



# PRODUCT AND SYSTEM TECHNICAL TRAINING COURSE CATALOG

**MOTOROLA SOLUTIONS - WORLDWIDE EDUCATION**





# WELCOME

Day in, and day out, governments and businesses around the world rely on effortless and reliable communication. Our customers call it their lifeline. To help businesses operate without interruption and to safeguard communities, workplaces, and ultimately, each one of us, we are determined to help keep the lifeline unbreakable.

With Motorola Solutions, Inc. Education Services, we help your two biggest lifeline investments - your personnel and your technology infrastructure - work together efficiently to maximize the value of your communication technologies.

Whether your organization is new to our latest innovations or has years of experience with us, our Education Services team helps expand your personnel's skills and knowledge for the full application of your technology investment.

Starting with professionally developed, real-world application and content, we always design your training with the learner in mind. Our experienced instructors average 20+ years in the communications industry and specialize in Motorola Solutions technologies and services. Immersive, hands-on experiences, expert lab environments, or online learning ensure we meet your learners with the right kind of learning at the right times.

Whether training is delivered virtually, at your location or in our state-of-the-art facilities, we can help ensure that your personnel know how to amplify your investment, maximize operational efficiency, and ensure an unbreakable lifeline.

We look forward to working with you.



**MOTOROLA**  
**SOLUTIONS**



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# GENERAL INFORMATION

## OUR LEARNING EXPERIENCE PORTAL

**AN INTERACTIVE PLATFORM... DESIGNED FOR YOU! THE LXP IS YOUR VALUABLE RESOURCE TO SEE THE LATEST COURSES, DESCRIPTIONS, REQUIREMENTS, DATES AND LOCATIONS.**

Use the search box and filters feature to quickly and easily search for training or documentation.

View your history and upcoming training on your personalized dashboard.

Receive reminder notifications of upcoming training or changes to your training.

Easily locate and download documents plus stay up-to-date with training news and announcements.



## GENERAL INFORMATION

For information on prerequisites and to register for courses visit the LXP at:  
**LEARNING.MOTOROLASOLUTIONS.COM**

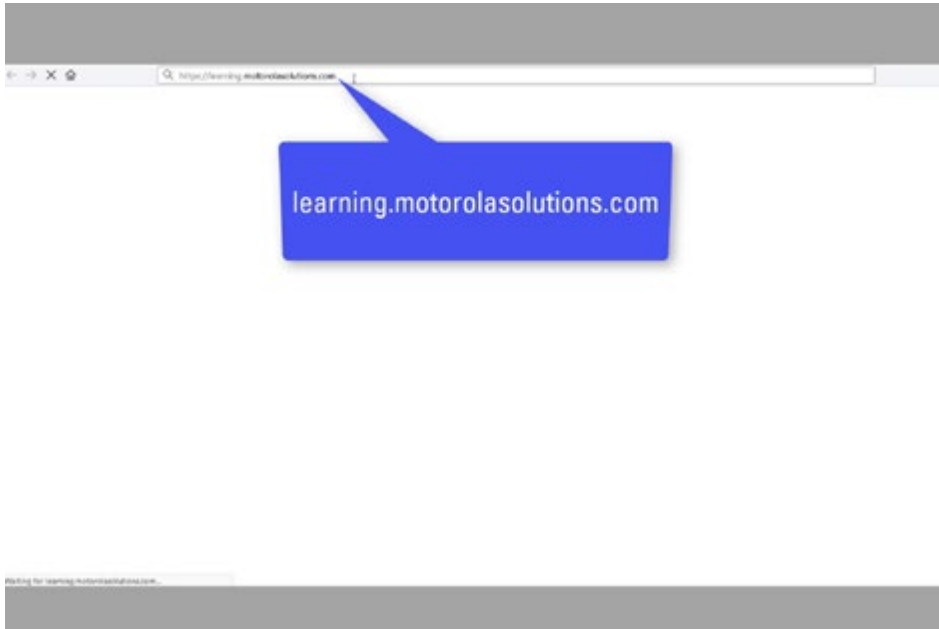
For general information contact the Latin America Education Services Help Desk at:  
**training.lacr@motorolasolutions.com**

## THE LEARNING EXPERIENCE PLATFORM (LXP)

The LXP is your valuable resource to see the latest courses, descriptions, requirements, dates and locations.

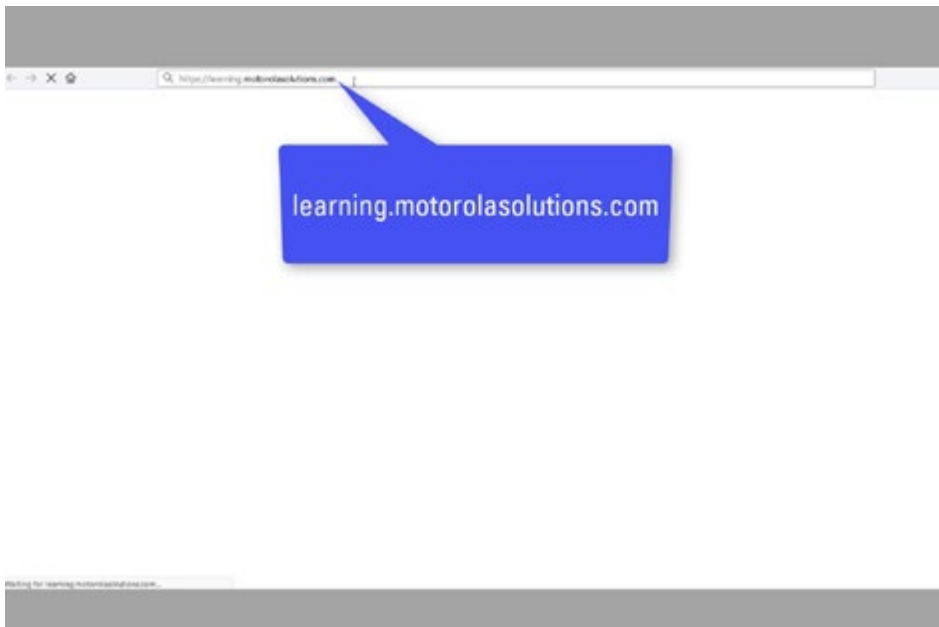
If you are a Motorola Solutions Customer who already has a Motorola Solutions Login ID, you can go to the “Enrol in a Course” section for further instructions.

### SET UP A NEW USER ACCOUNT AND PASSWORD



- Visit: <https://learning.motorolasolutions.com>
- Click “Register”
- Fill Out all the required information on the form (if you are a MSI Customer with an established 10-digit Motorola Customer Account Number, please enter your Company Name in the form)
- Click “Submit”
- You will receive a confirmation of your submission
- You will next receive further information to activate your account (Up to 5 business days)

### TO ENROLL IN A COURSE (ONCE YOU HAVE AN LXP ACCOUNT)



- Log in to the LXP: <https://learning.motorolasolutions.com>
- Click on “LOG IN”
- **Enter your Log In ID and Password and Click “LOG IN”**
- If you have forgotten your Log In or Password click on “Forgot Log In ID” or “Forgot Password”
- Find a training course by clicking “Browse Training” at the top of the screen Or use “Search Catalog” at the top of the screen

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# TRAINING OPTIONS

In this catalog you will find a wide range of learning initiatives; some of them have been developed to be completed at your own pace, and others are led by our Technical Instructors:

### LIVE TRAINING

It consists of scheduled live sessions, delivered either in class or in a virtual environment by our Technical instructors. Participants can immerse themselves in the subject; they receive substantial time for hands-on training that enables them to develop creating solutions for

unique problems. In both classes, the number of seats available is limited and advanced registration is required.

On-the-job training is also available, for those who prefer a more direct instruction.

### ONLINE TRAINING

Online self-paced learning allows your team to gain foundational knowledge on a variety of topics using their computer, at their own schedule.

Where to start? Our training roadmaps will let you know the starting point and milestones of your development, so you can make sure you acquire the right knowledge to make the most of each step of your learning process.



## UNDERSTANDING THE ICONS



**LIVE TRAINING**



**ONLINE TRAINING**



**EXAM**

## POLICIES AND REQUIREMENTS

### CANCELLATION AND RESCHEDULING BY THE STUDENT

Customer cancellation or rescheduling made less than 30 days prior to the class start date will be subject to the full course tuition.

### CANCELLATION AND RESCHEDULING BY MOTOROLA SOLUTIONS

Motorola Solutions reserves the right to change or cancel classes up to 10 business days prior to the class start date. You will be notified at that time of such change or cancellation.

### PROFESSIONALISM

Students are expected to maintain professional conduct and dress at all times. Class dress is casual, but smart. For safety and security reasons, we cannot permit shorts, thong type sandals, or tank tops in the classroom.

### LAPTOP REQUIREMENTS

Some of our classes may require students to bring their laptops to the classroom so that they may utilize an electronic copy of the class material. Please review your enrollment confirmation email for specific requirements for your class.

### TRAINING CONTENT AND STRATEGY DISCLAIMER

All of Motorola Solutions training classes are designed to support and align with the Motorola Solutions Service strategy for each product. This strategy may include a combination of (but not limited to) processes, procedures, recommendations, and instructor experiential advice which may involve repair, replacement, and or recovery of hardware, software, or firmware of Motorola Solutions products. The repair, replacement, or recovery of these products may vary from product to product. Motorola Solutions reserves the right to change the structure and content of all courses at any time.

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## EDUCATION BUNDLES: ACCELERATE YOUR LEARNING JOURNEY

Worldwide Education understands your challenging needs during uncertain times. Travel limitations, the continued safety of your first responders that serve and protect your citizens, and assurance there is zero training downtime is critical. To meet these challenges, we offer course bundles that combine a virtual learning experience with traditional, hands-on learning.

Watch [the video](#) to learn more about how you can accelerate your training today.



### THE TWO COMPONENTS OF OUR EDUCATION BUNDLES

The virtual component will focus on live discussions, application-based demonstrations, and various online activities using our virtual training hosted solutions and our lab environment.

The practical component will take place at either one of our facilities or, in case of buy-out sessions, at your location. This part of the training will focus on performing the tasks discussed in the virtual sessions. Once you have complete the two components, you will receive credit for the bundle and the equivalent traditional course.

Compared to our traditional full in-class offerings, you may be able to combine multiple practical components into one week or less. This will not only allow you to complete multiple courses (bundles) during that time, it will also help to reduce your overall travel costs and time investment.

### BENEFITS FOR YOU

- Live training sessions led by our subject-matter expert certified instructors accessible from your computer
- Practice through demos and guided virtual lab environment
- Active participation and interaction assured, by limiting the number of participants per group
- Reduction of travel expenses and time away from home

### READY TO GET STARTED?

[Find your courses](#) or email us at [training.lacr@motorolasolutions.com](mailto:training.lacr@motorolasolutions.com)

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# QUALITY ASSURANCE: THE TPMA FRAMEWORK

## MOTOROLA SOLUTIONS WORLDWIDE EDUCATION COMMITS TO EXCELLENCE IN INSTRUCTOR-LED TRAINING

For 45+ years, our instructors continue to be laser-focused on your two lifeline investments - your personnel and your technology infrastructure. Our mission is to work together efficiently to maximize the value of your communication technologies.

Motorola Solutions is aware of the impact training experiences have on your team and your organization. When it comes to supporting the success of your employees and your technology infrastructure, we seek to continually deliver exceptional training to you.

For over 10 years, we have built and implemented the Training Performance

Monitoring & Assessment (TPMA) framework in our organization. Our internal instructors are held to the highest level of training standards outlined within the Learning & Performance Institute (LPI). The TPMA certificate is widely-recognized and accepted as the premiere institute for learning, assessing and benchmarking trainer progress.

Anywhere in the world, those who hold a TPMA certificate demonstrate that they have reached or exceeded the highest standards demanded within the industry.

## WHY DO TPMA CERTIFICATIONS MATTER?

Adopting TPMA standards is essential to meet industry trends and leading industry best practices to meet user needs, enhance

instructor development and ultimately leads to a happy customer experience.

LPI ensures the quality of the instructors' training delivery is maintained and meets the highest quality standards, provides expert feedback on their performance and promotes the development of their facilitator skills.

Visit us at [learning.motorolasolutions.com](http://learning.motorolasolutions.com) to register for our training courses.

## ACHIEVING OPTIMAL PERFORMANCE MATTERS TO US

- We focus on the needs of the learner, not the trainer
- The personalized approach and structured consistency of standardized-requirements help win business

*"The instructor did an outstanding job. Truly a professional and extremely knowledgeable. Never rushed and always listened. Provided feedback to all questions and allowed students to participate at their own level of expertise and speed."*

*"The Instructor was extremely helpful during the training. He has an excellent way of teaching and was very attentive to the students when asked questions. I liked that he went over each and every field of CPS. Excellent Instructor! I would recommend to anyone!"*

*"The instructor showed outstanding skills to combine theory, practice, actual cases and hands-on training. Great training."*

*"Exceptional course, no words to explain the instructor's commitment and professionalism. Vast experience, humbleness, patience and amazing teaching skills. A different and positive class."*

*"Excellent coach. Direct, precise, detailed. Explain everything in the right way. Honestly, the best coach I have ever had. They do not skip anything, explain everything in detail. My knowledge after this training is much better. During the entire training, he was fully committed to us."*

*"The best teacher I have ever had in any previous training courses. Very challenging and interactive teaching helping me to understand the system from the bottom to top with a lot of additional slides from the teacher with extremely good and clear explanations in the system networking for deeper understanding."*

*"One of the best instructors I had. Speaks clearly, responsive to the students; actions and very good at making the students stay alert and attentive."*

*"Amazing training, very glad to join it. Amazing trainer, very vibrant, very knowledgeable trainer. Looking forward to more training with him. Good trainer from a good company."*



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[training.lacr@motorolasolutions.com](mailto:training.lacr@motorolasolutions.com)

# EDUCATION PACKAGES

Motorola Solutions Education Packages have been built by our technical education experts, to provide you a simpler way to select the right learning activities from our extensive training portfolio. These packages are all designed considering four vital aspects:

- Your Motorola Solutions Infrastructure & Devices
- The Level of Support provided by Motorola Solutions
- The tasks undertaken by your team, and
- The roles of the professionals in charge of those tasks

Behind these packages there are Education Services professionals whose aim is to fully prepare your team to achieve desired organizational efficiency and outcomes by ensuring that they have the knowledge, skill and competency needed to effectively interact with your Motorola Solutions technology investment.

If you wish to customize your Motorola Solutions training strategy, ask our Professional Education Services team to analyze your specific technical and end user training needs and gaps. Please work with your Motorola Solutions account representative to request this professional service.

Let Motorola Solutions Education Services help you ensure that your organization provides effortless and reliable communications, and keep your lifeline stronger than ever!

### ASTRO® INFRASTRUCTURE EDUCATION PACKAGES



#### COMPLEMENT EDUCATION PACKAGE

Prepare your team to operate your ASTRO® Solution, achieving optimal organizational efficiency.

##### TOPICS

System Overview, Upgrade Differences, MyView Portal, Device End User Best Practices, Dispatch End User Best Practices

#### SUPPLEMENT EDUCATION PACKAGE

Prepare your team to operate and administer your ASTRO® Solution, achieving optimal organizational efficiency.

##### TOPICS

System Overview, Administration, Secure Communications, Upgrade Differences, MyView Portal, Device End User Best Practices, Dispatch End User Best Practices

#### SUPPORT EDUCATION PACKAGE

Prepare your team to operate, administer, and maintain your ASTRO® Solution, achieving optimal organizational efficiency.

##### TOPICS

System Overview, Core, RF-Subsystems, Transport, Administration, Dispatch, Secure Communications, Security Patch Management, Device End User Best Practices, Dispatch End User Best Practices

### ASTRO® DEVICES EDUCATION PACKAGES



#### COMPLEMENT EDUCATION PACKAGE

Prepare your team to operate your APX™ devices.

##### TOPICS

Device Overview, My View Portal, Device End User Best Practices

#### SUPPLEMENT EDUCATION PACKAGE

Prepare your team to operate and administer your APX™ devices.

##### TOPICS

Device Overview, Programming and Radio Management, Device End User Best Practices

#### SUPPORT EDUCATION PACKAGE

Prepare your team to operate, administer, and maintain your APX™ devices.

##### TOPICS

Device Overview, Programming and Radio Management, Radio Maintenance, Device End User Best Practices

Talk with your Motorola Solutions contact for a quote, or email us at [training.lacr@motorolasolutions.com](mailto:training.lacr@motorolasolutions.com) for more information on how to sign your team up for one of our Education Services Packages.

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# SAMPLE PACKAGES



## ASTRO® INFRASTRUCTURE SUPPLEMENT EDUCATION PACKAGE

This Education Package aligns with the Infrastructure ADVANCED Services Package

ASTRO® 25 SYSTEM OVERVIEW

MY VIEW PORTAL OVERVIEW

ASTRO® FEATURES AND FUNCTIONALITY

ASTRO® 25 SYSTEM FLEETMAPPING

ASTRO® 25 IV&D RADIO SYSTEM ADMINISTRATOR

MCC 7000 SERIES MANAGEMENT

CONSOLE ADMINISTRATOR & DISPATCH END USER TRAINING

RADIO END USER TRAIN-THE-TRAINER

WAVE™ ADMINISTRATION & END USER

IMW OPERATIONS AND ADMINISTRATION

RADIO AUTHENTICATION

EXECUTIVE OVERVIEW

ASTRO® 25 IV&D SECURE COMMUNICATIONS



## APX DEVICE SUPPORT EDUCATION PACKAGE

This Education Package aligns with the APX Device ESSENTIAL Services Package

APX QUICK START

APX RADIO MANAGEMENT OVERVIEW

APX CPS PROGRAMMING & TEMPLATE BUILDING

APX RADIO MANAGEMENT WORKSHOP

APX TECHNICAL SUBSCRIBER ACADEMY

RADIO END USER TRAIN-THE-TRAINER

### LEGEND:

- Foundation
- Administration
- Maintenance
- Device & Console Best Practices
- Optional

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[training.lacr@motorolasolutions.com](mailto:training.lacr@motorolasolutions.com)

# HELPFUL INFORMATION

## FOR QUESTIONS AND ASSISTANCE

The **LXP Helpdesk** is available for you Monday – Friday from 8:00 am - 6:00 pm (U.S. EST) on the phone numbers listed on the table below. Attention is available in Spanish, Portuguese and English.

You may also email our LXP Helpdesk at:  
[training.lacr@motorolasolutions.com](mailto:training.lacr@motorolasolutions.com)

## HOW TO MAKE PAYMENTS WHEN ENROLLING IN A COURSE

### HOW TO MAKE PAYMENTS WHEN REGISTERING

For your convenience we accept the following methods of payment:

- Credit Card
- Bank Transfer

Prepayment is required to secure your registration and it must be received by Motorola Solutions 30 days prior to your attendance.

Contact the Help Desk above for assistance with payments and P.O. specifications.  
All pricing listed is US dollars.

## CONTACT MOTOROLA SOLUTIONS LATIN AMERICA

<b>ARGENTINA</b>	0800-333-3708
<b>BRAZIL</b>	0800-892-4264
<b>CHILE</b>	123-0020-2126
<b>COLOMBIA</b>	01-800-710-2285
<b>COSTA RICA</b>	0800-013-1450
<b>MEXICO</b>	001-855-241-8253
<b>PANAMA</b>	001-800-205-3867
<b>PERU</b>	0800-55760
<b>VENEZUELA</b>	0800-100-9332

For assistance you can also dial one of the following direct phone lines according to your language of preference:

## LEARNING HELPDESK PHONE NUMBERS

<b>SPANISH</b>	DID 3127255372
<b>PORTUGUESE</b>	DID 3127255373
<b>CARIBBEAN</b>	DID 3127255368

For assistance specific for partner accounts please contact us at: [partners.lacr@motorolasolutions.com](mailto:partners.lacr@motorolasolutions.com)



# OPERATOR TRAINING

**THE SUCCESSFUL  
IMPLEMENTATION OF YOUR  
COMMUNICATIONS SYSTEM  
DEPENDS ON ITS CONFIDENT  
USERS.**

Users of your mobile and portable radios require training on their units to understand its basic operation, features and functions.

Dispatchers of your consoles require training to understand basic operation, features and functions; management personnel require training on the Motorola Solutions applications.



## TRAIN THE TRAINER

With this option, Motorola Solutions trains people you have identified as qualified instructors so that they in turn can train each individual user in your organisation. These classes are typically done on site using your equipment. The interactive End-user toolkit (iEUTK) and/or tailored end user materials can be utilised.

### AUDIENCE

This course is geared for customers who have an experienced, dedicated training staff in their organisation. This course concentrates on specific product features and how it relates to the training process.

