

Competency Requirements MOTOROLA® & ETA® International CENTRACOM Gold Elite Console System Technician (CCOM) 2011



The intent of this certification is to ensure technicians have the appropriate knowledge and skills necessary to install, maintain and repair a Centracom Gold Elite Console. **This certification is not part of the ASTRO® Series certifications.** Technicians seeking the ETA® CENTRACOM Console System Technician specialty are required to also have a basic education in fundamental electronics. That basic knowledge is assessed in the Associate CET examination.

Students must register with the certifying agency, ETA® International, prior to attempting this certification. Additional registration information may be found at: www.eta-i.org/motorola_certifications.html.

The certification is comprised of a written exam and a practical element with troubleshooting and procedural scenarios. Completion of the Centracom Gold Elite Workshop is required prior to attempting the certification. The written assessment can be conducted at the conclusion of the course or can be completed at a later time using an ETA® International certified proctor, such as a local library. Contact ETA® International for additional information regarding acceptable testing locations. **The practical exam is typically administered at a later date.**

Prior experience with a Centracom Gold Elite Console is strongly recommended as a prerequisite to the certification. The written exam is comprised of the following topics:

Hardware Theory	54%
Hardware Configuration	26%
Troubleshooting and Maintenance	14%
Programming	6%

The following is a listing of each topic considered necessary to be included in a course of study towards the education of technicians performing installation, maintenance and repair of a CENTRACOM Console System. There are 2 categories of training. This COMPETENCY listing is the syllabus, or identification of each individual subject, in which the technician must be knowledgeable and skilled.

CENTRACOM Console System Competencies:

1. Communication Systems Concepts

- 1.1. Two-Way Radio System Concepts, including Antennas, Towers, and Transmission Lines, Frequency and Spectrum, Range and Coverage, Radio Systems, System Enhancements
- 1.2. Motorola Model Numbering System
- 1.3. Requirements for Setting Up a "Basic Communications System"
- 1.4. Communication System Fundamentals
 - 1.4.1. Basic Simplex System Operation
 - 1.4.2. Half-Duplex (Repeater Systems)
 - 1.4.3. Simulcast Operation
 - 1.4.4. Voting Systems
 - 1.4.5. Compare the operation of conventional communication systems and trunking systems
 - 1.4.6. Smartnet Trunking
 - 1.4.7. Trunked Simulcast Systems
 - 1.4.8. SmartZone Systems
 - 1.4.9. Frequency Modulation, Securenet, and ASTRO® systems
- 1.5. Radio Frequency Path Fundamentals
 - 1.5.1. Decibel concepts
 - 1.5.2. Transmission line concepts
 - 1.5.3. Antenna System
 - 1.5.4. RF Propagation
 - 1.5.5. Radio Frequency Interference

2. CENTRACOM Console System

- 2.1. System Hardware
 - 2.1.1. Conventional Command and Acknowledgement
 - 2.1.2. Operator Position Hardware
- 2.2. Console Interface Electronics (CIE)
- 2.3. Elite Operator Positions
 - 2.3.1. Time Division Multiplexing Switching
 - 2.3.2. Central Electronics Bank (CEB)
- 2.4. Wiring
- 2.5. Power Supplies
- 2.6. Card Cage
- 2.7. CEB Boards
 - 2.7.1. Maintenance and Diagnostic
 - 2.7.2. Embassy Switch
- 2.8. Software and Programming
 - 2.8.1. Install CENTRACOM software
 - 2.8.2. Console Database Manager Application Program
 - 2.8.3. Alias Database Manager Application Program
 - 2.8.4. Motorola Upload Program Utility
 - 2.8.5. CENTRACOM Elite Admin Program
 - 2.8.6. CENTRACOM Elite Dispatch Program
- 2.9. Troubleshooting

End of Motorola® CENTRACOM Gold Elite Console System® Technician Competencies