

Publications and Training Solutions

Course Syllabus: 523-0806549

WARNING: INFORMATION SUBJECT TO EXPORT CONTROL LAWS

This document may contain information subject to the International Traffic in Arms Regulation (ITAR) or the Export Administration Regulation (EAR) of 1979 which may not be exported, released, or disclosed to foreign nationals inside or outside of the United States without first obtaining an export license. A violation of the ITAR or EAR may be subject to a penalty of up to 10 years imprisonment and a fine of up to \$1,000,000 under 22 U.S.C.2778 of the Arms Export Control Act of 1976 or section 2410 of the Export Administration Act of 1979. Include this notice with any reproduced portion of this document.

PROPRIETARY NOTICE

NOTICE: FREEDOM OF INFORMATION ACT (5 USC 552) AND DISCLOSURE OF CONFIDENTIAL INFORMATION GENERALLY (18 USC 1905)

This document and the information disclosed herein are proprietary data of Rockwell Collins, Inc. Neither this document nor the information contained herein shall be used, reproduced, or disclosed to others without the written authorization of Rockwell Collins, Inc., except to the extent required for installation or maintenance of recipient's equipment. This document is being furnished in confidence by Rockwell Collins, Inc. The information disclosed herein falls within exemption (b) (4) of 5 USC 552 and the prohibitions of 18 USC 1905.

SOFTWARE COPYRIGHT NOTICE

© COPYRIGHT 2018 ROCKWELL COLLINS, INC. ALL RIGHTS RESERVED.

All software resident in this equipment is protected by copyright.

FOR TRAINING PURPOSE ONLY

Publications and Training Solutions

Course Syllabus: 523-0806549

COURSE TITLE: UG III
Level I Operation and Organizational Maintenance

PREREQUISITES: Students should have completed a two (2) year Technical Electronics School or equivalent. Students will be able to speak, read, and write effectively in English.

PURPOSE: This course includes theoretical lessons and practical exercises to develop, evaluate, and reinforce students' understanding of the installation, operation, and repair of the UG III system. The Course will include 30 to 50 percent practical demonstration and hands-on training.

The UG III system consists of the line replaceable units (LRUs) identified in the section titled EQUIPMENT TYPE by nomenclature and part number, including associated peripheral equipment identified as deliverable hardware.

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

1. State Equipment Functions and Operational Characteristics.
2. Trace Signal Flow through the Block Diagrams.
3. Perform Assembly/Disassembly, Testing, Adjustment, and Troubleshooting to the LRU.
4. Observe all personnel and equipment related Warnings and Cautions described in the Technical Manual.

COURSE LENGTH: 2.5 Days

Publications and Training Solutions

Course Syllabus: 523-0806549

TRAINING DEVICES:

1. Equipment (Line Replaceable Unit(s)):
 - a. RT-2200 Receiver-Exciter
 - b. PA-2220 Power Amplifier
 - c. PS-2220 Power Supply
 - d. CU-2040 Antenna Coupler
 - e. Pre/Post Selector (PR-2025)
2. Special Test Equipment:
 - a. IBM Computer with CCS-2200 Relay Interface and Basic Control Software
 - b. PC Relay Card
 - c. PC Multiport RS-232/422 Serial Card

TRAINING MATERIALS:

1. PowerPoint Presentation with LCD/Box Light projector
2. Student Guide – Flash drive (pdf) – Training Presentation
Information Sheets
3. Technical Manuals
4. Instructor Guides
5. Student Exams
6. Student/Course Evaluations

REFERENCES:

1. RT-2200 Radio Receiver-Transmitter (Intermediate Maintenance) IB 523-0777920
2. CU-2040 Antenna Coupler (Operation & Organizational Manual) IB 523-0780076

Publications and Training Solutions

Course Syllabus: 523-0806549

COURSE OUTLINE

0. Welcome & Introductions

- A. Course Overview
 - i. Welcome
 - ii. Student Registration

1. HF Communications Overview

- A. Capabilities/Limitations of HF
- B. Types of Voice and Data Modulation
- C. Automatic Link Establishment (ALE)

2. General Systems Description

- A. Purpose of the System
- B. Equipment Supplied
- C. Features of Equipment Subsystems
- D. Radio Set URG III General Description

3. RT-2200 Receiver-Transmitter Interface Description

- A. Power
- B. Control
- C. RF Interface
- D. Audio In/Out
- E. Other Inputs/Outputs
- F. HF Cabinet Interface

4. System Operation

- A. Receiver-Transmitter, Controls and Indicators
- B. Local
- C. Remote
- D. Split-Site
- E. Built-In Test

Publications and Training Solutions Course Syllabus: 523-0806549

5. URG III Theory of Operation

- A. Block Diagrams

6. Maintenance

- A. HF Cabinet Preventive Maintenance
- B. Organizational Level (System) Troubleshooting
- C. R/T Maintenance Controls, Test Points, and Test Meter
- D. Strapping Options
- E. CCS-2200 Load and Operations
- F. RT-2200 Minimum Performance Testing (Lab)

7. Summary – Review - Critique

- A. Test
- B. Critiques

Publications and Training Solutions

Course Syllabus: 523-0806549

EQUIPMENT TYPE:

EQUIPMENT	NOMENCLATURE	PART NUMBER
Pre/Post Selector	PR-2025	270-2586-010
1kW Power Amp Sys (230 VAC Single Phase) <u>Note:</u> Includes PA-2220A Power Amplifier (270-2695-020) and Power Supply (270-2695-030)	PA/PS-2220	270-2695-010
1kW Antenna Coupler	CU-2040	622-9636-001
Receiver-Exciter	RT-2200	822-0906-002
PC Multiport Serial Card	RS-232/422	270-2749-030
PC Relay Card		270-2630-060
Basic Control for RT-2200	CCS-2200	752-9803-041
Relay Interface Software	CCS-2200	752-9803-067