### COURSE OVERVIEW

This course provides the customer's identified training personnel knowledge and practice applying training techniques that will enable them to successfully train their students. Trainers will use simulation, facilitation and hands-on activities to facilitate learning events supported by tailored training materials and job aides. Students will become proficient in discussing common tasks associated with the operation of the customer's radios and consoles as identified by the customer's needs analysis.

Note: This course is presented as customer specific and will cover pertinent information on customer equipment.

### REQUISITE KNOWLEDGE

Previous training experience and radio system knowledge is a must.

### TO REQUEST FIELD TRAINING, PLEASE CONTACT YOUR ACCOUNT MANAGER.

**Note: The interactive End-user toolkit (iEUTK) is not sold as a standalone product but included with our instructor-led, Train The Trainer or Operator Training.**

## OPERATOR TRAINING

With this option, the users within your organisation are trained by a Motorola Solutions instructor. These classes are typically done on site using your equipment. The interactive End-user toolkit (iEUTK) and/or tailored end user materials support this training option.

### CONSOLES TRAINING

These courses provide operators and supervisors with an introduction to the basic operation, administration and feature functionality of the Console Systems. Through facilitation and hands-on practice, users learn to perform tasks that are associated with their organisation's particular system.

- Overview of console configuration
- Console dispatcher and supervisor operation
- Alias Management
- Messaging

### SUBSCRIBER TRAINING

These courses provide radio users with an introduction to their radios, a review of their radio's basic functionality by means of job aides tailored to exactly how they use their radios. Through facilitation and hands-on practice, users learn to perform common tasks associated with their radio configuration.

- Overview of radio configuration
- General radio operations

## COURSES FOR CONSOLE PRODUCTS

- MCC 7000 Series Dispatch Console Administrator Training
- MCC 7000 Series Dispatch Console Operator Training
- MCD 5000 Operator Training

## COURSES FOR MOBILES & PORTABLES

- MTP/MTM Series
- APX™ Series
- MOTOTRBO™ Series

# FOUNDATIONAL COURSES

<b>BASIC RF</b> (RDS0002)	<b>17</b>
<b>BASIC RADIO</b> (RDS0004)	<b>17</b>
<b>BASIC NETWORKING</b> (RDS0003)	<b>17</b>
<b>RF FOR RADIO PROFESSIONALS</b> (RDS2012)	<b>18</b>
<b>SPECTRUM FREQUENCIES SYSTEMS</b> (RDS1037)	<b>18</b>
<b>COMMUNICATION SYSTEMS CONCEPTS</b> (NST021)	<b>18</b>
<b>NETWORKING ESSENTIALS IN MOTOROLA SOLUTIONS COMMUNICATIONS EQUIPMENT</b> (NST762)	<b>19</b>
<b>SITE INSTALLATION PRACTICES WORKSHOP</b> (NST925)	<b>19</b>
<b>BRIDGING THE KNOWLEDGE GAP FOR ASTRO® 25 – TECHNICIAN</b> (ACT100E)	<b>19</b>
<b>BRIDGING THE KNOWLEDGE GAP FOR ASTRO® 25 – SYSTEM ADMINISTRATOR</b> (ACT101E)	<b>20</b>
<b>ASTRO® 25 SYSTEMS APPLIED NETWORKING</b> (NWT003)	<b>20</b>
<b>MOTOTRBO™ SYSTEMS APPLIED NETWORKING</b> (PCT2007)	<b>20</b>



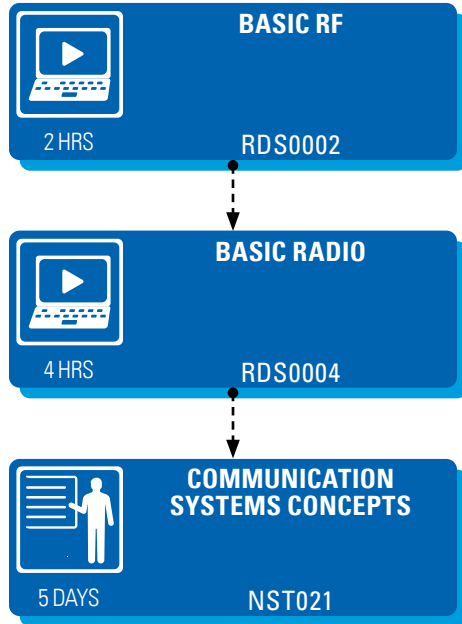
# RADIO SOLUTIONS FOUNDATIONAL

For information on prerequisites and to register for courses visit the LXP at: [LEARNING.MOTOROLASOLUTIONS.COM](http://LEARNING.MOTOROLASOLUTIONS.COM)

For general information contact the Latin America Education Services Help Desk at: [training.lacr@motorolasolutions.com](mailto:training.lacr@motorolasolutions.com)

## RF FUNDAMENTALS

### RF BASICS / RADIO SYSTEM BASICS



**CURRICULUM COMPLETE**

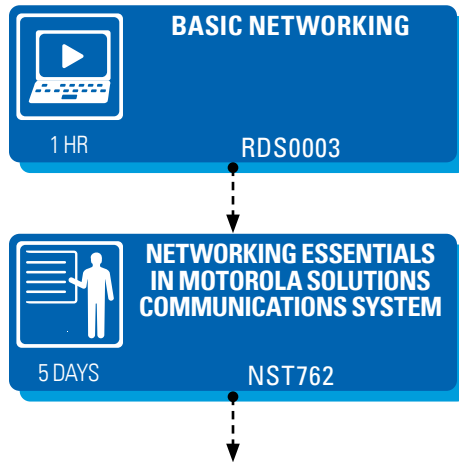
PARTICIPANT HAS RF KNOWLEDGE REQUIRED FOR ADVANCING TO MORE COMPLEX TECHNICAL TRAINING COURSES.

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## IP/NETWORKING FUNDAMENTALS



CHOOSE ONE OF THE FOLLOWING COURSES BELOW ACCORDING TO YOUR SOLUTION SYSTEM



### ASTRO® 25 SYSTEM



ASTRO® 25 SYSTEMS  
APPLIED NETWORKING

5 DAYS

NWT003

### MOTOTRBO™ SYSTEM



MOTOTRBO™ SYSTEMS  
APPLIED NETWORKING

4 DAYS

PCT2007

### CURRICULUM COMPLETE

PARTICIPANT HAS IP PROTOCOLS AND NETWORKING SKILLS TO USE MOTOROLA SOLUTIONS SYSTEMS REQUIRING  
ADVANCED TECHNICAL TRAINING.



[CLICK HERE TO GO TO  
PAGE 21 FOR MORE  
DETAILS ON ASTRO® 25](#)

[CLICK HERE TO GO TO  
PAGE 54 FOR MORE  
DETAILS ON MOTOTRBO™](#)



## RADIO SOLUTIONS FOUNDATIONAL

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**BASIC RF**  
2 HRS RDS0002

### COURSE OVERVIEW

This course emphasizes the concepts behind RF Systems theory and operation. Topics include basic radio transmitters and receivers, RF propagation, modulation, antenna systems, transmission lines and data-communications.

### TARGET AUDIENCE

Technical staff who need to understand communication systems concepts.

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe electrical principles, including direct and alternating current.
- Describe the basic structure of radio transmitters and receivers.
- Describe the operation of the antenna system.
- Identify different types of transmission media.
- Describe RF propagation and understand system gains in a link budget.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None

**BASIC RADIO**  
4 HRS RDS0004

### COURSE OVERVIEW

The purpose of this course is to provide the student with the basic, foundational land mobile two-way radio knowledge required when working with Motorola Solutions. This course is ideal for all people who sell or service land mobile two-way radios and it was especially designed to meet the needs of the MR Channel and Motorola Solutions employees.

### TARGET AUDIENCE

Individuals who need a foundational overview of two-way radios.

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- Define what a two-way radio is.
- Describe two-way radio components.
- Describe communication types.
- List and describe ways of expanding coverage.
- Describe analog and digital solutions.
- Describe how transmit and receive processes work in conventional and trunked two-way radio.
- Define system scalability.
- Identify the considerations to implementing a two-way radio.
- List the characteristics of single-site, single-zone and multi-zone systems.
- Explain the concept of two-way radio security.
- Describe the open standards for the following technologies: APCO P25, TETRA and DMR.

### REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- RDS0002 Basic RF

### PREREQUISITES

None

**BASIC NETWORKING**  
1 HR RDS0003

### COURSE OVERVIEW

This course provides a detailed description of the fundamentals of system networking. Topics include the OSI seven layer model, bridges and switches, IP and routing, applications and security.

### TARGET AUDIENCE

Engineers who need to understand the essentials of system networking.

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- Identify the elements and interconnectivity of a basic network
- Define the OSI and TCP/IP Models
- Define the advantages of different Network Layout Options
- List the Physical and Data-Link Layers of the OSI and TCP/IP Models
- Define the Network and Transport Layers of the OSI and TCP/IP Models
- Identify the Service Layers within the OSI and TCP/IP Model
- Define the concept of Network Security.
- Identify standards organizations

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None

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**RF FOR RADIO PROFESSIONALS**

3 HRS RDS2012

### COURSE OVERVIEW

This course emphasizes the concepts behind RF Systems theory and operation. Topics include basic radio transmitters and receivers, RF propagation, modulation, antenna systems, transmission lines and data-communications.

### TARGET AUDIENCE

Technical staff, who need to understand Communication Systems Concepts including basic radio, RF propagation, modulation, antenna systems, transmission lines and data-communications.

### COURSE OBJECTIVES

By the end of the course, you will be able to:

- Describe basic circuit-related phenomena and elements
- Describe the filtering process and types of RF filters
- Describe and compare digital modulation schemes
- List common frequency spectrum bands and describe their common uses
- Describe the transmission line theory
- Provide the rules for cable selection, routing and installation
- List advanced RF hardware filters, and provide their descriptions
- Discuss RF performance issues
- List and describe transmitter performance parameters
- List and describe receiver performance parameters
- List and describe common test equipment
- Describe the RF troubleshooting process

### REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- RDS0002 RF Basics

### PREREQUISITES

None



**SPECTRUM FREQUENCIES SYSTEMS**

5 DAYS RDS1037

### COURSE OVERVIEW

This course shows the students the functioning and adjustment of Combiners, Duplexers and Antennas. In addition to amplifiers operating theories and Top Multi couplers, reception systems sensitivity, Spectrum Analyzer. It will also be shown how to build up the major types of RF connectors.

### TARGET AUDIENCE

Maintenance Technicians/Engineers

### COURSE OBJECTIVES

On completion of this course delegates will be able to:

- Set combiners and duplexers
- Know what type of antenna to use for the system
- Adjust the receiving system in relation to noise and signal to manufacture the connectors properly

### REQUISITE KNOWLEDGE

Knowledge on basic electronic concepts

### PREREQUISITES

None



**COMMUNICATION SYSTEMS CONCEPTS**

5 DAYS NST021

### COURSE OVERVIEW

This course emphasizes the concepts behind RF Systems theory and operation. Major topics covered include:

- RF System Operation, including talkaround, repeater operation, and types of signaling used in RF Systems
- A basic walkthrough of building a communication system from Simplex, to Half Duplex, Voting Systems, and Simulcast is done, emphasizing the improvements in communication obtained with each step.
- Trunking Operation, including Smartzone operation
- Types of modulation used in RF System operation, including ASTRO®
- Radio frequency path including the antenna and transmission line
- Decibels and their uses on the job
- RF Propagation/RF Interference
- Basic Troubleshooting practices from the system perspective

### TARGET AUDIENCE

Individuals who are interested in the operational concepts driving modern communication systems.

### COURSE OBJECTIVES

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

- Define terms commonly used in two-way communication systems
- Effectively use two-way radio communication systems knowledge to troubleshoot typical two-way communication radio systems
- Develop requirements for a two-way radio system by establishing programming and protocol requirements as requested
- Improve skills in the interpretation of typical two-way radio checks of the receiver, transmitter and the antenna system to troubleshoot a two-way radio communication system
- Use decibels to interpret the radio frequency path and antenna system to describe expected radio communication system performance and troubleshooting

### REQUISITE KNOWLEDGE

- Knowledge of basic electronics
- Experience using standard communication test equipment

### PREREQUISITES

None

## RADIO SOLUTIONS FOUNDATIONAL

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**NETWORKING ESSENTIALS  
IN MOTOROLA SOLUTIONS  
COMMUNICATIONS  
EQUIPMENT**

5 DAYS NST762

### COURSE OVERVIEW

The Networking Essentials in Motorola Solutions Communications Equipment course provides the technician with the essential elements of networking required for the installation and maintenance of most Motorola Solutions communications systems. The course includes ample hands-on and basic troubleshooting on network elements.

### TARGET AUDIENCE

System Technicians

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- Recall basic network terminology
- Compare basic configuration types, both logical and physical
- Describe the basic OSI (Open System Interconnect) model compared with the TCP/IP model
- Construct a basic LAN with a Windows Server Domain Controller and workstations
- Examine the interaction between the routers through their configurations
- Use common network commands to simulate traffic and validate connectivity and routing

### REQUISITE KNOWLEDGE

- An understanding of basic Motorola Communications Systems
- Basic familiarization with computer operating systems
- Completion of Basic Networking course (RDS0003) or equivalent experience

### PREREQUISITES

None



**SITE INSTALLATION  
PRACTICES WORKSHOP  
(R56)**

4 DAYS NST925

### COURSE OVERVIEW

The Site Installation Practices Workshop (R56) course is designed to present the standards and guidelines for installing a Motorola Solutions communication system. Participants will understand how a properly installed system can help to ensure a safe and efficient communications system, reducing system down time.

### TARGET AUDIENCE

Technicians who need an introduction to the R56 processes.

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- List the purposes of grounding and evaluate their importance in terms of personal safety and effective system installation and protection
- Apply principles of basic electronics to the installation standards found in the R56 manual
- Determine how an effectively installed ground system provides protection for a communication system from a lightning strike or electrical anomalies
- List the minimum requirements and specifications for the external and internal ground system
- List the minimum requirements and specifications for installation equipment, cables and documentation for a reliable communication system installation
- Investigate sources for possible solutions to various installation scenarios

### REQUISITE KNOWLEDGE

Graduate of a basic electronics course

### PREREQUISITES

None



**BRIDGING THE KNOWLEDGE  
GAP FOR ASTRO® 25 –  
TECHNICIAN**

4 HRS ACT100E

### COURSE OVERVIEW

This course is designed to bring Technicians from different technical backgrounds and experience levels to a common starting point for the ASTRO® 25 curriculum. This course provides information from the basic concepts of radio communication systems and computer networking features, through the evolution that led to the ASTRO® 25 trunking system's architecture.

### TARGET AUDIENCE

This course is intended for System Technicians, and other ASTRO® 25 system users who are new to trunked radio systems. Also those with experience in non-IP-based radio systems like SmartNet and SmartZone.

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- Explain the different radio system concepts as applied to conventional and trunked systems
- Compare analog radio communication signaling to ASTRO® 25 radio communications signaling
- Identify different communication concepts using representative block diagrams of the respective systems
- Compare radio system communication concepts using representative block diagrams of the respective systems
- Compare how voice and data, information flow through different radio communication system types and how the signaling information controls that flow of information
- Describe the features of each radio communication system in terms of advantages and disadvantages

### REQUISITE KNOWLEDGE

None


### PREREQUISITES

None

## RADIO SOLUTIONS FOUNDATIONAL

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**BRIDGING THE KNOWLEDGE GAP FOR ASTRO® 25 – SYSTEM ADMINISTRATOR**

4 HRS      ACT101E

### COURSE OVERVIEW

This course is designed to bring Administrators from different technical backgrounds and experience levels to a common starting point for the ASTRO® 25 curriculum. This course provides five modules from the basic concepts of radio communication systems and computer networking features, through the evolution that led to the ASTRO® 25 trunking system's architecture.

### TARGET AUDIENCE

System Administrators who are new to trunked radio systems. Also those with experience in non-IP-based radio systems like SmartNet and SmartZone.

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- Identify different communication concepts using representative block diagrams of the respective systems
- Compare radio system communication concepts using representative block diagrams of the respective systems
- Compare how voice and data information flows through different radio communication system types, and how the signaling information controls that flow of information
- Describe the features of each radio communication system in terms of advantages and disadvantages
- Explain the Trunked Radio System Concepts

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**ASTRO® 25 SYSTEMS APPLIED NETWORKING**

5 DAYS      NWT003

### COURSE OVERVIEW

The ASTRO® 25 Systems Applied Networking course provides technicians with the necessary networking information required for understanding the network components installed in modern Motorola communications systems. The course includes familiarization with basic networking concepts, and the networking components deployed in the ASTRO® 25 System.

### TARGET AUDIENCE

Technical System Managers and Technicians

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- Define basic IP network concepts, hardware and protocols.
- Describe the LAN topologies for the ASTRO® 25 system.
- Describe the WAN topologies for the ASTRO® 25 system.
- Identify the current and legacy network components such as switches and routers.
- Perform backup, restore, and recovery procedures of routers and LAN switches.
- Analyze basic IP network connectivity and addressing.
- Define ASTRO® 25 Master Site VLAN/VRRP operation.
- Define ASTRO® 25 Network Transport Subsystem.
- Describe the various ASTRO® 25 Network Management applications.
- Identify network security components and concepts in an ASTRO® 25 system.
- Diagram SNMP deployment throughout the system.


### REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- NST762 Networking Essentials in Motorola Communications Systems

### PREREQUISITES

None



**MOTOTRBO™ SYSTEMS APPLIED NETWORKING**

4 DAYS      PCT2007

### COURSE OVERVIEW

The MOTOTRBO™ Systems Applied Networking provides technicians with the necessary information required for understanding the typical networking requirements for implementing a variety of MOTOTRBO™ solutions. The course includes familiarization/review of basic networking concepts and MOTOTRBO™-specific networking requirements. This course will focus on specific configurations for IP Site Connect, Linked Capacity Plus, and Connect Plus trunking systems.

### TARGET AUDIENCE

Technical System Managers and Technicians

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- Recall Basic Networking Concepts
- Identify recommended network components for MOTOTRBO™ systems
- Define LAN/WAN topologies for MOTOTRBO™ systems
- Perform backup, restore and recovery of recommended network components
- Identify network security concepts for MOTOTRBO™ systems

### REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- NST762 Networking Essentials in Motorola Solutions Communications Equipment

### PREREQUISITES

None

# ASTRO® 25 IV&D SYSTEM COURSES

<b>ASTRO® 25 IV&amp;D SYSTEM OVERVIEW</b> (AST1038)	<b>27</b>
<b>ASTRO® 25 IV&amp;D RADIO SYSTEM ADMINISTRATOR WORKSHOP</b> (AST4102)	<b>27</b>
<b>ASTRO® 25 IV&amp;D WITH M CORE WORKSHOP</b> (AST4103)	<b>27</b>
<b>ASTRO® 25 IV&amp;D M CORE SYSTEM OVERVIEW</b> (AST1067)	<b>28</b>
<b>ASTRO® 25 IV&amp;D SECURE COMMUNICATIONS WORKSHOP</b> (AST4207)	<b>28</b>
<b>ASTRO® 25 IV&amp;D GTR 8000 REPEATER SITE WORKSHOP</b> (AST4208)	<b>28</b>
<b>STANDALONE GTR8000 CONVENTIONAL BASE RADIO</b> (AST2006)	<b>29</b>
<b>ASTRO® 25 IV&amp;D CONVENTIONAL CORE WITH CONFIGURATION MANAGER WORKSHOP</b> (AST4410)	<b>29</b>
<b>ASTRO® 25 IV&amp;D CONVENTIONAL RF SITE WORKSHOP</b> (AST4440)	<b>29</b>
<b>ASTRO® 25 IV&amp;D DYNAMIC SYSTEM RESILIENCE</b> (ACS715023)	<b>30</b>
<b>ASTRO® 25 SYSTEMS FLEETMAPPING</b> (RDS1017)	<b>30</b>
<b>INTRODUCTION TO KVL 5000</b> (AST0067)	<b>30</b>
<b>NEW FEATURES FOR ASTRO® 25 RELEASE 7.17</b> (AST1068)	<b>31</b>
<b>NEW FEATURES FOR ASTRO® 25 RELEASE 7.17.2</b> (AST0058)	<b>31</b>
<b>NEW FEATURES FOR ASTRO® 25 RELEASE 7.17.3</b> (AST0061)	<b>31</b>
<b>NEW FEATURES FOR ASTRO® 25 2019.2</b> (AST0081)	<b>32</b>
<b>ASTRO® 25 IV&amp;D INTRODUCTION TO RADIO SYSTEM MANAGEMENT APPLICATIONS</b> (AST1074)	<b>32</b>

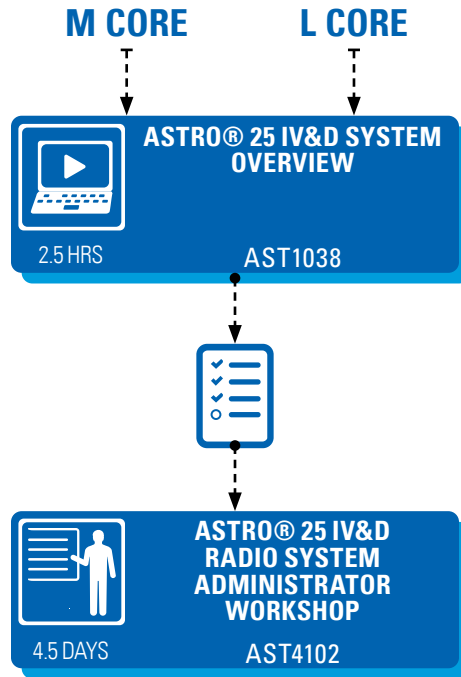


# RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

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## ASTRO® 25 IV&D RADIO SYSTEM ADMINISTRATOR



### RECOMMENDED CURRICULUM IS COMPLETE



PARTICIPANT SHOULD BE ABLE TO CARRY OUT ADMINISTRATIVE TASKS IN THE ASTRO® 25 IV&D SYSTEM SUCH AS: PROVISIONING SUBSCRIBERS AND TALK GROUPS, GENERATING HISTORICAL REPORTS, CONTROLLING DEPLOYED SUBSCRIBERS AND MANAGING NETWORK ELEMENT CONFIGURATIONS. PARTICIPANT UNDERSTANDS FACTORS OF SYSTEM CONFIGURATION THAT IMPACT ASTRO® 25 SYSTEM MANAGEMENT.

