Publications and Training Solutions
Course Syllabus: 523-0807316

COURSE TITLE: HF-CPS MP (Mission Planning) Network Administrator

PREREQUISITES: Students should be familiar with the General Principles of HF Radio Theory and Operations.

PURPOSE: This course provides training to enable students to efficiently use the HF Communication Planning System (HF-CPS) software tool to create Master and Operational databases to include frequencies, Self-Addresses, Net-Addresses, Channels, and Scan Lists.

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

1. Demonstrate knowledge of ALE databases by correctly creating complete Master and Operational databases.
2. Demonstrate knowledge of database configuration and system parameters.
3. Output a Datafill file and load a Datafill file into the radio.

COURSE LENGTH: 5 Days

TRAINING DEVICES:

1. An IBM compatible personal computer (PC) in the Windows 95, Windows NT 4.0, or Windows XP operating environment
2. Special Test Equipment (as applicable)

TRAINING MATERIALS:

1. PowerPoint Presentation with LCD/Box Light projector
2. Student Guide – Flash drive (pdf) – Training Presentation
   Assignment Sheets
   Information Sheets

REFERENCES:

1. ALE Network Designer's Guide

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COURSE OUTLINE

0. **Welcome & Introductions**
    - A. Course Overview
        - i. Welcome
        - ii. Student Registration
1. **Chapter 1 – Course Overview**
    - A. Fundamentals of HF Propagation
    - B. Basic Automatic Link Establishment (ALE)
    - C. Network Designer's Guide
    - D. Maintenance
    - E. Review/Critique
2. **Chapter 2 – HF Propagation**
    - A. HF Characteristics
        - i. Ground Wave, Sky Wave, NVIS (Near Vertical Incidence Skywave)
        - ii. Ionosphere Layers
        - iii. Frequency Planning Tools
            1. PROPMAN
3. **Chapter 3 – Basic Automatic Link Establishment (ALE)**
    - A. Theory – the need for ALE
        - i. Configuration Parameters
        - ii. System Parameters
        - iii. Other Addresses
        - iv. Self-Addresses
        - v. Scan Lists
        - vi. Net-Addresses
        - vii. Channels

viii. Groups

ix. Messages

x. Time

xi. Date

xii. Scanning

xiii. Sounding

xiv. Link Quality Analysis (LQA)

4. Chapter 4 – Network Designer's Guide

A. Steps to Successful Network Design

B. Identifying the Stations and Networks

C. Propagation and Frequency Selection/Assignment

D. Net Calls and Slot Times

E. Interrelated User Programmable Parameter

F. Assigning ALE Addresses

G. Building Datafill Files

5. Chapter 5 – Building the Master and Operational Databases

A. Database Structure, Content, and Security

B. Lookup Tables

C. Frequencies and Frequency Designators

D. Addresses, Parameters, and Dictionary

E. Customization – Radios, Reports, Forms, Parameters, Users

F. Database Repair and Compacting

G. Outputting the Datafill File/Loading the Radio

H. Operating in ALE

6. **Chapter 6 – Final Exam / Exam Review**
7. **Chapter 7 – Summary – Review - Critique**

EQUIPMENT TYPE:

EQUIPMENT	NOMENCLATURE	PART NUMBER
Exportable Software CD_ROM	HF-CPS V4.4	984-1417-002
HF Propagation Prediction Software Program	PropMan 2000TM Version 2.0	984-3384-002