IRT-4400
Bombardier
FLM Cabin Training

ROCKWELL COLLINS, a part of Collins Aerospace
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CAGE CODE: 0EFD0

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Initial Issue: OCT 23/24
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TARGET AUDIENCE:

Students should have completed a two-year technical electronics school or have equivalent knowledge of aircraft avionics systems and a working command of the English language (interpreters are available for special cases).

Training Level: Organizational (Maintenance) Level 1

Course Length: 1 Day

DESCRIPTION:

This course provides the student with the skills and background knowledge required for troubleshooting and isolating defective components in the IRT-4400 SATCOM System using applicable manuals.

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

1. Provide an overall understanding of Satellite Communication principles, operations, and testing of the subject equipment
2. Identify system components and the functional/operational characteristics of each Line Replaceable Unit (LRU)
3. Identify typical aircraft system interface/architecture
4. Perform fault isolation to a faulty LRU using built-in diagnostics

TRAINING DEVICES:

1. Aircraft-installed system (preferred)
2. Aircraft Rig
3. Laptop (required)

TRAINING MATERIALS:

1. 523-0836613 Course PowerPoint
2. Handouts:
    a. Practical Exercise
    b. Connector Diagrams
    c. Kirkpatrick Assessment (End of Course Assessment)

REFERENCES:

Document Name	Part Number	Edition	Revision	Date
IRT-4400 Iridium Cabin SATCOM System Installation Manual	523-0834153	1	0	NOV 04/24
IRT-4000 Iridium SATCOM Cabin System ORT Configuration Tool User Guide	523-0833711	1	0	MAY 05/23

COURSE OUTLINE:

1   **WELCOME/INTRODUCTIONS**

    A. Introductions

    B. Course Overview

    C. Course Objectives

    D. Course Outline

2   **SYSTEM DESCRIPTION**

    A. Overview

    B. General

        a. Iridium Network
        b. In-Progress Check #1

    C. System Overview

        a. Publication
        b. Equipment Covered
        c. System Interfaces
        d. SATCOM Function
        e. Component Description
        f. In-Progress Check #2
        g. Summary

3   **INSTALLATION**

    A. Overview

    B. General

    C. Unpacking and Inspecting

        a. Damage

        b. Markings

    D. Pre-Installation

    E. Cabling

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    F.   Configurations/Required Interfaces

          a.   General

          b.   Discrete I/O

          c.   ARINC 429

    G.   In-Progress Check #3

    H.   Power

    I.   Cooling

    J.   Installation

          a.   IRT-4000

          b.   ICM-4000

          c.   SIM

          d.   HGA-4000

    K.   Initial Power On

          a.   Verify System

          b.   Configuration Page

          c.   Avionics Status

          d.   SDU Status

          e.   Enabling Ground Test

          f.   Calibrate Cable Loss

    L.   In-Progress Check #4

    M.   Summary

4   OPERATION

    A.   Overview

    B.   General

    C.   On-Ground

    D.   In-Flight

    E.   User Interface

    F.   Voice Channel

    G.   2-Wire Audio

          a.   Plain Old Telephone Service (POTS)

          b.   Operating Instructions

          c.   Testing

    H.   In-Progress Check #5 and #6

    I.   Summary

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5 MAINTENANCE

A. Overview

B. General

C. Software Components

D. ORT Configuration Files

E. Data Load

F. Built-In Test Equipment

G. Fault Detection

H. Fault Storage

I. Engineering Event Log

J. In-Progress Check #7 and #8

K. Summary

6 ORT TOOL

A. Overview

B. General

C. Publication and Tool

D. ORT Tool

  a. Operational Environment/Installation

  b. Architecture

  c. Workflow Options

  d. File Management

E. Operation

  a. OEM Mode

  b. Airline Mode

F. Help Menu

G. In-Progress Check #9

H. Summary

7 ORT TOOL VERSION 4.0.G

A. Overview

B. General

C. Publication and Tool

D. ORT Tool

  a. Operational Environment/Installation

E. Operation

  a. OEM Mode

  b. Airline Mode

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F. Help Menu

G. Summary

8   PRACTICAL (HANDS ON)

A. Overview

B. General

C. Summary

9   COURSE SUMMARY (END OF COURSE)

A. Summary

B. Final Questions

10   COURSE CRITIQUE (HANDOUT)

A. Overview

B. General

EQUIPMENT COVERAGE:

Equipment	Nomenclature	Collins Part Number (CPN)
ICM-4000	Iridium Configuration Module	822-3584-400
IRT-4000	Iridium Receiver Transmitter	822-3585-400
HGA-4000	High Gain Antenna	822-3586-400
Software (Version 3.0.1)	(IRT NX) SATCOM Transmitter Owner Requirements Table (ORT) Editor Tool	810-0697-400
Software (Version 4.0.g)	(IRT NX) SATCOM Transmitter Owner Requirements Table (ORT) Editor Tool	810-0697-401