### OPTIONAL TRAINING ROADMAP

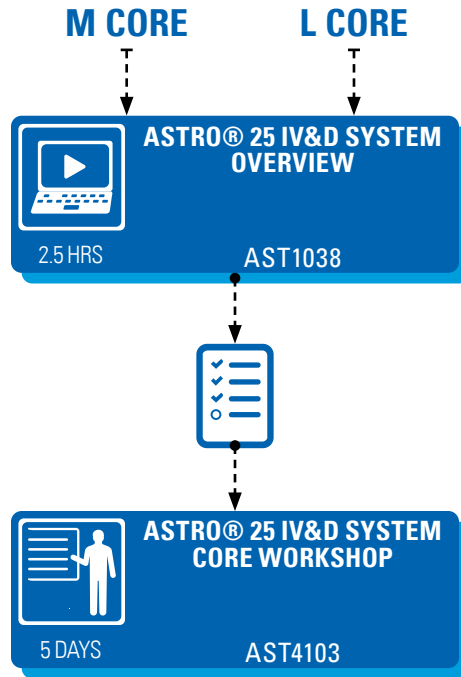
OPTIONAL TRAINING ROADMAP AVAILABLE.  
CLICK ON THIS LINK TO GO TO PAGE 26  
FOR ADDITIONAL DETAILS.

# RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

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## ASTRO® 25 IV&D M/L CORE TECHNICIAN



### RECOMMENDED CURRICULUM IS COMPLETE



PARTICIPANT SHOULD UNDERSTAND ASTRO® 25 M CORE COMPONENTS, VIRTUAL SERVERS AND SERVICE STRATEGY. PARTICIPANT CAN INTERPRET SYSTEM ALARMS, PROPOSE SOLUTIONS FOR SYSTEM FAILURES, AND AS WELL AS RESTORING EQUIPMENT TO PROPER FUNCTIONALITY.

### OPTIONAL TRAINING ROADMAP

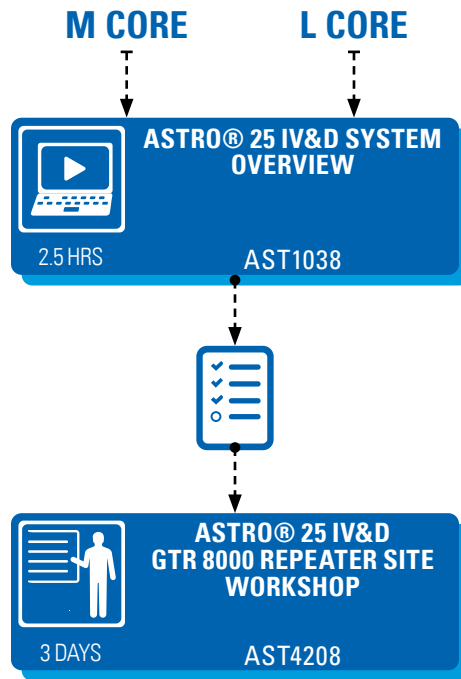
OPTIONAL TRAINING ROADMAP AVAILABLE.  
CLICK ON THIS LINK TO GO TO PAGE 26  
FOR ADDITIONAL DETAILS.

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### ASTRO® 25 IV&D REPEATER SITE TECHNICIAN (GTR)



#### RECOMMENDED CURRICULUM IS COMPLETE



PARTICIPANT CAN MAINTAIN AN ASTRO® 25 REPEATER SITE INCLUDING: GTR8000 BASE STATION, GCP8000 SITE CONTROLLER AND OTHER SITE EQUIPMENT.  
\*PARTICIPANT PERFORMS ALIGNMENTS TROUBLESHOOTING AND FIELD REPLACEMENT OF SITE DEVICES DURING COURSE.

#### OPTIONAL TRAINING ROADMAP

OPTIONAL TRAINING ROADMAP AVAILABLE.  
CLICK ON THIS LINK TO GO TO PAGE 26  
FOR ADDITIONAL DETAILS.

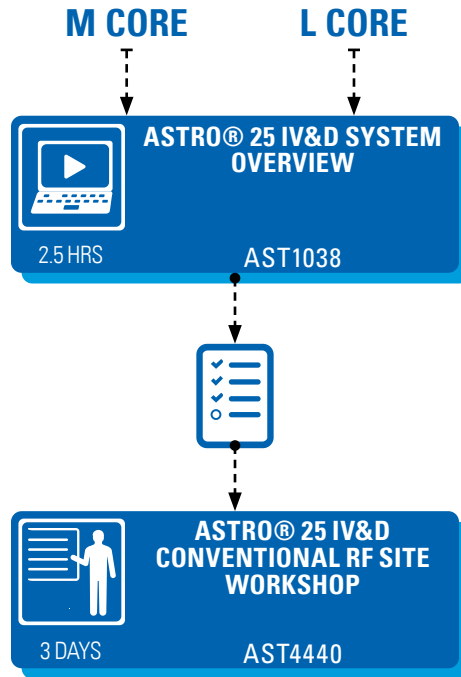


# RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

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## ASTRO® 25 IV&D CONVENTIONAL RF SITE TECHNICIAN



### RECOMMENDED CURRICULUM IS COMPLETE



PARTICIPANT SHOULD BE ABLE TO MAINTAIN AN ASTRO® 25 REPEATER SITE INCLUDING THE GTR8000 BASE STATION, GCP8000 SITE CONTROLLER, SITE COMPARATOR AND OTHER SITE EQUIPMENT.

### OPTIONAL TRAINING ROADMAP

OPTIONAL TRAINING ROADMAP AVAILABLE.  
CLICK ON THIS LINK TO GO TO PAGE 26  
FOR ADDITIONAL DETAILS.

## RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS



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### ASTRO® IV&D OPTIONAL TRAINING CURRICULUM

Motorola Solutions offers optional training for those participants who have completed their ASTRO® 25 curriculum and want to learn more about their system's infrastructure and/or features.

**Select the training course below applicable to your system.**

 <p><b>ASTRO® 25 IV&amp;D DYNAMIC SYSTEM RESILIENCE</b></p> <p>2 HRS      ACS715023</p>	 <p><b>ASTRO® 25 IV&amp;D SYSTEMS FLEETMAPPING</b></p> <p>5 DAYS      RDS1017</p>
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### SUBSCRIBER OPTIONAL TRAINING CURRICULUM

 <p><b>APX™ CPS PROGRAMMING AND TEMPLATE BUILDING</b></p> <p>2 DAYS      APX7001V</p>	 <p><b>APX™ TECHNICAL SUBSCRIBER ACADEMY</b></p> <p>5 DAYS      APX010</p>
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## RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

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**ASTRO® 25 IV&D SYSTEM OVERVIEW**  
2.5 HRS  
AST1038

### COURSE OVERVIEW

The ASTRO® 25 IV&D System Overview course will provide participants with knowledge and understanding of the ASTRO® 25 IV&D system. This course will address M, L and K Core systems. System architecture, components and features will be explained. In addition, RF and console sites and their architecture, features and components will be discussed. Finally, call processing for voice and mobile data applications will be covered, and an introduction to applications available in the ASTRO® 25 system will be provided.

### TARGET AUDIENCE

Core Technicians, Site Technicians, Console Technicians, Core Managers.

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- Understand the general architecture of an ASTRO® 25 IV&D Radio System
- Understand key features of available in the ASTRO® 25 IV&D Radio System
- Understand the components of the ASTRO® 25 Zone Core
- Understand site components in the ASTRO® 25 system
- Understand the features, capabilities and components of the MCC7000 series dispatch consoles
- Understand concepts of Mobility and Call Processing in the ASTRO® 25
- Understand the applications for managing the ASTRO® 25 system

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**ASTRO® 25 IV&D RADIO SYSTEM ADMINISTRATOR WORKSHOP**  
5 DAYS  
AST4102

### COURSE OVERVIEW

This workshop covers administrator functions for an ASTRO® 25 Integrated Voice and Data (IV&D) System. Learning activities in this course focus on how to use the different ASTRO® 25 IV&D System Management applications. Participants will be provided with an opportunity to discuss how to structure their organization and personnel for optimal ASTRO® 25 IV&D system use.

### TARGET AUDIENCE

System Administrators, Technical System Administrators, System Technicians, and other Application Users.

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe the relationship between radio programming, console administration and system management, and the impact of this relationship on system planning.
- List the network management tools applicable at each phase of the system life cycle.
- Identify the advantages and disadvantages of options available for the configuration of system infrastructure and user parameters.
- Use the report and real-time data to monitor performance and make adjustments necessary to maintain acceptable system performance levels.

### REQUISITE KNOWLEDGE

Completion of the following courses or equivalent experience:

- AST1038 ASTRO® 25 IV&D System Overview
- ACT101E Bridging the Knowledge Gap – System Administrators
- NST762 Networking Essentials in Communication Equipment
- NWT003 ASTRO® 25 Applied Networking

### PREREQUISITES

None



**ASTRO® 25 IV&D SYSTEM CORE WORKSHOP**  
5 DAYS  
AST4103

### COURSE OVERVIEW

The ASTRO® 25 IV&D with ASTRO® 25 System Core course teaches advanced troubleshooting skills and best practices for the Trunked Large Systems. The course also focuses on gathering and analyzing system information to implement appropriate action(s) that return a system to full operational status.

### TARGET AUDIENCE

ASTRO® 25 System Core Master Site Technicians

### COURSE OBJECTIVES

After completing this course, the participant will be able to:

- Describe the ASTRO® 25 System architecture.
- Identify the functional and radio subsystems that comprise the ASTRO® 25 System.
- Explain and discuss call flow and data flow through Large System Core devices and their subsystems.
- Perform recommended routine maintenance procedures for the ASTRO® 25 Large System Core.
- Utilize the troubleshooting tools to diagnose a fault and restore the Large System Core to the level of the Motorola-supported service strategy.

### REQUISITE KNOWLEDGE

Completion of the following courses or equivalent experience:

- Bridging the Knowledge Gap (ACT100E or ACT101E)
- Networking Essentials in Communication Equipment (NST762)
- ASTRO® 25 Systems Applied Networking (NWT003)
- ASTRO® 25 IV&D System Overview (AST1038)

### PREREQUISITES

None

# RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

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**ASTRO® 25 IV&D  
M CORE SYSTEM  
OVERVIEW**

1 DAY      AST1067

## COURSE OVERVIEW

The course provides a general description of the architecture, functions and components of an ASTRO version 7.15 trunking system.

## TARGET AUDIENCE

System administrators, technical system administrators, system technicians, field service technicians.

## COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe architectures with M-core, functions and components.
- Describe remote sites and their components.
- Describe types of information and routes used for control, voice and data.
- Describe the servers and databases used in an ASTRO 25 system with core M.

## REQUISITE KNOWLEDGE

None

## PREREQUISITES

None



**ASTRO® 25 IV&D  
SECURE COMMUNICATIONS  
WORKSHOP**

5 DAYS      AST4207

## COURSE OVERVIEW

This workshop describes planning, installation, configuration, operations, and troubleshooting of Secure Communications within the ASTRO® 25 IV&D System.

## TARGET AUDIENCE

System Technicians, System Administrators, Technical System Managers

## COURSE OBJECTIVES

After completing this course, the student will be able to:

- Plan, organize, and implement Secure Communications in an ASTRO® 25 IV&D system.
- Install and configure a Key Management Facility (KMF) system and related components.
- Demonstrate centralized key management using Over-the-Air-Rekeying (OTAR).
- Perform System Administrator functions using the KMF server and KMF client.
- Troubleshoot installation and configuration problems for the KMF server, KMF client, and KMF database.

## REQUISITE KNOWLEDGE

Completion of the following courses or equivalent experience:

- ACT100E Bridging the Knowledge Gap - Technicians
- NST762 Networking Essentials in Communication Equipment

## PREREQUISITES

None



**ASTRO® 25 IV&D  
GTR 8000 REPEATER SITE  
WORKSHOP**

3 DAYS      AST4208

## COURSE OVERVIEW

This workshop describes the components in the ASTRO® 25 IV&D System Repeater Site with GTR 8000 expandable site subsystem. This course also presents how the GTR 8000 expandable site subsystem operates and explains the tools and methods available for troubleshooting components within the subsystem.

## TARGET AUDIENCE

GTR 8000 Site Technicians

## COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe the ASTRO® 25 IV&D Repeater Site with GTR 8000 Expandable Site Subsystem configurations and components.
- Identify the GCP 8000 Site Controller functions and configuration requirements.
- Describe the connections and interfaces to the GCP 8000.
- Diagnose and troubleshoot the GCP 8000.
- Describe the functionality of the GTR 8000 Expandable Site Subsystem.
- Configure and troubleshoot the ASTRO® 25 Repeater Site with GTR 8000 Expandable Site Subsystem.
- Configure and troubleshoot the Network Transport subsystem.

## REQUISITE KNOWLEDGE

Completion of the following courses or equivalent experience:

- AST1038 ASTRO® 25 IV&D System Overview
- ACT100E Bridging the Knowledge Gap - Technicians
- NST762 Networking Essentials in Communication Equipment
- NWT003 ASTRO®25 Applied Networking

## PREREQUISITES

None

# RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

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**STANDALONE GTR8000  
CONVENTIONAL BASE  
RADIO**

2 DAYS      AST2006

## COURSE OVERVIEW

This course is designed to give the participants the ability to align, troubleshoot and repair the Standalone GTR8000 Base Station/Repeater to Motorola Solutions recommended service levels. Emphasis is placed on the use of Configuration Service Software (CSS) and its role in configuration, maintenance, diagnostics, alignments, and optimization of the Standalone GTR8000 Base Radio/ Repeater.

## TARGET AUDIENCE

Maintenance Technicians

## COURSE OBJECTIVES

By the end of the course, you will be able to:

- Understand basic concepts of the various radio systems supported by the GTR8000 Conventional Base Radio
- Identify the equipment modules of the GTR8000 Conventional Base Radio
- Operate and perform routine maintenance on the GTR8000 Conventional Base Radio
- Understand basic operational theory of GTR8000 Conventional Base Radio components
- Configure the GTR8000 Conventional Base Radio using Configuration Service Software (CSS)
- Identify the different backplane connections on the GTR8000 Conventional Base Radio
- Perform calibration and alignment adjustments for the GTR8000 Conventional Base Radio
- Troubleshoot problems and identify/replace faulty modules in the GTR8000 Conventional Base Radio

## REQUISITE KNOWLEDGE

General RF Knowledge and Skills Basic Knowledge of Two-Way Radio systems

## PREREQUISITES

None



**ASTRO® 25 IV&D  
CONVENTIONAL CORE  
WITH CONFIGURATION  
MANAGER WORKSHOP**

3 DAYS      AST4410

## COURSE OVERVIEW

The ASTRO® 25 IV&D Conventional Core with Configuration Manager course teaches advanced troubleshooting skills and best practices for the ASTRO® 25 IV&D Conventional Core with Configuration Manager. It also focuses on administrator functions and how to use the ASTRO® 25 IV&D Configuration Manager applications. A technical introduction to the MCC 7500 as used within the ASTRO® 25 IV&D Conventional Core with Configuration Manager, including some administrator functions, is also provided. Learning activities focus on gathering and analyzing system information to implement the appropriate actions that return a system to full operational status.

## TARGET AUDIENCE

Master Site Technicians, System Administrators, Technical System Administrators, System Technicians, and other Application Users

## COURSE OBJECTIVES

After completing the course the participant will be able to:

- Understand the key physical and functional characteristics of the ASTRO® 25 Conventional Core with Configuration Manager system.
- Perform tasks necessary to install the ASTRO® 25 Conventional Core with Configuration Manager system components.
- Perform configuration steps for the ASTRO® 25 Conventional Core with Configuration Manager system components.
- Understand the available maintenance tools and indicators in the ASTRO® 25 Conventional Core with Configuration Manager system.

## REQUISITE KNOWLEDGE

Completion of the following courses or equivalent experience:

- ACT101E Bridging the Knowledge Gap – System Administrators
- NST762 Networking Essentials in Motorola Communications Equipment
- NWT003 ASTRO® 25 System Applied Networking
- AST1038 ASTRO® 25 IV&D System Overview

## PREREQUISITES

None



**ASTRO® 25 IV&D  
CONVENTIONAL RF SITE  
WORKSHOP**

3 DAYS      AST4440

## COURSE OVERVIEW

The ASTRO® 25 IV&D Conventional RF Site workshop describes the components in the different ASTRO® 25 IV&D Conventional RF Sites topologies. This course also presents how the different ASTRO® 25 IV&D Conventional RF Sites topologies operate and explains the tools and methods available for troubleshooting components within the different ASTRO® 25 IV&D Conventional RF Sites topologies.

## TARGET AUDIENCE

Site Technicians

## COURSE OBJECTIVES

After completing the course the participant will be able to:

- Understand key physical and functional characteristics of conventional site.
- Perform tasks necessary to install conventional site components.
- Perform configuration steps for conventional site components.
- Understand available maintenance tools and indicators in conventional site.

## REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- ACT101E Bridging the Knowledge Gap – System Administrators
- NST762 Networking Essentials in Motorola Communications Equipment
- NWT003 ASTRO® 25 System Applied Networking
- AST1038 ASTRO® 25 IV&D System Overview

## PREREQUISITES

None

## RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

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**ASTRO® 25 IV&D  
DYNAMIC SYSTEM  
RESILIENCE**

2 HRS      ACS715023

### COURSE OVERVIEW

The ASTRO® 25 IV&D Dynamic System Resilience (DSR) Overview is a self-study training course intended to provide a technical overview of DSR. The course describes how DSR adds a geographically separate backup for the Master Site to protect against a catastrophic failure.

### TARGET AUDIENCE

System Administrators, System Technicians, Field Technicians

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- Differentiate between a non-DSR Master Site and a DSR Master Site
- Describe the DSR components, operation and functionality of each of the following services:
  - Voice
  - Data
  - Network Management
  - Network Transport
  - IP Services

### REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- AST1038 ASTRO® 25 IV&D System Overview

### PREREQUISITES

None



**ASTRO® 25 IV&D  
SYSTEMS FLEETMAPPING**

5 DAYS      RDS1017

### COURSE OVERVIEW

This workshop addresses topics necessary for the effective planning and mapping of an ASTRO® 25 IV&D radio system. During this course, the participants will learn about ASTRO® 25 features, capabilities, and restrictions in order to effectively plan and prepare for a new or upgraded ASTRO® 25 system.

