

# Publications and Training Solutions

## Course Syllabus: 523-0807800

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### **FOR TRAINING PURPOSE ONLY**

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**COURSE TITLE:** TALON VHF/UHF Advanced Radio Communication System  
Level I – Operation and Organizational Maintenance

**PREREQUISITES:** This course may require State Department approval.  
Students should be able to score 70 or better on the English Comprehension Level (ECL) Test. Students should have completed a two (2) year technical electronics school or equivalent. Students should have an avionics background in VHF/UHF radio frequency communications systems, with a working knowledge of semiconductor, digital, analog, and microprocessor circuitry including Self-Test functions.

**PURPOSE:** This course provides the training necessary to Data Load (using the DL-8171), Operate, and Perform Level I Organizational Maintenance on the Talon RT-8200 VHF/UHF Communication System (using the RCU-8150).  
The Talon Communication 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. Describe the Talon VHF/UHF Communication System, the Line Replaceable Unit (LRU) components that comprise the system, and the Inputs/Outputs, To/From each LRU (Interface Description).
2. Describe the Controls and Indicators associated with the RCU-8150 and explain their functions during Normal Operation.
3. Operate the Talon VHF/UHF Communication System in all Normal and Emergency Modes of Operation, including Have Quick and ECCM modes
4. Perform RT-8200 Data Loading using the DL-8171 Data Loader.
5. Perform Initiated Built-In Testing (IBIT), Performance Monitoring, and Troubleshooting/Fault Isolation to the LRU level (using the RCU-8150).
6. Perform Routine Maintenance Tasks.

**COURSE LENGTH:** 7 Days (48 Hours)

\*Based on Student Availability of 6 Hrs/Day

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#### TRAINING DEVICES:

1. Equipment (Line Replaceable Units (LRUs):
  - a. RT-8200 Receiver-Transmitter
  - b. RCU-8150 Remote Control Unit
2. Special Test Equipment:
  - a. DL-8171 Data Loader

#### TRAINING MATERIALS:

1. PowerPoint Presentation with LCD/Box Light projector
2. Student Guide – Flash drive (pdf) – Training Presentation  
Assignment Sheets  
Job Sheets  
Diagram Sheets  
Test Sheets
3. Instructor Guide

#### REFERENCES:

- |   |             |
|---|-------------|
| 1. Talon VHF/UHF RT-8200 with Have Quick Operator's Guide | 523-0790447 |
| 2. Data Loader System DL-8171 Instruction Book            | 523-0806156 |
| 3. Talon RT-8200( ) and RCU-815X( ) Instruction Book      | 523-0806735 |
| 4. DL-8171 Data Loader System ILT Course                  | 523-0807320 |

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## Course Syllabus: 523-0807800

### COURSE OUTLINE

#### **0. Welcome & Introductions**

- A. Course Overview
  - i. Welcome
  - ii. Student Registration
  - iii. Student Policies and Procedures
- B. Course Overview (Instructor)
  - i. Instructor and Student Introductions
  - ii. Course Description
  - iii. Course Objectives
  - iv. Course Outline
  - v. Course Material

#### **1. Overview of the Talon VHF/UHF Communication System**

- A. System Description
  - i. Purpose
  - ii. Equipment Supplied
  - iii. Key Operating Features
  - iv. Interface Description
  - v. Associated Equipment

#### **2. Talon VHF/UHF Radio Receiver-Transmitter Specifications & Installation**

- A. RT-8200 Overview
  - i. Description
  - ii. Equipment Specification
- B. Installation
  - i. Single System Interconnect
  - ii. Dual System Interconnect

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#### **3. Operation**

- A. Familiarization with RCU-8150 Controls and Indicators
- B. Normal Operation
  - i. Manual Operation
  - ii. Preset Channel Operation
  - iii. Scan Operation
  - iv. Maritime Operation
  - v. ADF Operation
  - vi. Emergency (Guard) Operation
  - vii. Air Traffic Control (ATC) Operation
  - viii. Zeroize Function
- C. Have Quick Operation
- D. Talon ECCM Operation
- E. Performance and Monitoring using Continuous Built-In Test (CBIT)

#### **4. DL-8171 Electronic Data Loading Procedure**

(Refer to the Syllabus for DL-8171 Data Loading Course, CPN 523-0807320)

- A. DL-8171 General Description
  - i. Purpose
  - ii. Capabilities and Characteristics
  - iii. Units Comprising the DL-8171 Data Loading System
  - iv. Principles of Operation
  - v. Controls, Indicators, and Connectors
- B. Data Load Operation (LAB)
  - i. Transfer Datafill Files to the Hand-Held Data Device (HDD)
  - ii. Datafill the Target Radio
  - iii. Operate Target Radio to Verify Correct Datafill Operation

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### 5. Maintenance of the VHF/UHF Communication System

- A. Performance Testing and Troubleshooting (using the RCU-8150)
  - i. Preliminary Test Setup
  - ii. Fault Isolation
  - iii. Initiated Built-In Test (IBIT)
  - iv. RCU-8150 Switch Testing
- B. Performing Routine Maintenance Tasks
  - i. Fuse Removal and Installation
  - ii. Holddown Hook Removal and Installation
  - iii. RCU Front Panel Knob Removal and Installation

### 6. Summary – Review - Critique

#### EQUIPMENT TYPE:

EQUIPMENT	NOMENCLATURE	PART NUMBER
Receiver-Transmitter	RT-8200	822-1774-001
Remote Control Unit	RCU-8150	822-1673-001
Line-of-Sight (LOS) Data Loader System	DL-8171	822-1715-002

