troubleshooting for LRU replacement and maintenance.
This does not include maintenance of any component inside an LRU.

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

1. Provide an overall understanding of Pro Line 21 System Principles of operation
2. Identify system components and the functional/operational characteristics of each line replaceable unit (LRU).
3. Identify typical aircraft system interface and system architecture.

COURSE LENGTH: 5 Days

PREREQUISITES: Students should have basic knowledge of aircraft avionics systems and a working command of the English language (interpreters are available for special cases).

SPECIAL TEST EQUIPMENT:

CL-605 Engineering Test Rig (if available)

TRAINING MATERIALS:

1. PowerPoint Presentation
2. Student training manual
3. Information handouts
4. CL-605 Avionics System Diagnostic Guide 532-0807950

REFERENCES:

1. CL-605 Avionics System Manual 523-080-7949
2. CL-605 Operators Guide 523-0807948
3. CL-605 Avionics System Diagnostic Guide 523-0807950

CL-605 Pro Line 21 COURSE OUTLINE**I. Welcome/Introduction**

- A. Training Overview
- B. Welcome
- C. Student Registration
- D. Student Policies and Procedures
- E. Course Description and Objectives

II. Data Buses

- A. Why we use Data Buses
- B. ARINC Data Buses

III. Integrated Avionics System Processor (IAPS)

- A. Overview
- B. Purpose
 - 1. Integrated Card Cage (ICC)
 - 2. Lightning/HIRF Protector (LHP)
 - 3. Power Supply (PWR-4000)
 - 4. IAPS Environmental Controller (IEC-4000)
 - 5. Input/Output Concentrator (IOC-4000)
 - 6. Configuration Strapping Unit (CSU-4100)
 - 7. Maintenance Diagnostic Computer (MDC-3110)
 - 8. Maintenance and Troubleshooting

IV. Maintenance Diagnostics

- A. Overview
- B. Description
- C. Theory of Operation

V. Electronic Flight Instrument System (EFIS)

- A. Overview
- B. Description
- C. Theory of Operation
- D. Maintenance and Troubleshooting

VI. Engine Indicating and Crew Alerting System (EICAS)

- A. Overview
- B. Description
- C. Theory of Operation
- D. Maintenance and Troubleshooting

VII. In Flight Information System (IFIS)

- A. Overview
- B. Description
- C. Theory of Operation
- D. Maintenance and Troubleshooting

VIII. Air Data System (ADS)

- A. Overview
- B. Description
- C. Theory of Operation
- D. Maintenance and Troubleshooting

IX. Flight Guidance System (FGS)

- A. Overview
- B. Description
- C. Theory of Operation
- D. Maintenance and Troubleshooting

X. Flight Management System (FMS)

- A. Overview
- B. Description
- C. Theory of Operation
- D. Maintenance and Troubleshooting

XI. Radio Sensor System (RSS)

- A. Overview
- B. Description
- C. Theory of Operation
- D. Maintenance and Troubleshooting

XII. Weather Radar System

- A. Overview
- B. Description
- C. Theory of Operation
- D. Maintenance and Troubleshooting

XIII. Data Loading

- A. Overview
- B. Data Base Subscriptions
- C. Data Base Loading Operations
 - 1. Data Base Unit
 - 2. PCD-3000
 - 3. CPAS

XIV. Satellite Communication System (SATCOM)

- A. Overview
- B. Description
- C. Theory of Operation
- D. Maintenance and Troubleshooting

XV. Summary

- A. Review
- B. Written Test
- C. Course critique