### TARGET AUDIENCE

Pre-sale customers, new system managers, system planning personnel

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- Discuss what a fleetmap is and why one is needed.
- Discuss the methodologies used to configure radio users and groups with the goal of optimizing the system resources.
- Describe the content to assist with fleetmapping decisions.
- Discuss frequency band plan organization and management.
- Describe basic planning requirements and complete a simple Fleetmap information template.
- Complete worksheets required to create a Fleetmap based on sample operational requirement information.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**INTRODUCTION TO  
KVL 5000**

1 DAY      AST0067

### COURSE OVERVIEW

The purpose of this training is to provide an introduction to the Key Variable Loader 5000. The course covers procedures which help participants familiarize themselves with the device and guide them through its configuration process. Participants will learn about features of KVL 5000, managing of encryption keys, loading keys into target device, configuring target devices using KVL 5000, sharing keys between KVLs, using KVL in an OTAR system, and managing log records.

### TARGET AUDIENCE

Technical Support Staff responsible for managing secure devices.

### COURSE OBJECTIVES

At the end of this course, you will be able to:

- Perform initial configuration of the KVL 5000
- Manage encryption keys in the KVL 5000
- Load keys and key groups into target devices
- View or remove keys from target devices
- Share keys between KVLs
- Configure and use the KVL 5000 in an OTAR system
- Manage key records

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None

# RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

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**NEW FEATURES FOR  
ASTRO® 25 RELEASE 7.17**

2 HRS      AST1068

## COURSE OVERVIEW

This presentation is to be customized by MSI field teams and/or key customer account personnel to their specific customer so that they may deliver New Features for ASTRO® 25 Release 7.17 training to their customer prior to receiving an upgrade to ASTRO® 25 Release 7.17, which includes upgrade support from Release 7.15 and 7.16. The intent of New Features for ASTRO® 25 Release 7.17 training is to:

- Educate system operators on added, changed, and removed features of the new system release.
- Highlight operational deltas to allow customers to plan within their organization and prepare for the changes to help ensure a smooth operational transition during upgrades.

## TARGET AUDIENCE

Primary Audience; ASTRO® 25 Customers Secondary Audience; Field Engineering; Customer Support Managers (CSMs); Key Customer Account Personnel The secondary audience will be able to utilize the presentation materials to deliver New Features for ASTRO® 25 Release 7.17 training to their specific customers who will be upgrading to A7.17.

## COURSE OBJECTIVES

At the end of this course, you should be able to:

- Identify changes as a result of the upgrade early to more easily manage the changes.
- Identify operational procedures that will go away as a result of the upgrade.
- Identify operational procedures that will change as a result of the upgrade.
- Identify new operational procedures that will be available as a result of the upgrade.

## REQUISITE KNOWLEDGE

None

## PREREQUISITES

None



**NEW FEATURES FOR  
ASTRO® 25 RELEASE 7.17.2**

2 HRS      AST0058

## COURSE OVERVIEW

This course describes the new features and feature enhancements introduced in the ASTRO® 25 7.17.2 system release. Optional features are introduced along with standard enhancements in this release.

## TARGET AUDIENCE

ASTRO® 25 Customers

## COURSE OBJECTIVES

At the end of this course, you should be able to:

- Identify changes as a result of the upgrade early to more easily manage the changes,
- Identify operational procedures that will go away as a result of the upgrade,
- Identify operational procedures that will change as a result of the upgrade,
- Identify new operational procedures that will be available as a result of the upgrade.

## REQUISITE KNOWLEDGE

None

## PREREQUISITES

None



**NEW FEATURES FOR  
ASTRO® 25 RELEASE 7.17.3**

2 HRS      AST0061

## COURSE OVERVIEW

This course describes the new features and feature enhancements introduced in the ASTRO® 25 7.17.3 system release. Optional features are introduced along with standard enhancements in this release.

## TARGET AUDIENCE

ASTRO® 25 Customers

## COURSE OBJECTIVES

At the end of this course, you should be able to:

- Identify changes as a result of the upgrade early to more easily manage the changes.
- Identify operational procedures that will go away as a result of the upgrade.
- Identify operational procedures that will change as a result of the upgrade.
- Identify new operational procedures that will be available as a result of the upgrade.

## REQUISITE KNOWLEDGE

None

## PREREQUISITES

None

## RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

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**NEW FEATURES FOR  
ASTRO® 25 2019.2**

2 HRS      AST0081

### COURSE OVERVIEW

This course describes the new features and feature enhancements introduced in the ASTRO® 25 2019.2 system release. Optional features are introduced along with standard enhancements in this release.

### TARGET AUDIENCE

Technical Support Staff who need to get an awareness of the new features of the ASTRO® 25 Release 2019.2.

### COURSE OBJECTIVES

At the end of this course, you should be able to:

- Identify and describe ASTRO® 25 2019.2 new features and their system dependencies.
- Identify changes as a result of the upgrade early to more easily manage the changes.
- Identify operational procedures that will go away as a result of the upgrade.
- Identify operational procedures that will change as a result of the upgrade.
- Identify new operational procedures that will be available as a result of the upgrade.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**ASTRO® 25 IV&D  
INTRODUCTION TO RADIO  
SYSTEM MANAGEMENT  
APPLICATIONS**

1 DAY      AST1074

### COURSE OVERVIEW

This course provides a high-level overview of the Motorola Radio System Management applications through recorded demonstrations of common system tasks.

### TARGET AUDIENCE

System Managers, Technical System Managers, System Technicians, and other Application Users

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe the purpose of Network Management applications used in an ASTRO system.
- Identify high-level capabilities of those Network Administrator applications.
- Familiarize with common operations allowed by those Network Administrator applications.

### REQUISITE KNOWLEDGE

Completion of the following courses or equivalent experience:

- ACT100E Bridging the Knowledge Gap - Technicians
- AST1038 ASTRO® 25 IV&D System Overview
- AST4103 ASTRO® 25 IV&D System Core Workshop

### PREREQUISITES

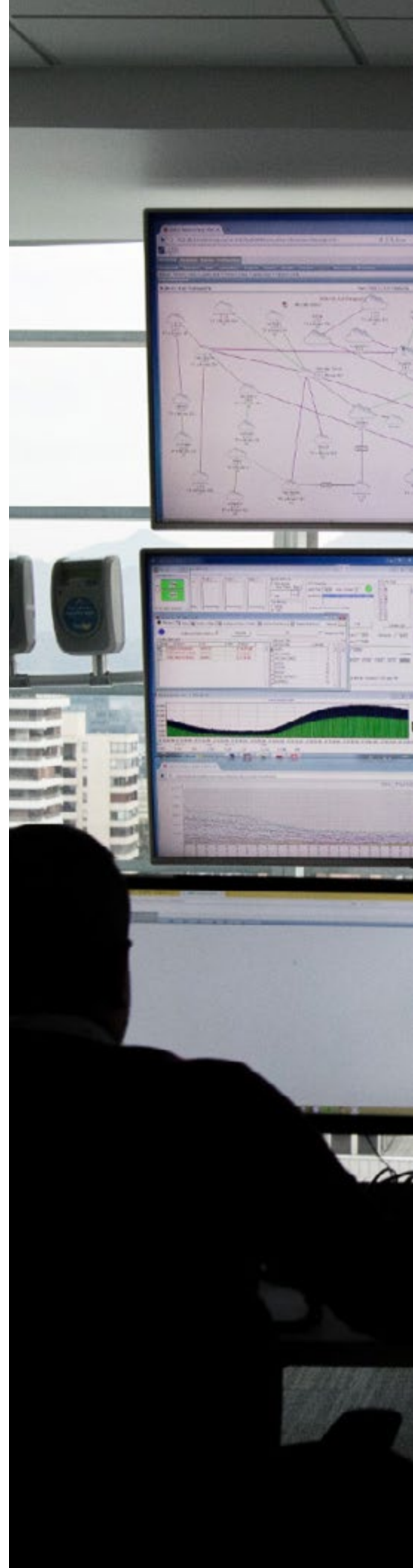
None



# DIMETRA SYSTEMS COURSES

DIMETRA SYSTEM TRAINING IS ALSO AVAILABLE IN PREVIOUS RELEASES, PLEASE CONTACT MOTOROLA SOLUTIONS FOR MORE INFORMATION.

<b>DIMETRA X CORE D9.1 SYSTEM OVERVIEW</b> (DMT9100)	<b>39</b>
<b>DIMETRA X CORE D9.1 CONFIGURATION AND ADMINISTRATION WORKSHOP</b> (DMT9101)	<b>39</b>
<b>DIMETRA X CORE D9.1 FAULT MANAGEMENT WORKSHOP</b> (DMT9102)	<b>39</b>
<b>DIMETRA X CORE D9.1 PERFORMANCE MANAGEMENT WORKSHOP</b> (DMT9103)	<b>40</b>
<b>DIMETRA X CORE D9.1 TROUBLESHOOTING AND MAINTENANCE WORKSHOP</b> (DMT9104)	<b>40</b>
<b>DIMETRA X CORE D9.1 AIR INTERFACE ENCRYPTION, AUTHENTICATION, AND PROVISIONING</b> (DMT9105)	<b>40</b>
<b>DIMETRA X CORE SECURE COMMUNICATIONS WORKSHOP</b> (DMT1094)	<b>41</b>
<b>DIMETRA X CORE D9.1 NETWORK SECURITY</b> (DMT9106)	<b>41</b>
<b>DIMETRA X CORE D9.1 DISPATCH COMMUNICATIONS SERVER WORKSHOP</b> (DMT9107)	<b>41</b>
<b>DIMETRA X CORE D9.1 MSO RESTORATION TRAINING</b> (DMT9108)	<b>42</b>
<b>DIMETRA EXPRESS INSTALLATION, CONFIGURATION AND MAINTENANCE WORKSHOP</b> (DMT0036)	<b>42</b>
<b>DIMETRA EXPRESS REDUNDANT SYSTEM DESIGN, INSTALLATION, CONFIGURATION, AND MAINTENANCE</b> (DMT0038)	<b>42</b>

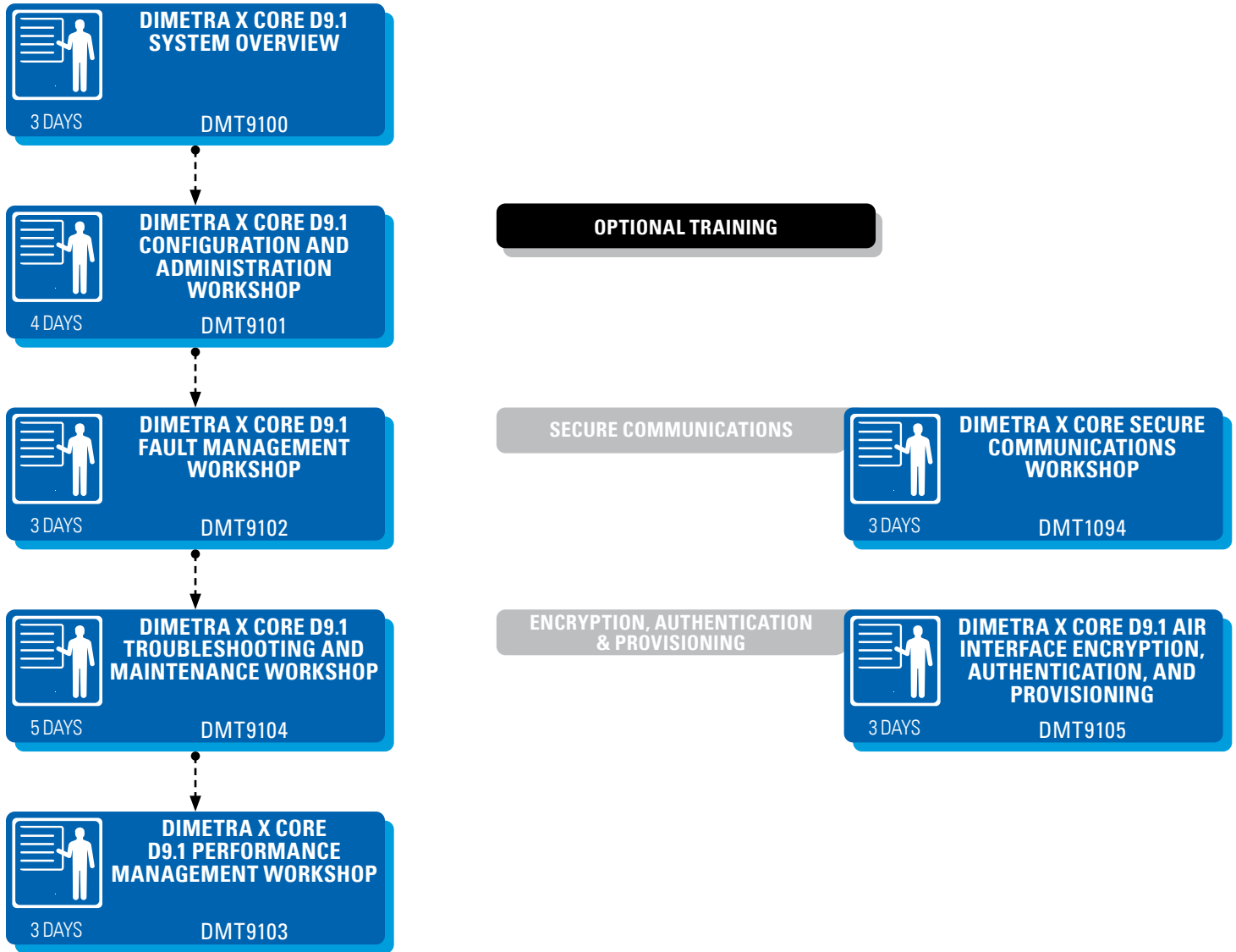


# RADIO SOLUTIONS DIMETRA SYSTEMS

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## DIMETRA MSO SYSTEM ENGINEER

