

# **ETA International Competency Requirements**

## **ASTRO® 25 7.x Network Manager – 2007**

The following is a listing of each topic considered necessary to be included in a course of study towards the education of technical managers performing network management of an ASTRO® 25 7.x system. There are 6 categories of training. This COMPETENCY listing is the syllabus, or identification of each individual subject, in which the technician must be knowledgeable and skilled.

Technician seeking the ETA ASTRO® 25 7.x Network Manager specialty are required to also have a basic education in fundamental electronics. That basic knowledge is assessed in the Associate CET examination. The Associate CET exam, plus the ASTRO® 25 7.x Network Manager and the WCM or USMSS wireless communications specialty examination go together to form the complete Journeyman CET exam.

## **ASTRO® 25 7.x NMR Competencies**

### **ASTRO® 25 System Overview**

- Purpose of the ASTRO 25 IV&D System.
- ASTRO 25 system features and capabilities.
- ASTRO 25 system subsystems and their respective functions.
- ASTRO 25 system and software tools.
- ASTRO 25 system compatible end-user devices.

### **ASTRO® 25 IV&D system management applications:**

- User Configuration Manager (UCM)
- System Profile
- Zone Watch
- Default Profile
- Zone Profile
- ATIA Log Viewer
- Zone Configuration Manager
- Affiliation Display
- Customer Service Software (CSS)
- RCM Basics
- Introduction to Router Manager
- Reports
- Introduction to FullVision

### **Upgrading to a ASTRO® 25 System**

- Foundational Principle
- Radio Frequency Subsystem
- Control Subsystem
- Audio Distribution Subsystem
- Transport Subsystem
- Management Subsystem

- Modulation Overview
  - Representation of Audio and DATA information
  - SECURENET Overview
  - Pulse Code Modulation Overview
  - ASTRO® Overview
  - Frequency Modulation
- Conventional Communications
  - Radio to radio
  - Repeater
  - Base Station/Console
  - Conventional System to
  - Trunking System Transition
- SMARTNET II Trunking Concepts
  - Call Processing
  - Features
  - Transition Principles
- Multiple Site Communication Principles
  - Terminology Issues
  - Conventional Multiple Site Systems
  - Voting Systems
  - Simulcast Systems
  - Trunking
  - Voting Systems
  - Simulcast Systems
- SmartZone System Principles
  - Concepts
  - Features
  - Control Path
  - Circuit-Switched-Based Audio Path
  - Network-Based Management System
- ASTRO® 25 System Principles
  - Concepts
  - Features
  - Packet Switch Based Control Path
  - Packet Switch Based Audio Path
  - Network-Based Management System
- Networking Fundamentals
  - Computer Insights Applied to Networking
  - Network Concepts and Hardware
  - Network Addressing
  - Basic Troubleshooting

## **Communications Networking**

- TCP/IP Basics
- Types of Protocols
- Addressing
- Microsoft Windows Client and Server
- Constructing a network
- Connecting Routers
- Troubleshooting

## **Motorola Communications Networking**

- Introduction to Motorola Systems
- Review of Basic Networking Concepts
- Networking in Motorola Systems
  - ASTRO SmartZone System 4.1
  - ASTRO 25 System 6.x / 7.x
- Advanced Networking Concepts
- Network Security Concepts
- T1 and Frame Relay
- Hands on access to the components used in Motorola Communications
- System networks
- Troubleshooting

## **ASTRO® 25 7.x Network Management**

- Planning
  - Factors that Impact Communications System Planning
  - Fleetmapping
- Configuration
  - Configuration Process and Tools
  - User Configuration Manager (UCM)
  - Zone Configuration Manager (ZCM)
  - Configuration Service Software (CSS)
- Operation and Optimization
  - Live Monitoring of the System
  - Report Generation
  - License Sharing
  - Performance Management