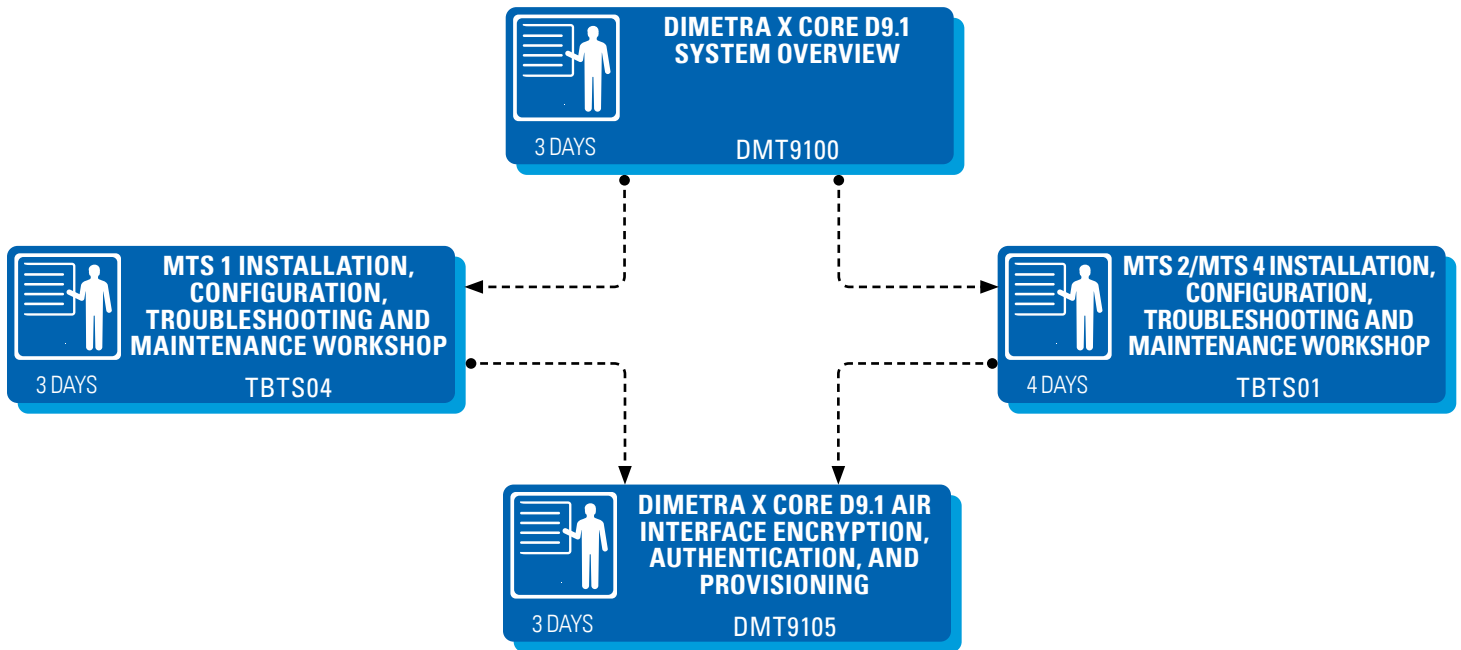


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## DIMETRA FIELD ENGINEER

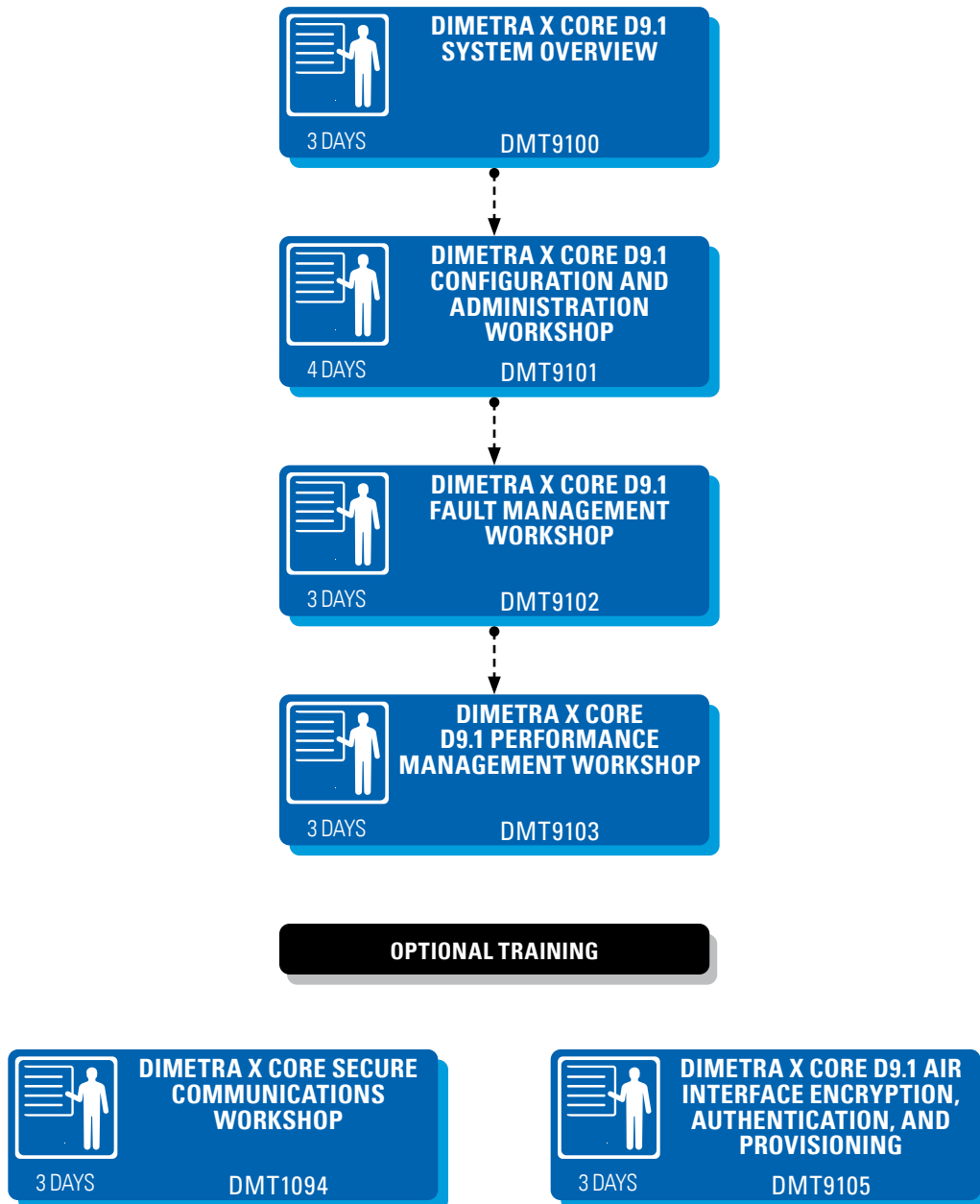


# RADIO SOLUTIONS DIMETRA SYSTEMS

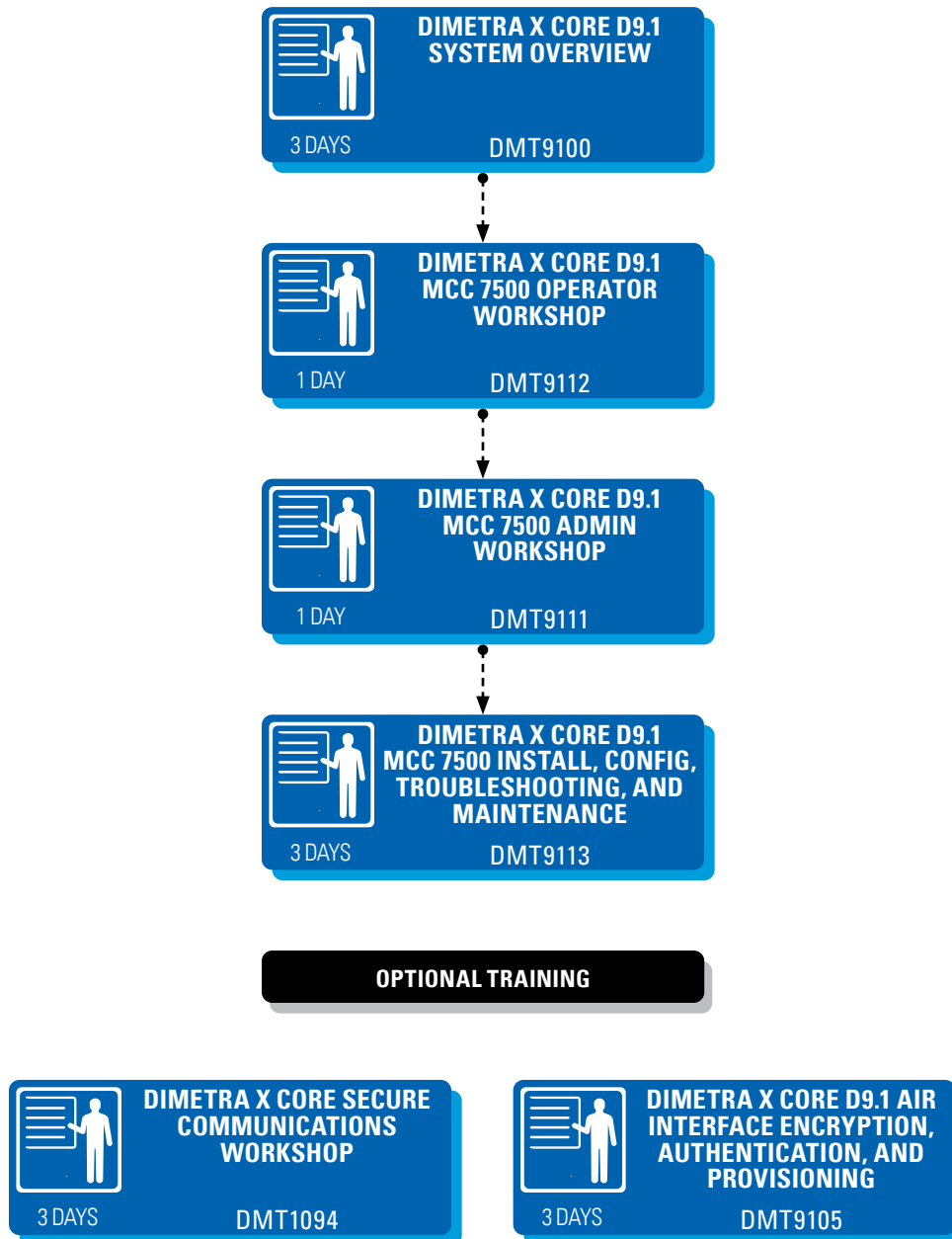
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## DIMETRA SYSTEM ADMINISTRATOR



## DIMETRA DISPATCH ADMINISTRATOR

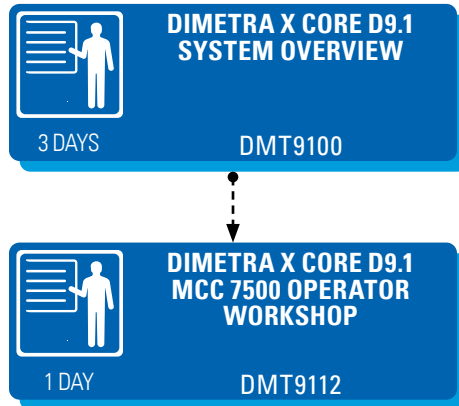


## RADIO SOLUTIONS DIMETRA SYSTEMS

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## DIMETRA DISPATCH OPERATOR



## RADIO SOLUTIONS DIMETRA SYSTEMS

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**DIMETRA X CORE D9.1  
SYSTEM OVERVIEW**

3 DAYS DMT9100

### COURSE OVERVIEW

This course provides an overview of the features and functions of a DIMETRA X Core system. The course includes descriptions of the various call types and system hardware functionality. Applications overview describes the purpose of the software used to manage and administer the system.

### TARGET AUDIENCE

All staff who require an overview of the DIMETRA X Core system functionality and features.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Describe Basic Radio concepts.
- Describe DIMETRA X Core benefits.
- Describe DIMETRA X Core features and their benefits.
- Describe DIMETRA X Core Single Zone system components and their functionality.
- Describe the purpose and function of DIMETRA X Core Network Management applications.
- Describe DIMETRA X Core Multi-Zone system components and their functionality.
- Describe DIMETRA X Core Inter-System Interface functionality.
- Describe how different types of calls are processed through a DIMETRA X Core system.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**DIMETRA X CORE D9.1  
CONFIGURATION AND  
ADMINISTRATION  
WORKSHOP**

4 DAYS DMT9101

### COURSE OVERVIEW

During this workshop delegates will use configuration and administration applications to manage a DIMETRA X Core system as they would on a daily basis. The delegates will perform configuration set up procedures for the more popular features and functions as well as common administration tasks, based on real business scenarios.

### TARGET AUDIENCE

System managers responsible for configuration and administration of a DIMETRA X Core system.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Describe the purpose of Configuration Management and Server Administration within your DIMETRA X Core system.
- Describe fleetmapping and home zone map function.
- Perform configuration procedures using UCM.
- Perform configuration procedures using ZCM.
- Perform configuration procedures using RCM.
- Perform Network Management Server Administration tasks.
- Explain the importance of daily operational tasks.
- Perform server database administration tasks.

Completion of the following course(s) or equivalent experience:

- DMT9100 DIMETRA X Core D9.1 System Overview

### PREREQUISITES

None



**DIMETRA X CORE D9.1  
FAULT MANAGEMENT  
WORKSHOP**

3 DAYS DMT9102

### COURSE OVERVIEW

The workshop will allow delegates to use applications to identify faults on systems components using a live DIMETRA X Core system and within the context of business scenarios.

### TARGET AUDIENCE

System operations staff and field engineers who perform fault management tasks on a DIMETRA X Core system.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Define the role of Fault Management within Network Management.
- Define the role of each of the applications used within Fault Management.
- Utilise the Unified Event Manger (UEM) application to assist Fault Management within the DIMETRA X Core system.
- Use the Transport Network Device Manager (TNDM) to assist Fault Management.
- Use the Zone Configuration Manager application to perform diagnostic functions within the DIMETRA X Core system.
- Use the Zone Watch application to assist Fault Management within the DIMETRA X Core system.
- Identify file backup procedures.

### REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- DMT9100 DIMETRA X Core D9.1 System Overview

### PREREQUISITES

None

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**DIMETRA X CORE  
D9.1 PERFORMANCE  
MANAGEMENT WORKSHOP**

3 DAYS                      DMT9103

### COURSE OVERVIEW

During this workshop delegates will use applications on a live DIMETRA X Core system using business scenarios. Using these applications delegates will learn how to interpret system and user performance based on call traffic and device statistics.

### TARGET AUDIENCE

System operators and managers who monitor and collect system statistics on a DIMETRA X Core system.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Describe the factors that affect system performance.
- Describe the Performance Management Analysis process.
- List the Performance Management applications used in a DIMETRA X Core system.
- Describe the purpose of system reports, system usage applications and device statistics in Performance Management activities.
- Access and navigate DIMETRA X Core Performance Management applications to monitor system activity and generate system reports.

### REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- DMT9100 DIMETRA X Core D9.1 System Overview

### PREREQUISITES

None



**DIMETRA X CORE D9.1  
TROUBLESHOOTING AND  
MAINTENANCE WORKSHOP**

5 DAYS                      DMT9104

### COURSE OVERVIEW

During this workshop delegates will troubleshoot and maintain a live DIMETRA X Core system using business scenarios, troubleshooting procedures and diagnostic applications. Delegates will also perform complex FRU/FRE procedures to resolve hardware faults.

### TARGET AUDIENCE

System and Field Engineers who troubleshoot and maintain a DIMETRA X Core system.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Describe troubleshooting model process, system support tools and technical support services provided by Motorola Solutions.
- Describe the DIMETRA X Core system architecture.
- Perform troubleshooting procedures using system troubleshooting tools.
- Perform recommended routine maintenance procedures for a DIMETRA X Core system.
- Perform replacement procedures and reconfigure faulty Field Replaceable Units (FRUs) and Field Replaceable Equipment/Entities (FREs) within a DIMETRA X Core system.
- Perform verification procedures on FRU/FRE replacement.

### REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- DMT9100 DIMETRA X Core D9.1 System Overview
- DMT9102 DIMETRA X Core D9.1 Fault Management Workshop

### PREREQUISITES

None



**DIMETRA X CORE D9.1 AIR  
INTERFACE ENCRYPTION,  
AUTHENTICATION, AND  
PROVISIONING**

3 DAYS                      DMT9105

### COURSE OVERVIEW

During this workshop, students will perform key management tasks on a live DIMETRA X Core system. Students will perform authentication and provisioning procedures for the daily administration of user authentication and provisioning based on real business scenarios.

### TARGET AUDIENCE

System operators and managers responsible for the provisioning and management of key authentication in a DIMETRA X Core system.

### COURSE OBJECTIVES

By the end of this course, the student will be able to:

- Describe how Air Interface Encryption and Authentication work within the DIMETRA X Core system.
- Describe the hardware components used in Encryption and Authentication.
- Describe distribution, storage, key updates and key management of Air Interface Encryption and Authentication keys.
- Perform Encryption Key management procedures using the Enhanced AuC, PrC, and KVL system components.

### REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- DMT9100 DIMETRA X Core D9.1 System Overview

### PREREQUISITES

None



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**DIMETRA X CORE SECURE COMMUNICATIONS WORKSHOP**

3 DAYS      DMT1094

### COURSE OVERVIEW

During the workshop delegates will perform key management, administrative and maintenance tasks on a live DIMETRA X Core system. Using real business scenarios this workshop will allow delegates to perform key management, key transference, maintenance, and troubleshooting procedures on the Key Management Facility (KMF) server and client.

### TARGET AUDIENCE

System operators, managers and field technicians responsible for the management and maintenance of secure end-to-end communications in a DIMETRA X Core system.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Describe the theory of DIMETRA secure communications operation.
- Carry out KMF client administration tasks.
- Utilize the E2E KVL.
- Perform KMF OTAK/OTEK management activities and procedures.
- Setup an MCC 7500S secure console.
- Administer the KMF server.

### REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- DMT9100 DIMETRA X Core D9.1 System Overview

### PREREQUISITES

None



**DIMETRA X CORE D9.1 NETWORK SECURITY**

3 DAYS      DMT9106

### COURSE OVERVIEW

The workshop is designed to give an overview of the elements of the DIMETRA X Core network security solution. The generic threat to network security will be discussed. During this workshop, delegates will perform basic procedures using network security software elements.

### TARGET AUDIENCE

System Operators, Managers, and Field Technicians responsible for the management and maintenance of Network Security in a DIMETRA X Core system.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Describe the generic threats to network security.
- Describe the DIMETRA X Core antivirus protection.
- Describe the DIMETRA X Core authentication management.
- Describe the perimeter protection available with the DIMETRA X Core system.

### REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- DMT9100 DIMETRA X Core D9.1 System Overview

### PREREQUISITES

None



**DIMETRA X CORE D9.1 DISPATCH COMMUNICATIONS SERVER WORKSHOP**

3 DAYS      DMT9107

### COURSE OVERVIEW

This workshop provides an overview of the DIMETRA Dispatch Communications Server as well as hands on activities in terms of configuration, administration, troubleshooting and maintenance aspects of the DCS server and DCS clients.

### TARGET AUDIENCE

Field and system engineers who support the DCS solution.

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe DCS functionality, topology, components and client connectivity.
- Describe DCS solution system limits, throughput and performance.
- Describe how DCS solution is incorporated in DIMETRA call processing.
- Perform configuration of DCS solution components.
- Administer and maintain the DCS solution.
- Perform diagnostic and troubleshooting activities for the DCS solution.
- Perform restoration procedures for DCS solution components in the event of failure.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

- DMT9100 DIMETRA X Core D9.1 System Overview
- DMT9101 DIMETRA X Core D9.1 Configuration and Administration Workshop

## RADIO SOLUTIONS DIMETRA SYSTEMS

For information on prerequisites and to register for courses visit the LXP at:  
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**DIMETRA X CORE D9.1  
MSO RESTORATION  
TRAINING**

5 DAYS                      DMT9108

### COURSE OVERVIEW

During this workshop delegates will perform complete hardware, software and database restorations for DIMETRA X Core. The tasks will be carried out in a lab environment through hands-on activities according to the procedures and guidelines from system documentation.

### TARGET AUDIENCE

Staff who troubleshoots and maintains a DIMETRA X Core system.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Restore a DIMETRA X Core System.
- Perform a complete system backup prior to re-installation
- Complete a system power down.
- Reinstall system hardware/software.
- Restore a system database and reconfigure the system back to original operating conditions.
- Perform a post-restoration check and test.

### REQUISITE KNOWLEDGE

Completion of the following courses or equivalent experience may be required, depending on the system:

- DMT9105 DIMETRA X Core D9.1 Air Interface Encryption, Authentication, and Provisioning
- DMT9106 DIMETRA X Core D9.1 Network Security

### PREREQUISITES

- DMT9100 DIMETRA X Core D9.1 System Overview
- DMT9101 DIMETRA X Core D9.1 Configuration and Administration Workshop
- DMT9102 DIMETRA X Core D9.1 Fault Management Workshop
- DMT9104 DIMETRA X Core D9.1 Troubleshooting and Maintenance Workshop



**DIMETRA EXPRESS  
INSTALLATION,  
CONFIGURATION AND  
MAINTENANCE WORKSHOP**

2 DAYS                      DMT0036

### COURSE OVERVIEW

This course will give the opportunity to install and configure a DIMETRA Express system from start to finish. Learners will be able to carry out all of the necessary configuration activities required when commissioning a DIMETRA Express radio network.

### TARGET AUDIENCE

Anyone who has responsibility for setting up or managing DIMETRA Express system.

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe DIMETRA Express main features and functionality.
- Install DIMETRA Express system.
- Setup a DIMETRA Express system.
- Setup and configure additional sites to the DIMETRA Express system.
- Configure a DIMETRA Express system using DIMETRA Express Network Manager application and procedures.
- Describe/Perform TETRA radio authentication process/provisioning in the DIMETRA Express system.
- Perform authentication application administration and management tasks.

### REQUISITE KNOWLEDGE

A basic understanding of Radio Frequency (RF) technology and Internet Protocol (IP) fundamentals.

### PREREQUISITES

None



**DIMETRA EXPRESS REDUNDANT  
SYSTEM DESIGN, INSTALLATION,  
CONFIGURATION, AND  
MAINTENANCE**

0.5 HRS                      DMT0038

### COURSE OVERVIEW

This course will show how to set up and configure geographical redundancy for a DIMETRA Express system. It will give the opportunity for individuals to learn how to install, configure and maintain redundancy within a DIMETRA Express system.

### TARGET AUDIENCE

System Managers/Staff responsible for setting-up, configuring, administrating, and maintaining the DIMETRA Express system and MTS equipment.

### COURSE OBJECTIVES

By the end of the course, you will be able to:

- Explain the principles of geographical redundancy.
- Describe DIMETRA Express redundancy features and functionalities.
- Setup and configure geographical redundancy within a DIMETRA Express system to automatically switch over in the event of a system failure.
- Carry out all maintenance procedures relating to redundancy.

### REQUISITE KNOWLEDGE

Basic knowledge of installation, configuration and maintenance.

### PREREQUISITES

None

# CONSOLE COURSES

CONSOLE TRAINING IS ALSO AVAILABLE IN PREVIOUS RELEASES, PLEASE CONTACT MOTOROLA SOLUTIONS FOR MORE INFORMATION.

<b>TECHNICAL ENABLEMENT FOR MCC 5500 DISPATCH CONSOLE (CON007)</b>	<b>45</b>
<b>MCD 5000 TECHNICAL WORKSHOP (RDS1022)</b>	<b>45</b>
<b>MCC 7000 SERIES DISPATCH CONSOLES WORKSHOP (CON012)</b>	<b>45</b>
<b>DIMETRA X CORE D9.1 MCC 7500 ADMIN WORKSHOP (DMT9111)</b>	<b>46</b>
<b>DIMETRA X CORE D9.1 MCC 7500 OPERATOR WORKSHOP (DMT9112)</b>	<b>46</b>
<b>DIMETRA X CORE D9.1 MCC 7500 INSTALL, CONFIG, TROUBLESHOOTING, AND MAINTENANCE (DMT9113)</b>	<b>46</b>

MCC 7000 SERIES DISPATCH CONSOLES WORKSHOP (CON012) FOCUSES ON THE CONSOLES APPLICATION IN AN M- OR L-CORE SYSTEM.

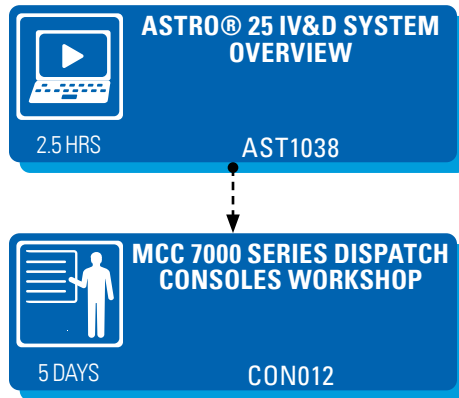


## RADIO SOLUTIONS CONSOLES

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## CONSOLES TECHNICAL TRAINING CURRICULUM



### CURRICULUM COMPLETE



PARTICIPANT CAN MAINTAIN A MCC 7000 DISPATCH CONSOLE SITE INCLUDING: CONSOLE PC, VPM, CC GW'S AND AUX I/O SERVERS.  
\*PARTICIPANT PERFORMS TROUBLESHOOTING AND REPLACEMENT OF SITE DEVICES DURING COURSE.

### OPTIONAL CONSOLE TRAINING

**MCD 5000 TECHNICAL WORKSHOP**  
3 DAYS  
RDS1022

## RADIO SOLUTIONS CONSOLES

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**TECHNICAL ENABLEMENT  
FOR MCC 5500 DISPATCH  
CONSOLE**

4 DAYS **CON007**

### COURSE OVERVIEW

This course familiarizes participants in installation, configuration, management and repair of MCC 5500 dispatch consoles, available documentation, Console System Database Manager (CSDM), system architecture, components and peripherals. The focus is on a detailed discussion of console hardware and hands-on activities with the installation and configuration of the MCC 5500 Console.

### TARGET AUDIENCE

System Managers, Console Technicians

### COURSE OBJECTIVES

By the end of the course, you will be able to:

- Calculate hardware required for an installation
- Install and configure all of the relevant hardware
- Test, troubleshoot and configure system components
- Build, modify, load and troubleshoot a system database
- Configure and modify operator screens

### REQUISITE KNOWLEDGE

- Basic two-way FM communications theory and logic circuits
- Communication Systems Concepts (NST021)
- Experience using common communication test equipment

### PREREQUISITES

None



**MCD 5000 TECHNICAL  
WORKSHOP**

3 DAYS **RDS1022**

### COURSE OVERVIEW

This workshop supports those that install, configure, or support the MCD 5000 Deskset. This three day training course will cover installation procedures for the MCD5000 Deskset, Radio Gateway Unit (RGU), and connectivity to different station types. Configuration and programming of the MCD5000 and its supporting equipment will be covered through discussion and hands-on lab activities. Troubleshooting and maintenance techniques will be addressed to the Motorola Solutions recommended service level.

### TARGET AUDIENCE

MCD 5000 Technicians

### COURSE OBJECTIVES

By the end of the course, you will be able to:

- Identify the MCD 5000 System components and functions.
- Install MCD 5000 Deskset.
- Install Radio Gateway Units.
- Configure MCD 5000 subcomponents.
- Troubleshoot the MCD 5000 System to Motorola Solutions recommended service levels.

### REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- NST021 Communication Systems Concepts

### PREREQUISITES

None



**MCC 7000 SERIES DISPATCH  
CONSOLES WORKSHOP**

5 DAYS **CON012**

### COURSE OVERVIEW

This course familiarizes participants in installation, configuration, management and repair of MCC 7000 Series Dispatch Consoles, Archiving Interface Servers, AUX I/O servers, and Conventional Channel Gateways. The focus is on a detailed discussion of console hardware and hands-on activities with the installation and configuration of the MCC 7000 Series Dispatch Consoles.

### TARGET AUDIENCE

System Administrators, Console Technicians

### COURSE OBJECTIVES

After completing this course, the participant will be able to:

- Understand key physical and functional characteristics of MCC 7000 Series Dispatch Consoles.
- Understand physical installation requirements of MCC 7000 Series Dispatch Consoles.
- Perform tasks necessary to install MCC 7000 Series Dispatch Consoles components.
- Perform configuration steps for MCC 7000 Series Dispatch Consoles components.
- Understand available maintenance tools and indicators in MCC 7000 Series Dispatch Consoles.
- Perform routine maintenance activities in MCC 7000 Series Dispatch Consoles components.
- Troubleshoot MCC 7000 Series Dispatch Consoles components to the Motorola Solutions recommended service level.
- Perform tasks necessary to provision users for MCC 7000 Series Dispatch Consoles.
- Configure the MCC 7000 Series Dispatch Consoles interface.
- Perform required administrative activities for MCC 7000 Series Dispatch Consoles.

### REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- ACT100E or ACT101E Bridging the Knowledge Gap
- NST762 Networking Essentials in Communication Equipment
- NWT003 ASTRO® 25 Systems Applied Networking

### PREREQUISITES

- AST1038 ASTRO® 25 IV&D System Overview

## RADIO SOLUTIONS CONSOLES

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**DIMETRA X CORE D9.1  
MCC 7500 ADMIN  
WORKSHOP**

1 DAY **DMT9111**

### COURSE OVERVIEW

This course provides students with an introduction to the Elite Admin application. It enables system administrators to use the software to set up configurations for the Elite Dispatch desktops that organize resources to meet specific user needs. Through facilitation and hands-on activities, the user learns how the configurations created in the Elite Admin can be saved and then distributed among the Elite Dispatch desktops.

### TARGET AUDIENCE

System Administrators for Dispatch Console Operators.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Identify the hardware components that make up the dispatcher position.
- Describe the Purpose of the Elite Admin application.
- Identify elements that make up the menu and toolbar structure within the Elite Admin software.
- Perform Elite Admin configurations.

### REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- DMT9112 DIMETRA X Core D9.1 MCC 7500 Operator Workshop

### PREREQUISITES

None



**DIMETRA X CORE D9.1  
MCC 7500 OPERATOR  
WORKSHOP**

1 DAY **DMT9112**

### COURSE OVERVIEW

This course provides students with an introduction to the dispatch console, its basic operation and tailored job aids which will be available for assistance in operation. Through facilitation and hands-on activities, the user learns how to perform common tasks associated with the console operation.

### TARGET AUDIENCE

Dispatch console operators.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Identify the hardware components that make up the dispatcher position.
- Describe the purpose of the Elite Dispatch application.
- Identify elements that make up the menu and toolbar structure within the Elite Dispatch software.
- Perform dispatcher operations:
  - Communicate with radios: transmit and receive calls within group and individual communications categories.
  - Perform advanced signaling features, i.e. Quicklists, Emergency call and alarms, Ambience Listening calls.
  - Perform basic procedures within screen configurations, i.e. expanding and compressing resources, adjusting volume.
  - Perform basic procedures within resource groups, i.e. multiselect or patch group, APB and patch transmit.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**DIMETRA X CORE D9.1  
MCC 7500 INSTALL, CONFIG,  
TROUBLESHOOTING, AND  
MAINTENANCE**

3 DAYS **DMT9113**

### COURSE OVERVIEW

During this workshop students will perform installation, configuration and troubleshooting procedures relating to the MCC 7500C dispatch console on a live DIMETRA X Core system.

### TARGET AUDIENCE

Control Room Managers, System Engineers and Network Administrators responsible for the installation, configuration and maintenance of control rooms containing MCC 7500C dispatch consoles in a DIMETRA X Core system.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Install and configure the hardware and software components of the MCC 7500C Dispatch Console subsystem.
- Troubleshoot installation and configuration problems for the MCC 7500C Dispatch Console.

### REQUISITE KNOWLEDGE

Completion of the following course or equivalent experience:

- DMT9100 DIMETRA X Core D9.1 System Overview

### PREREQUISITES

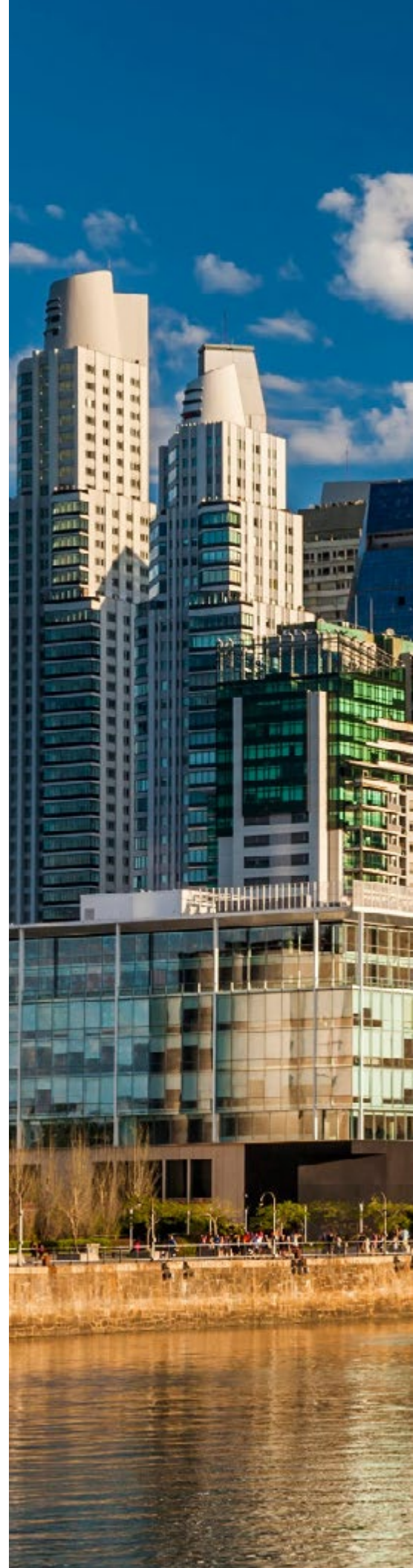
None

# BASE STATIONS COURSES

**MTS 2/MTS 4 INSTALLATION, CONFIGURATION, TROUBLESHOOTING & MAINTENANCE WORKSHOP** (TBTS01) **48**

**MTS 1 INSTALLATION, CONFIGURATION, TROUBLESHOOTING AND MAINTENANCE** (TBTS04) **48**

**STANDALONE GTR8000 CONVENTIONAL BASE RADIO** (AST2006) **48**



## RADIO SOLUTIONS BASE STATIONS

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**MTS 2/MTS 4 INSTALLATION, CONFIGURATION, TROUBLESHOOTING AND MAINTENANCE WORKSHOP**

4 DAYS      TBTS01

### COURSE OVERVIEW

This course includes the theoretical and practical aspects of configuring, maintaining and troubleshooting the MTS base station in a DIMETRA IP system. The course includes the practical use of service software and the man-machine interface. Practical sessions include the removal and replacement of Field Replaceable Units (FRU).

### TARGET AUDIENCE

Field Engineers responsible for installing, configuring and maintaining the base station equipment.

### COURSE OBJECTIVES

By the end of the course, you will be able to:

- Describe the function of the MTS within a DIMETRA IP system.
- Identify the Field Replaceable Units (FRUs) within the MTS.
- Describe the function of FRUs within the MTS.
- Perform MTS installation procedures.
- Carry out removal and replacement procedures for MTS FRUs.
- Identify FRU part numbers.
- Utilise the Software Download application.
- Perform maintenance and testing procedures using Motorola TETRA BTS Service Software.
- Download a configuration file to the MTS using the BTS Service Software and Software Download Manager applications.
- Perform Ki loading procedures to the MTS.
- Carry out MTS expansion.
- Troubleshoot MTS to FRU level.

### REQUISITE KNOWLEDGE

- RF and Field or Bench service background.
- Completion of a DIMETRA System Overview course or equivalent experience is recommended.

### PREREQUISITES

None



**MTS 1 INSTALLATION, CONFIGURATION, TROUBLESHOOTING AND MAINTENANCE**

3 DAYS      TBTS04

### COURSE OVERVIEW

This course includes the theoretical and practical aspects of configuring, maintaining and troubleshooting the MTS 1 base station in a DIMETRA IP system. The course includes the practical use of service software and the man-machine commands. Practical sessions include the testing and configuration of the MTS 1.

### TARGET AUDIENCE

Field Engineers responsible for installing and configuring and maintaining MTS 1 equipment.

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe the function of the MTS 1 within a DIMETRA IP system.
- Identify and describe the function of MTS 1 components.
- Describe MTS 1 installation procedures.
- Execute MMI commands using local and telnet access.
- Perform MTS 1 verification test procedures.
- Download configuration and application files using the BTS Service Software and Software Download Manager application.
- Perform MTS 1 Ki loading procedures.
- Perform MTS 1 troubleshooting using BTS Service Software.

### REQUISITE KNOWLEDGE

- RF and Field or Bench service background - recommended

### PREREQUISITES

None



**STANDALONE GTR8000 CONVENTIONAL BASE RADIO**

2 DAYS      AST2006

### COURSE OVERVIEW

This course is designed to give the participants the ability to align, troubleshoot and repair the Standalone GTR8000 Base Station/Repeater to Motorola Solutions recommended service levels. Emphasis is placed on the use of Configuration Service Software (CSS) and its role in configuration, maintenance, diagnostics, alignments, and optimization of the Standalone GTR8000 Base Radio/ Repeater.

### TARGET AUDIENCE

Maintenance Technicians

### COURSE OBJECTIVES

By the end of the course, you will be able to:

- Understand basic concepts of the various radio systems supported by the GTR8000 Conventional Base Radio
- Identify the equipment modules of the GTR8000 Conventional Base Radio
- Operate and perform routine maintenance on the GTR8000 Conventional Base Radio
- Understand basic operational theory of GTR8000 Conventional Base Radio components
- Configure the GTR8000 Conventional Base Radio using Configuration Service Software (CSS)
- Identify the different backplane connections on the GTR8000 Conventional Base Radio
- Perform calibration and alignment adjustments for the GTR8000 Conventional Base Radio
- Troubleshoot problems and identify/replace faulty modules in the GTR8000 Conventional Base Radio

### REQUISITE KNOWLEDGE

General RF knowledge and skills basic knowledge of two-way radio systems

### PREREQUISITES

None



# SUBSCRIBER COURSES

<b>TETRA SUBSCRIBER END-USER OPERATOR COURSES</b>	<b>50</b>
<b>TETRA TERMINAL PROGRAMMING COURSE (CPS PLUS) (TTER01PLUS)</b>	<b>51</b>
<b>TETRA SUBSCRIBER OPERATOR, PROGRAMMING AND MAINTENANCE (DMT1107)</b>	<b>51</b>
<b>CPS PROGRAMMING AND TEMPLATE BUILDING OVERVIEW (ADT001V)</b>	<b>51</b>
<b>XTS/XTL TECHNICAL SUBSCRIBER ACADEMY (ADST005)</b>	<b>52</b>
<b>APX™ TECHNICAL SUBSCRIBER ACADEMY (APX010)</b>	<b>52</b>
<b>APX™ CPS PROGRAMMING AND TEMPLATE BUILDING (APX7001V)</b>	<b>52</b>
<b>APX™ RADIO MANAGEMENT WORKSHOP (RDS2017)</b>	<b>53</b>
<b>MOTOTRBO™ RADIO MANAGEMENT WORKSHOP (PCT2022)</b>	<b>53</b>
<b>MOTOTRBO™ SUBSCRIBER AND REPEATER TECHNICAL SERVICE ACADEMY (TBO300)</b>	<b>53</b>



## RADIO SOLUTIONS SUBSCRIBERS

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## TETRA SUBSCRIBER END-USER OPERATOR COURSES

Click the boxes below to go to the LXP to get additional information and to register for the following subscriber courses. The course description to the right applies to all courses listed below.



**MTP3000 SERIES  
END-USER OPERATOR**

1 DAY DMT1054



**MTP6000 SERIES  
END-USER OPERATOR**

1 DAY DMT1068



**MTM5000 SERIES  
END-USER OPERATOR**

1 DAY DMT1070



**MTM5400 SERIES  
END-USER OPERATOR**

2 HRS TTER27E

### COURSE OVERVIEW

Our subscriber end-user operator courses will provide the background information and the knowledge required to allow delegates to be fully conversant with the features and functions of their chosen subscriber. It will provide users with an introduction to their subscriber, its operation and builds on theoretical instruction with practical exercises designed to allow delegates to practice and confirm their understanding of all features and functions covered in the course.

### TARGET AUDIENCE

Radio end-user operators

### COURSE OBJECTIVES

The goal of End-User Operator courses is to enable the user to identify the features and functions of their chosen subscriber, to make calls and perform basic radio troubleshooting.

After completing any of these courses, the student will be able to:

- Identify the location and function of all subscriber keys and controls.
- Describe radio preparation including assembly and battery charging.
- Make all available Trunked Mode and Direct Mode calls.
- List optional features available to the subscriber.
- Perform basic subscriber troubleshooting.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None

## OTHER SUBSCRIBER COURSES

Click the box below to go to the LXP to get additional information and to register for the following course:



**TETRA TERMINAL  
PROGRAMMING (CPS PLUS)**

2 DAYS TTER01PLUS

## RADIO SOLUTIONS SUBSCRIBERS

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**TETRA TERMINAL PROGRAMMING COURSE (CPS PLUS)**  
2 DAYS      TTER01PLUS

### COURSE OVERVIEW

This course will provide the background information and the knowledge required to program Motorola Solutions TETRA radios. The course is highly practical in nature and covers everything from software requirements and installation, through to programming and editing radio codeplugs, and troubleshooting.

### TARGET AUDIENCE

Technical staff required to program Motorola Solutions TETRA radios.

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- Identify and locate all program features.
- Describe the function of all major CPS Plus features and tools.
- Installation of the CPS and adding RPK files.
- Carry out radio programming using CPS Plus.
- Carry out CPS Plus troubleshooting procedures.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**TETRA SUBSCRIBER OPERATOR, PROGRAMMING AND MAINTENANCE**  
1 DAY      DMT1107

### COURSE OVERVIEW

This practical course will provide assistance to TETRA radio users, diagnose radio problems both locally and remotely. Program the radio for end users operations and provide first line maintenance for suspected faulty radios.

### TARGET AUDIENCE

Technicians and personnel who will be involved in programming and maintaining to level 1.

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- Locate and use all MTP6650 and MTM5400 controls.
- Execute trunked and direct mode calls using the MTP6650 and MTM5400 radios.
- Carry out radio troubleshooting using built-in diagnostics.
- Describe the function of Motorola CPS Plus software.
- Create a user codeplug and program the codeplug into an MTP6650 and MTM5400 radio.
- Carry out software troubleshooting using CPS Plus.
- Carry out configuration for collaborative devices.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**CPS PROGRAMMING AND TEMPLATE BUILDING OVERVIEW**  
2 DAYS      ADT001V

### COURSE OVERVIEW

This course provides communications management personnel and technicians with the knowledge and tools needed to program the radio units in the most efficient way depending on the system, features and options they require. The parameters and exercises shown in the class apply to a wide number of portable and mobile radios, including XTS 5000, XTS 3000, XTS 2500, XTS 1500, XTL 5000, XTL 2500, XTL 1500, MTS 2000, MCS 2000, the SPECTRA family, and the Professional Series.

### TARGET AUDIENCE

Radio Technicians, System Managers

### COURSE OBJECTIVES

By the end of the course, you will be able to:

- Program the basic parameters of any radio using the Customer Programming Software (CPS)
- Program the specific parameters of any radio related to the system where the user is going to work conventional, single-site trunking, Simulcast, AMSS, SmartZone or ASTRO 25
- Demonstrate knowledge of the options and features that can be programmed in a radio
- Create templates for subscriber programming in a system
- Create templates for the programming of subscribers in a system.

### REQUISITE KNOWLEDGE

Knowledge of the basic features and options of two-way radios and the basic concepts of trunking Please Note: For individuals with prior CPS programming experience, a test out is available. Test Out CPS Programming and Template Building (ADT001T)

### PREREQUISITES

None

## RADIO SOLUTIONS SUBSCRIBERS

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**XTS/XTL TECHNICAL  
SUBSCRIBER ACADEMY**

5 DAYS      ADST005

### COURSE OVERVIEW

Participants will learn the capabilities, features and functions of the XTS/XTL family of radios as well as how to correctly complete performance checks, radio alignments, disassembly/reassembly, maintenance and troubleshooting. This Academy will also focus on the detailed theory of operation.

### TARGET AUDIENCE

Radio Technicians

### COURSE OBJECTIVES

By the end of the course, you will be able to:

- Distinguish between the features and specifications of the XTS and XTL 5000 radios
- Verify the correct operations of the XTS and XTL 5000 radios by completing Performance Checks and Alignment procedures
- Maintain & troubleshoot an XTS and XTL 5000 Radios
- Disassemble and reassemble the radio's using the documented procedures
- Verify the housing integrity of an XTS 5000R portable radio
- Flash upgrade an XTS and an XTL 5000 Radio
- Interpret the circuit theory of operation and use this information to isolate faults found at both the board and the component level

### REQUISITE KNOWLEDGE

Completion of the following courses or equivalent experience:

- NST021 Communications Systems Concepts
- RDS0002 Basic RF
- RDS0004 Basic Radio
- ADT001V CPS Programming and Template Building Overview
- ADT001T Test Out CPS Programming and Template Building Overview

### PREREQUISITES

None.



**APX™ TECHNICAL  
SUBSCRIBER ACADEMY**

5 DAYS      APX010

### COURSE OVERVIEW

Participants will learn the capabilities, features and functions of the APX family of radios as well as how to correctly complete performance checks, radio alignments, disassembly/reassembly, maintenance, and troubleshooting. This Academy will also focus on a Level 2 (block-level) theory of operation for the APX family of radios and provide a review of APX CPS and Radio Management programming. In addition to the lecture, large amounts of hands on with scenario-based lab work will be used to reinforce knowledge transfer.

### TARGET AUDIENCE

This course is intended for who would like to get familiar with the features, operation principles, troubleshooting steps and disassembly and reassembly of the APX family of radios.

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- Distinguish between the features and specifications of APX Portable and Mobile radios
- Verify the correct operation of the various radios within the APX family of subscribers by completing Performance Checks and Alignment procedures
- Disassemble and reassemble APX radios using the documented procedures
- Maintain and troubleshoot radios within the APX family of subscribers

### REQUISITE KNOWLEDGE

Completion of the following courses or equivalent experience:

- NST021 Communication Systems Concepts
- APX7001V APX CPS Programming and Template Building Overview

### PREREQUISITES

None



**APX™ CPS PROGRAMMING  
AND TEMPLATE BUILDING**

2 DAYS      APX7001V

### COURSE OVERVIEW

The APX CPS Programming and Template Building course provides communications management personnel and technicians with the knowledge and training necessary to build templates and program the APX family of radios in the most efficient way possible. Supplemental videos for this VILT course can be seen by enrolling in RDS1018 and RDS1019 in the LXP.

### TARGET AUDIENCE

Radio Technicians, System Managers

### COURSE OBJECTIVES

By the end of the course, you will be able to:

- Build the APX family of programming templates using the APX CPS programming Software Program the specific parameters related to the various system types in which the subscriber unit will operate: Conventional, Single Site trunking, Simulcast, SmartZone or ASTRO® 25 IV&D TDMA and ASTRO® 25 IV&D x2.
- Demonstrate knowledge of the APX CPS navigation, tools, options and features that make efficient programming of the radio possible.
- Demonstrate a complete understanding of the various APX CPS programming efficiency tools, such as: Cloning, drag and drop, Codeplug Comparison tool, radio Flashing, Advance System Key Administrator, Codeplug Merging and many others.

### REQUISITE KNOWLEDGE

Knowledge of the basic features and options of two-way radios and the basic concepts of trunking.


### PREREQUISITES

None

## RADIO SOLUTIONS SUBSCRIBERS

For information on prerequisites and to register for courses visit the LXP at: [LEARNING.MOTOROLASOLUTIONS.COM](http://LEARNING.MOTOROLASOLUTIONS.COM)

For general information contact the Latin America Education Services Help Desk at: [training.lacr@motorolasolutions.com](mailto:training.lacr@motorolasolutions.com)



**APX™ RADIO  
MANAGEMENT WORKSHOP**

3 DAYS RDS2017

### COURSE OVERVIEW

Participants will learn the capabilities, features, and functions of the APX Radio Management Suite.

This course covers an APX CPS overview, APX Radio Management Overview, Basic Networking Primer, ASTRO25/CEN Networking and UNS Overview, and APX Radio Management Installation, Configuration, and Operations.

In addition, the course contains labs that focus on installation, configuration, and operation using both wired and POP25 updates to APX Subscriber radios in both a LAN and WAN environment.

### TARGET AUDIENCE

Radio Technicians, System Managers, Radio Programmers

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe the APX Radio Management Suite operations and required software and hardware components
- Describe all deployment options for APX Radio Management Suite
- Configure a basic APX Radio Management system using a single PC, multiple PCs on a LAN, and multiple PCs on a WAN.
- Troubleshoot common APX Radio Management installation, configuration, and operation issues
- Use Best Practices to implement and optimize Radio Management Performance.

### REQUISITE KNOWLEDGE

Completion of the following courses or equivalent experience:

- APX7001V APX CPS Programming and Template Building Overview

### PREREQUISITES

None



**MOTOTRBO™ RADIO  
MANAGEMENT WORKSHOP**

2 DAYS PCT2022

### COURSE OVERVIEW

The MOTOTRBO™ Radio Management 2.0 Workshop course provides technicians with the necessary information and practice to use the MOTOTRBO™ Radio Management 2.0 programming tool effectively.

### TARGET AUDIENCE

System Managers and Technicians

### COURSE OBJECTIVES

By the end of the course, you will be able to:

- Deploy and use RM 2.0 in a variety of real-world scenarios.
- Create and maintain configurations for basic MOTOTRBO™ Configurations (Connect Plus and Capacity Max excluded).
- Utilize Wi-Fi programming within RM 2.0.
- Use the RM Import and Export feature for database population.
- Convert existing radio templates and codeplugs to RM 2.0 Configurations.
- License and activate Radio and Application features.
- Use advanced features such as Data Mining.
- Use RM 2.0 to ease mass-deployments of subscribers.

### REQUISITE KNOWLEDGE

Networking Essentials or Network + Certification.

- A high-level working knowledge of IP networking is important.

### PREREQUISITES

PCT1032 MOTOTRBO™ Radio Management 2.0 Configuration Mode



**MOTOTRBO™ SUBSCRIBER  
AND REPEATER TECHNICAL  
SERVICE ACADEMY**

4 DAYS TBO300

### COURSE OVERVIEW

Participants will learn the capabilities, features and functions of the MOTOTRBO™ family of radios and repeaters as well as how to correctly complete performance checks, radio alignments, disassembly/reassembly, maintenance, and troubleshooting. This Academy will also focus on the detailed theory of operation. In addition to lecture, large amounts of hands on, scenario based lab work will be used to reinforce knowledge transfer. This Academy will cover in detail different models within the MOTOTRBO™ family of radios and repeaters.

### TARGET AUDIENCE

Radio Technicians

### COURSE OBJECTIVES

- Correctly categorize the different components available to build your MOTOTRBO™ system.
- Accurately explain the functional technology that MOTOTRBO™ systems employ
- Propose the MOTOTRBO™ topology that best fits the user requirements.
- Correctly describe MOTOTRBO™s digital and analog features.
- Analyze the various data applications' capabilities and everyday uses within the MOTOTRBO™ systems.
- Refer to system and channel capacity considerations during system planning.
- Refer to MOTOTRBO™ IP network design considerations during system planning.
- Design a fleetmap in accordance with organizational requirements and resources.
- Select the right MOTOTRBO™ tool for your needs.
- Successfully purchase, register, and activate premium radio features.

### REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

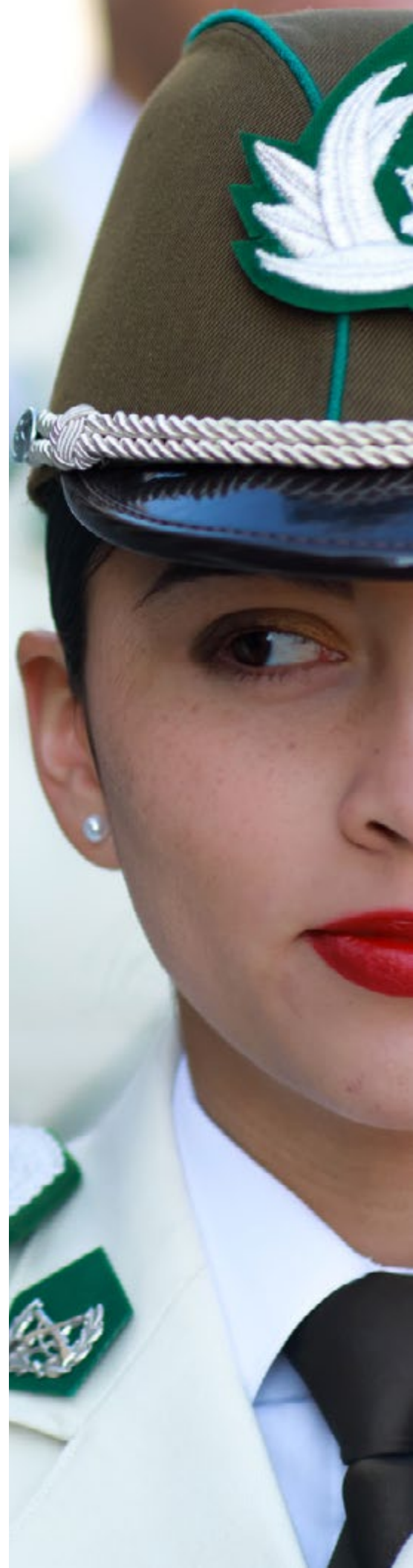
- CEDMEL2000 MOTOTRBO™ System Introduction for Technicians

### PREREQUISITES

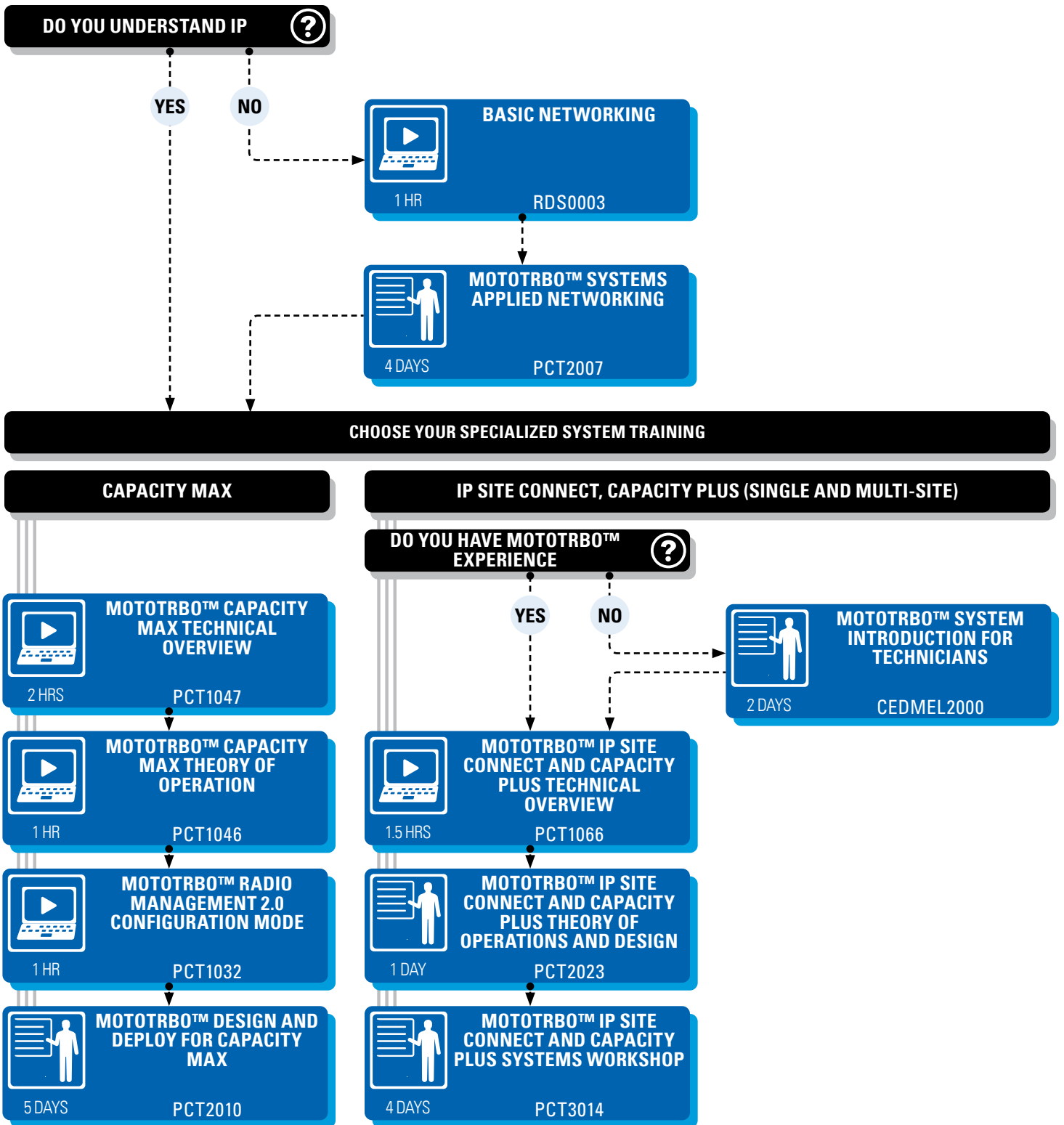
None

# MOTOTRBO™ COURSES

<b>MOTOTRBO™ CAPACITY MAX TECHNICAL OVERVIEW</b> (PCT1047)	<b>57</b>
<b>MOTOTRBO™ CAPACITY MAX THEORY OF OPERATION</b> (PCT1046)	<b>57</b>
<b>MOTOTRBO™ RADIO MANAGEMENT 2.0 CONFIGURATION MODE</b> (PCT1032)	<b>57</b>
<b>MOTOTRBO™ RADIO MANAGEMENT WORKSHOP</b> (PCT2022)	<b>58</b>
<b>MOTOTRBO™ CAPACITY MAX DESIGN AND DEPLOY</b> (PCT2010)	<b>58</b>
<b>MOTOTRBO™ SYSTEM INTRODUCTION FOR TECHNICIANS</b> (CEDMEL2000)	<b>58</b>
<b>MOTOTRBO™ IP SITE CONNECT AND CAPACITY PLUS TECHNICAL OVERVIEW</b> (PCT1066)	<b>59</b>
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<b>MOTOTRBO™ IP SITE CONNECT AND CAPACITY PLUS SYSTEMS WORKSHOP</b> (PCT3014)	<b>59</b>



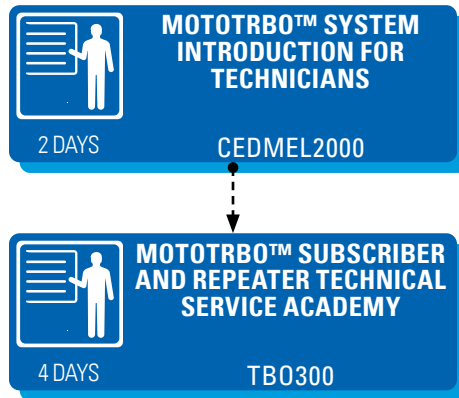
## MOTOTRBO™ TECHNICAL TRAINING CURRICULUM



### CURRICULUM COMPLETE

PARTICIPANT SHOULD BE ABLE TO DESCRIBE THE KEY CHARACTERISTICS OF THE SYSTEM, DESCRIBE THE KEY CONFIGURATION ITEMS IN BOTH SUBSCRIBERS AND REPEATERS, PROGRAM EFFECTIVE REPEATER AND SUBSCRIBER CODEPLUG TEMPLATES FOR THE SYSTEM, AND DESCRIBE THE APPLICABLE IP NETWORKING REQUIREMENTS WHEN DESIGNING A SYSTEM.

## MOTOTRBO™ TECHNICAL TRAINING CURRICULUM FOR SUBSCRIBER/REPEATER MAINTENANCE TECHNICIAN



### CURRICULUM COMPLETE



PARTICIPANT WILL LEARN THE COMMON MOTOTRBO™ FEATURES AND CAPABILITIES TO DESIGN AND DEPLOY MOTOTRBO™ SYSTEMS. PARTICIPANT SHOULD BE ABLE TO COMPLETE PERFORMANCE CHECKS, RADIO ALIGNMENTS, DISASSEMBLY/REASSEMBLY, MAINTENANCE, AND TROUBLESHOOTING OF VARIOUS MOTOTRBO™ RADIO TYPES.



## RADIO SOLUTIONS MOTOTRBO™

For information on prerequisites and to register for courses visit the LXP at:  
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[training.lacr@motorolasolutions.com](mailto:training.lacr@motorolasolutions.com)



**MOTOTRBO™ CAPACITY  
MAX TECHNICAL  
OVERVIEW**

2 HRS PCT1047

### COURSE OVERVIEW

This self-study course is designed to help you learn the fundamentals of Capacity Max.

Whether you have a sales or technical background, this training will give you the information that you need to gain a basic understanding of Capacity Max. Begin by exploring the DMR standard and Capacity Max's positioning within the MOTOTRBO™ portfolio of systems.

Learn about the different hardware and software components that make up a Capacity Max system and gain an understanding of its logical and physical topology. Features, redundancy, design tools and warranty will also be addressed.

### TARGET AUDIENCE

Professionals responsible for selling, designing, configuring, deploying, or maintaining MOTOTRBO™ radio systems.

### COURSE OBJECTIVES

By the end of the course, you will be able to:


- Explain Digital Mobile Radio (DMR)
- Describe a basic Capacity Max system and where it fits in the MOTOTRBO™ Portfolio
- Describe the Capacity Max's system physical and logical topologies
- List the minimum hardware and software requirements for a Capacity Max system
- Distinguish the three different types of Capacity Max Operating Modes
- Identify the different features and license types available for a Capacity Max system

### REQUISITE KNOWLEDGE

Basic Radio knowledge

### PREREQUISITES

None



**MOTOTRBO™ CAPACITY  
MAX THEORY OF  
OPERATION**

1 HR PCT1046

### COURSE OVERVIEW

This foundational self-study course is designed to help you understand the theory of how a Capacity Max system functions. It describes the life cycle of a call, which includes: call initiation, call queuing, call grant or rejection, call transmission(s), and call termination. This knowledge is important for system troubleshooting and maintenance purposes.

### TARGET AUDIENCE

Professionals responsible for selling, designing, configuring, deploying, or maintaining MOTOTRBO™ radio systems.

### COURSE OBJECTIVES

Upon completion of this course, you will be able to describe and explain the functions of:

- Control Channel
- Roaming
- Radio Registration
- Call Request
- Call Setup
- Busy Queue
- Channel Allocation
- Call Termination

### REQUISITE KNOWLEDGE

Basic Radio knowledge

### PREREQUISITES

PCT1047 MOTOTRBO™ Capacity Max Technical Overview



**MOTOTRBO™ RADIO  
MANAGEMENT 2.0  
CONFIGURATION MODE**

1 HR PCT1032

### COURSE OVERVIEW

This self-paced course is a basic tutorial of Radio Management (RM) 2.0 Configuration Mode. A set of short videos present installation and deployment of RM components, explain the concepts of sets and configurations, and demonstrate the user how to navigate through RM Client views and functionalities. The course also covers migration from template to configuration mode, backup and restores procedures, as well as user and machine authorization.

### TARGET AUDIENCE

Professionals responsible for configuring, deploying, or maintaining MOTOTRBO™ radios and repeaters.

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- Explain the purpose of that Radio Management Configuration (RM) Mode.
- Explain the concept of sets and configurations.
- Set up Radio Management 2.0 for the first time.
- Name and navigate through major RM Client views.
- Perform basic RM Configuration Client operations: populate and manage radio database, edit sets and configurations, etc.
- Perform Server Utility operations.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None

## RADIO SOLUTIONS MOTOTRBO™

For information on prerequisites and to register for courses visit the LXP at:  
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[training.lacr@motorolasolutions.com](mailto:training.lacr@motorolasolutions.com)



**MOTOTRBO™ RADIO  
MANAGEMENT WORKSHOP**

2 DAYS PCT2022

### COURSE OVERVIEW

The MOTOTRBO™ Radio Management 2.0 Workshop course provides technicians with the necessary information and practice to use the MOTOTRBO™ Radio Management 2.0 programming tool effectively.

### TARGET AUDIENCE

System Managers and Technicians

### COURSE OBJECTIVES

By the end of the course, you will be able to:

- Deploy and use RM 2.0 in a variety of real-world scenarios.
- Create and maintain configurations for basic MOTOTRBO™ Configurations (Connect Plus and Capacity Max excluded).
- Utilize Wi-Fi programming within RM 2.0.
- Use the RM Import and Export feature for database population.
- Convert existing radio templates and codeplugs to RM 2.0 Configurations.
- License and activate Radio and Application features.
- Use advanced features such as Data Mining.
- Use RM 2.0 to ease mass-deployments of subscribers.

### REQUISITE KNOWLEDGE

Networking Essentials or Network + Certification.

- A high-level working knowledge of IP networking is important.

### PREREQUISITES

PCT1032 MOTOTRBO™ Radio Management 2.0 Configuration Mode



**MOTOTRBO™ DESIGN AND  
DEPLOY FOR CAPACITY  
MAX**

5 DAYS PCT2010

### COURSE OVERVIEW

MOTOTRBO™ Capacity Max Design and Deploy begins by covering the design process for a Capacity Max Radio system. Participants will have the opportunity to practice designing and deploying a small scale, 2 Site/3 Channel, Capacity Max system in a safe classroom environment. This course will also cover how to configure Capacity Max using Radio Management 2.0 Configuration Mode.

### TARGET AUDIENCE

This training is intended for professionals responsible for designing, configuring, or deploying MOTOTRBO™ radio systems.

### COURSE OBJECTIVES

Upon completion of this course, you will be able to:

- Design a simple a 1-System 2 Site/3 Channel Capacity Max system
- Calculate Capacity Max capacity and bandwidth using a Case Scenario and System Design tools.
- Using Radio Management Configuration Mode, configure your radios and infrastructure.
- Deploy a 1-System 2 Site/3 Channel Capacity Max system.
- Using System Advisor, learn the fundamentals of troubleshooting and -maintaining a Capacity Max system.
- Execute Radio Management database backup and restore.
- Describe how to optimize a Capacity Max system.

### REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Understanding IP Network Addressing.
- Knowledge of RF Propagation modeling tools

### PREREQUISITES

- PCT1032 MOTOTRBO™ Radio Management 2.0 Configuration Mode
- PCT1046 MOTOTRBO™ Capacity Max Theory of Operation
- PCT1047 MOTOTRBO™ Capacity Max Technical Overview



**MOTOTRBO™ SYSTEM  
INTRODUCTION FOR  
TECHNICIANS**

2 DAYS CEDMEL2000

### COURSE OVERVIEW

This is an introductory course to the MOTOTRBO™ system theory of operation, key components and topologies. MOTOTRBO™ System Introduction for Technicians provides all the basic information about common MOTOTRBO™ features and capabilities, along with system design and deploy principles.

### TARGET AUDIENCE

Professionals responsible for selling, designing, configuring, deploying, or maintaining MOTOTRBO™ Digital Radio Systems.

### COURSE OBJECTIVES

Upon completion of this course, you will be able to:

- Correctly categorize the different components available to build your MOTOTRBO™ system.
- Accurately explain the functional technology that MOTOTRBO™ systems employ
- Propose the MOTOTRBO™ topology that best fits the user requirements.
- Correctly describe MOTOTRBO™s digital and analog features.
- Analyze the various data applications' capabilities and everyday uses within the MOTOTRBO™ systems.
- Refer to system and channel capacity considerations during system planning.
- Refer to MOTOTRBO™ IP network design considerations during system planning.
- Design a fleetmap in accordance with organizational requirements and resources.
- Select the right MOTOTRBO™ tool for your needs.
- Successfully purchase, register, and activate premium radio features.

### REQUISITE KNOWLEDGE

Completion of the following optional courses or equivalent knowledge:

- RDS0003 Basic Networking
- RDS0002 Basic RF
- RDS0004 Basic Radio
- AAE1402 Professional and Commercial Radios (PCR) Portfolio Overview

### PREREQUISITES

None

## RADIO SOLUTIONS MOTOTRBO™

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[training.lacr@motorolasolutions.com](mailto:training.lacr@motorolasolutions.com)



**MOTOTRBO™ IP SITE  
CONNECT AND CAPACITY  
PLUS TECHNICAL  
OVERVIEW**

1.5 HRS      PCT1066

### COURSE OVERVIEW

This course is designed to help you understand the basics of a MOTOTRBO™ IP Site Connect and a MOTOTRBO™ Capacity Plus system. We'll begin by exploring their capabilities, features and positioning within the MOTOTRBO™ system solutions. You will also learn about the different system components and their general topology. The course will also review available MOTOTRBO™ services packages.

### TARGET AUDIENCE

Professionals responsible for selling, designing, configuring, deploying, or maintaining MOTOTRBO™ radio systems.

### COURSE OBJECTIVES

By the end of the course, you will be able to:

- Describe a MOTOTRBO™ IP Site Connect and Capacity Plus system.
- Explain the capabilities of the MOTOTRBO™ IP Site Connect and Capacity Plus system.
- Identify the MOTOTRBO™ IP Site Connect and Capacity Plus system components.
- Identify a MOTOTRBO™ IP Site Connect and Capacity Plus topology.
- Explain the difference in service plans between these systems.

### REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Basic Radio knowledge
- CEDMEL2000 MOTOTRBO™ Systems Introduction for Technicians

### PREREQUISITES

None



**MOTOTRBO™ IP SITE  
CONNECT AND CAPACITY  
PLUS THEORY OF  
OPERATIONS AND DESIGN**

1 DAY      PCT2023

### COURSE OVERVIEW

This course is designed to help you gain a solid foundation and understanding of the theory behind how an IPSC and Capacity Plus system functions. It describes the life cycle of a call, repeater arbitration and Motorola's proprietary Enhanced Channel Access (ECA) feature. In addition, you will learn about the different IPSC and Capacity Plus system design options, fleetmapping and the MOTOTRBO™ System Design Tool.

### TARGET AUDIENCE

Professionals responsible for designing and deploying MOTOTRBO™ radio systems.

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- Explain the call processing methods.
- Define repeater arbitration, Enhanced Channel Access (ECA) and All Start.
- List the considerations that must be taken into account when designing a MOTOTRBO™ IP Site Connect, Capacity Plus Single-Site or Capacity Plus Multi-Site system.
- Use the MOTOTRBO™ System Design Tool to size the system.
- Explain the purpose of Fleetmapping, how to conduct a fleetmap and its importance in system design.
- Illustrate possible system deployment topologies based on options selected.
- Describe the roaming process which helps to optimize User coverage.
- Describe Data capabilities.
- Understand the purpose and intent of voting repeaters and receivers.

### REQUISITE KNOWLEDGE

- Basic Radio knowledge
- CEDMEL2000 MOTOTRBO™ Systems Introduction for Technicians
- PCT1066 MOTOTRBO™ IP Site Connect and Capacity Plus Technical Overview

### PREREQUISITES

None



**MOTOTRBO™ IP SITE  
CONNECT AND CAPACITY  
PLUS SYSTEMS WORKSHOP**

4 DAYS      PCT3014

### COURSE OVERVIEW

This course allows the participant to acquire in-depth hands-on experience in planning, configuring, and deploying the following MOTOTRBO™ systems: Digital Conventional, IP Site Connect, Capacity Plus Single and Multi-Site. Under the Instructor's guidance, participants will have the opportunity to practise designing and deploying the systems in a safe classroom environment. The course also provides information on the fleetmapping considerations together with exercises for each system type.

### TARGET AUDIENCE

Professionals responsible for deploying MOTOTRBO™ radio systems.

### COURSE OBJECTIVES

Upon completion of this course, the participant will be able to:

- Describe the MOTOTRBO™ IP Site Connect and Capacity Plus (Single and Multi-Site) systems, their capabilities, system components, and data application.
- Describe the MOTOTRBO™ IP Site Connect and Capacity Plus (Single and Multi-Site) theory of operation.
- Describe the available MOTOTRBO™ IP Site Connect and Capacity Plus (Single and Multi-Site) topologies.
- Take the steps needed to configure IP Site Connect and Capacity Plus (Single and Multi-Site) systems using MOTOTRBO™ CPS to program the subscribers and repeaters.

### REQUISITE KNOWLEDGE

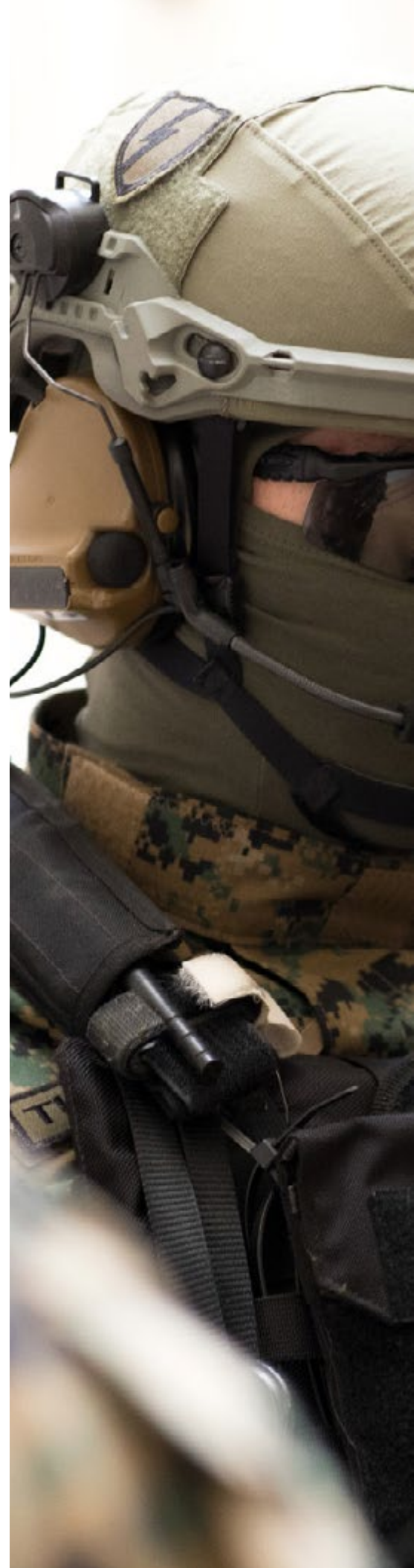
Basic Radio knowledge

### PREREQUISITES

- CEDMEL2000 MOTOTRBO™ System Introduction for Technicians
- PCT1066 MOTOTRBO™ IP Site Connect and Capacity Plus Technical Overview
- PCT2023 MOTOTRBO™ IP Site Connect and Capacity Plus Theory of Operations and Design

# SOFTWARE & APPLICATIONS

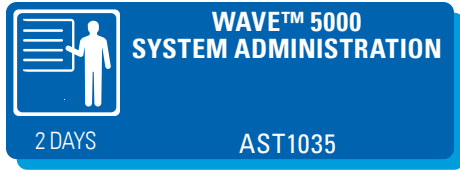
<b>WAVE™ 5000 SYSTEM ADMINISTRATION (AST1035)</b>	<b>61</b>
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## SOFTWARE & APPLICATIONS

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**WAVE™ 5000  
SYSTEM ADMINISTRATION**

2 DAYS      AST1035

### COURSE OVERVIEW

This course provides an overview of the WAVE™ 5000 Solution, its features, hardware requirements, and software and is targeted to the Administrator role and or support roles.

### TARGET AUDIENCE

You should attend this training course if you are an Administrator or support personnel of a WAVE™ 5000 solution.

### COURSE OBJECTIVES

By the end of the course, you will be able to:

- Add, edit and delete Channels.
- Create, edit and delete Channel Groups.
- Perform administration tasks for Users, Profiles, and Subscribers Manage Media and Proxy Servers.
- Manage Console.
- Understand SIP.
- Describe what QoS is.
- Describe Morse Call Signs public safety feature
- View log entries and delete log records in System Log.
- Search, play, and download recordings.
- Add, change, and delete audio files.
- Describe the WAVE™ Database.
- Find answers to troubleshooting questions.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**WAVE™ CERTIFIED  
INTEGRATION ENGINEER**

5 DAYS      AST3001

### COURSE OVERVIEW

The WAVE™ Certified Integration Engineer course provides instruction in designing, integrating, and troubleshooting WAVE™ systems. It also provides the groundwork for a basic understanding of how WAVE™ delivers a Radio-over-IP solution. The training scope covers WAVE™ integration to MOTOTRBO™, ASTRO®, and DIMETRA systems.

### TARGET AUDIENCE

Sales/Systems Engineers who will design and implement WAVE™ solutions.

### COURSE OBJECTIVES

After completing this course, the student will be able to:

- Understand and identify WAVE™ components.
- Install and configure the WAVE™ Management Server, Media Server, Proxy Server, Desktop Communicator, Advanced Desktop Communicator, and Mobile Communicators.
- Identify radio systems compatible with WAVE™ and list integration steps.
- Maintain and support a WAVE™ domain.

### REQUISITE KNOWLEDGE

General knowledge of IP Networking, IP Telephony, Server-class Operating Systems

### PREREQUISITES

None



**WAVE™ PTX APPLICATION  
OVERVIEW**

0.5 HRS      PSA0004L

### COURSE OVERVIEW

This course provides an overview of the WAVE™ PTX application. It offers guidelines for signing up for WAVE™ trial and includes demonstrations of how to make calls, share location, and send secure multimedia messages. It also explains how to use the latest features, such as Quick Group from Map, Geofencing, and Supervisory Override.

### TARGET AUDIENCE

This training is intended for new WAVE™ PTX users who want to start using the application and get familiar with its interface and features.

### COURSE OBJECTIVES

After completing this course, the participant will be able to:

- Sign up for the WAVE™ PTX trial and upgrade to a paid subscription.
- Navigate the new WAVE™ PTX PTT application's interface.
- Make calls, share location, and send secure multimedia messages.
- Create Quick Groups from the map view, add Geofences, and use Supervisory Override.

### REQUISITE KNOWLEDGE

None

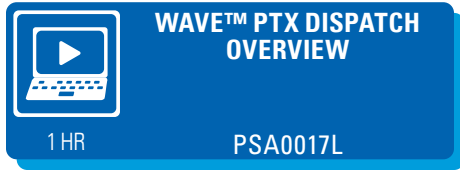
### PREREQUISITES

None

## SOFTWARE & APPLICATIONS

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[training.lacr@motorolasolutions.com](mailto:training.lacr@motorolasolutions.com)



**WAVE™ PTX DISPATCH OVERVIEW**  
1 HR  
PSA0017L

### COURSE OVERVIEW

This course provides instruction on how to operate the WAVE™ PTX Dispatch web-based application. Split into short clips, this in-depth course covers the basics, from installation and high-level overview, through making, receiving and recording calls, sending and receiving secured messages, using the map and monitoring TalkGroups, and then moves on to more advanced features, such as geofencing and location history.

### TARGET AUDIENCE

This training is intended for WAVE™ PTX users who want to get familiar with the features and operation principles of WAVE™ PTX Dispatch application in order to coordinate fleets and communicate with them.

### COURSE OBJECTIVES

By the end of the course, you will be able to:

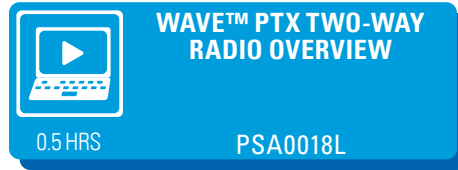
- Install and launch WAVE™ PTX Dispatch application.
- Navigate the application's interface.
- Use the map.
- Make and receive calls.
- Send and receive secure messages.
- Perform advanced operations.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**WAVE™ PTX TWO-WAY RADIO OVERVIEW**  
0.5 HRS  
PSA0018L

### COURSE OVERVIEW

This course covers the most essential operations available for WAVE™ PTX Two-Way Radio, such as adding and activating radios through WAVE™ PTX Portal, turning the device on and making talkgroup and private calls. It also touches upon battery and status indicators and basic troubleshooting procedures.

### TARGET AUDIENCE

This training is intended for WAVE™ PTX users who want to learn how to add and activate a TLK 100 through WAVE™ PTX Portal and how to operate the device.

### COURSE OBJECTIVES

By the end of the course, you will be able to:

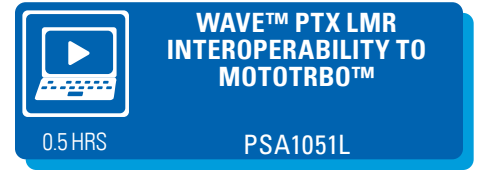
- Add, activate, and edit a TLK 100 through WAVE™ PTX Portal.
- Make and receive talkgroup and private calls.
- Perform basic troubleshooting procedures.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**WAVE™ PTX LMR INTEROPERABILITY TO MOTOTRBO™**  
0.5 HRS  
PSA1051L

### COURSE OVERVIEW

This course provides instructions on how to integrate the WAVE™ PTX application with MOTOTRBO™ Systems. It includes software simulations showing how to add radio systems and gateways. It also provides guidance on how to associate Gateways with Radio Systems, edit Radio Systems, add Subscribers and TalkGroups.

### TARGET AUDIENCE

This training is intended for WAVE™ PTX users who want to get familiar with the process of WAVE™ PTX integration with MOTOTRBO™ Systems, including operations on Radio Systems, Gateways, Subscribers and TalkGroups.

### COURSE OBJECTIVES

After completing this course, the participant will be able to:

- Add Radio Systems in WAVE™ PTX (Capacity Plus Single Site, Capacity Plus Multi-Site, and Capacity Max).
- Add Gateways in WAVE™ PTX and associate them with Radio Systems.
- Edit Radio Systems, add Subscribers and TalkGroups.

### REQUISITE KNOWLEDGE

Completion of the following course or equivalent experience:

- PSA2001L WAVE™ PTX Administrator


### PREREQUISITES

None

## SOFTWARE & APPLICATIONS

For information on prerequisites and to register for courses visit the LXP at:  
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[training.lacr@motorolasolutions.com](mailto:training.lacr@motorolasolutions.com)



**WAVE™ PTX  
ADMINISTRATOR**

0.5 HRS      PSA2001L

### COURSE OVERVIEW

This course provides an overview of the WAVE™ PTX application, its key features, integration possibilities, and roles within the application. It includes clickable software simulations showing basic operations, operations on Customers, and operations on Partner Employees within the Administrator role.

### TARGET AUDIENCE

This training is intended for WAVE™ PTX users who want to get familiar with Administrator features and functionalities of the application.

### COURSE OBJECTIVES

By the end of the course, you should be able to:

- Describe the WAVE™ PTX application, its key features, integration possibilities, and roles within the system.
- Perform basic operations.
- Perform operations on Customers: adding, editing Customers, Employees, Users, and TalkGroups.
- Perform operations on Partner Employees: adding and editing Partner Employees.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**PREMIERONE APPLICATION  
INTEGRATION FOR FIELD  
RESPONDERS OVERVIEW**

1 HR      AST0015

### COURSE OVERVIEW

This course provides a high level overview of how information flows through the PremierOne Suite and the integration between each product.

### TARGET AUDIENCE

This training is intended for anyone who wants an understanding of PremierOne CAD features, basic dispatching functions, and call taking functions.

### COURSE OBJECTIVES

By the end of the course, you will be able to:

- Participate the Pre-Provision Training
- Recognize the interaction between PremierOne CAD, Mobile, Handheld and Records products

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**PREMIERONE SUITE HIGH  
LEVEL OVERVIEW**

1 HR      AST1015

### COURSE OVERVIEW

This course is a high-level overview of what PremierOne suite is. It explains basic concepts and functionalities of PremierOne applications that are part of the suite and shows how these integrate into a customers' organization.

### TARGET AUDIENCE

This training is intended for anyone who wants an understanding of PremierOne CAD features, basic dispatching functions, and call taking functions

### COURSE OBJECTIVES

At the completion of the course the students will be able to:

- Identify all the applications of the PremierOne Suite
- Describe how the applications integrate into a customers' work place

### REQUISITE KNOWLEDGE

None

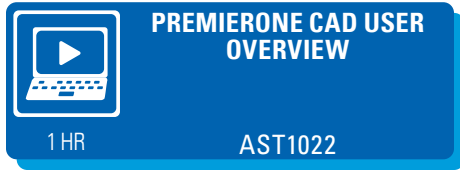
### PREREQUISITES

None

## SOFTWARE & APPLICATIONS

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**PREMIERONE CAD USER OVERVIEW**  
1 HR  
AST1022

### COURSE OVERVIEW

This course will show how PremierOne CAD is used in a customer environment. The full suite of applications will be seen or referenced however, not all of them may be installed at any one customer site.

### TARGET AUDIENCE

This training is intended for anyone who wants an understanding of PremierOne CAD features and how to perform basic dispatching and call taking functions.

### COURSE OBJECTIVES

By the end of the course, you should be able to:

- Recognize PremierOne CAD from the CAD dispatchers point of view
- Identify information the dispatcher receives from the public
- Identify information the dispatcher sends to the officer (mobile)
- Identify information the dispatcher receives back from the officer

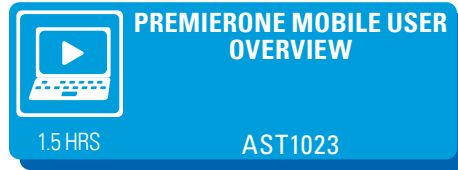
### REQUISITE KNOWLEDGE

Completion of the following course or equivalent experience:

- AST1015 PremierOne Suite High Level Overview

### PREREQUISITES

None



**PREMIERONE MOBILE USER OVERVIEW**  
1.5 HRS  
AST1023

### COURSE OVERVIEW

This course will show PremierOne Mobile as it would be used in a customer environment. The full suite of applications will be seen or referenced however, not all of them may be installed at any one customer site.

### TARGET AUDIENCE

This training is intended for anyone who wants an understanding of PremierOne Mobile features and how to perform basic tasks, such as running a query, responding to an incident, and performing a traffic stop, and more.

### COURSE OBJECTIVES

By the end of the course, you will be able to:

- Recognize PremierOne Mobile in a typical scenario
- Identify various types of information that officers send to the dispatcher, and what type of information the dispatcher sends to the officer (mobile)

### REQUISITE KNOWLEDGE

Completion of the following course or equivalent experience:

- AST1015 PremierOne Suite High Level Overview

### PREREQUISITES

None



**PREMIERONE RECORDS USER OVERVIEW**  
1 HR  
AST1024

### COURSE OVERVIEW

This course allows the attendees to view a demonstration of the case reports flow and other day-to-day operations within PremierOne Records.

### TARGET AUDIENCE

This training is intended for anyone who wants an understanding of PremierOne CAD features, basic dispatching functions, and call taking functions.

### COURSE OBJECTIVES

At the completion of the course the students will be able to:

- Describe the use of PremierOne Records from various user role perspectives
- Recognize how the product works at a functional level

### REQUISITE KNOWLEDGE

Completion of the following course or equivalent experience:

- AST1015 PremierOne Suite High Level Overview

### PREREQUISITES

None



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**PREMIERONE JAIL USER OVERVIEW**

1 HR      AST1025

### COURSE OVERVIEW

This course provides a walkthrough of offender management processes within PremierOne Jail from Arrest to Release.

### TARGET AUDIENCE

This training is intended for anyone who wants an understanding of PremierOne Jail features and how to perform basic tasks, such as inmate booking, assessments, sentencing, and more.

### COURSE OBJECTIVES

By the end of the course, you should be able to:

- Describe the offender management workflow used within PremierOne Jail
- Recognize how the product works at a functional level

### REQUISITE KNOWLEDGE

Completion of the following course or equivalent experience:

- AST1015 PremierOne Suite High Level Overview

### PREREQUISITES

None



**INTELLIGENT MIDDLEWARE 5.2 OPERATION AND ADMINISTRATION**

2 DAYS      RDS2025

### COURSE OVERVIEW

The purpose of this course is to provide the steps to operate and maintain a customer's IMW system within their Motorola system (ASTRO®, DIMETRA, LTE).

### TARGET AUDIENCE

Professionals responsible for the operation and maintenance of a customer's IMW system within their Motorola systems (ASTRO®, DIMETRA, LTE).

### COURSE OBJECTIVES

By the end of the course, you will be able to:

- Describe IMW features.
- Configure an IMW system.
- Identify the IMW tools to administer the system.
- Perform routine administration.
- Perform troubleshooting.
- Understand system-specific considerations.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None

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