



**XTS 2500
Type II**

Montgomery County Emergency Services 800 MHz Rebanding Training

XTS 2500 Type II Portable Radio



Before You Begin...



**XTS 2500
Type II**

View the main training video first, it covers:

- General Radio Review
- Overview of Montgomery County's Radio System
- Rebanding & Interoperability
- Channel Matrix Discussion
- Talk Group Usage, Event Channels, Local Channels



XTS 2500, Type II: Overview



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Radio Functions:

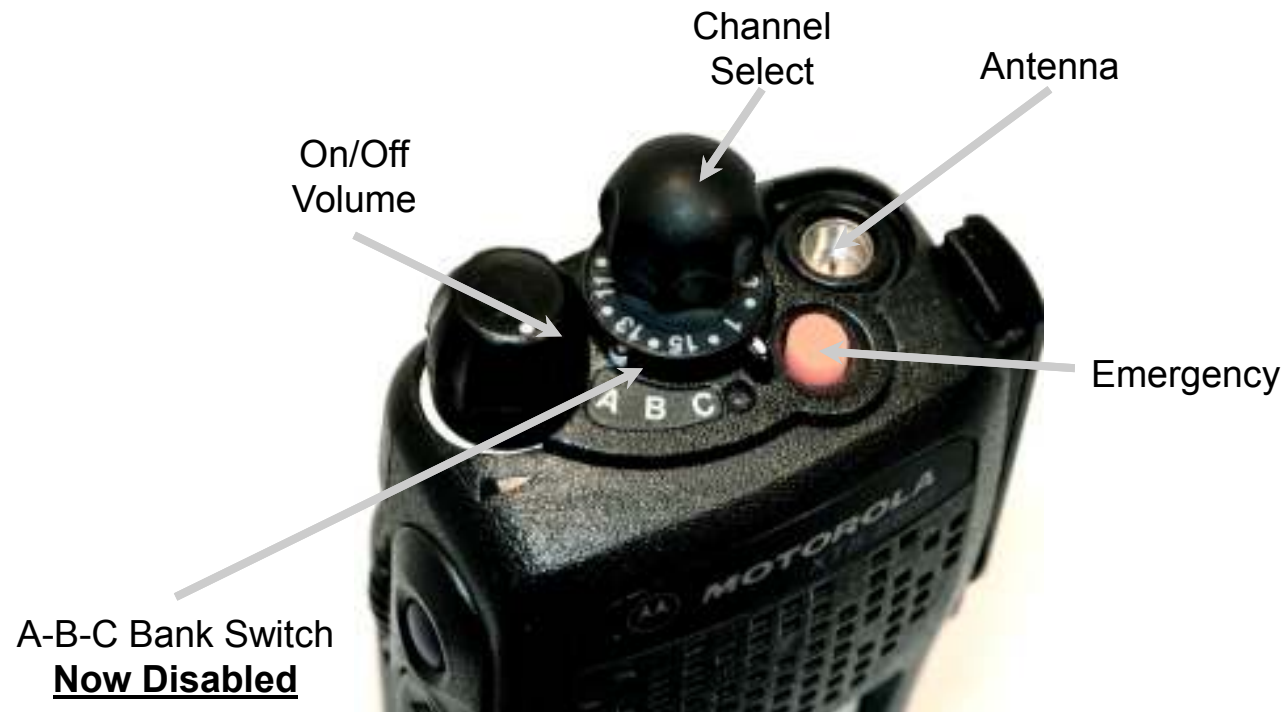
- Radio Operation
- Audio Alerts: Tones & Bonks
- Emergency Operation
- Scan, Nuisance Delete
- Side Cover & Accessories
- Battery Care
- Antenna
- How to Report a Problem



XTS 2500, Type II: Overview



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XTS 2500, Type II: Side Panel Controls



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XTS 2500, Type II: Front Panel Controls



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Menu Select Buttons

Associate with whatever function is directly above them

Home Button

Closes out of a programming session

XTS 2500, Type II: Front Panel Controls



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4 - Way Navigation

- **Left/Right:** Changes soft key options on display. Navigates zones when in scan program mode
- **Up/Down:** adjusts programmable date and clock when clock mode selected. Navigates talk groups when in scan program mode



XTS 2500, Type II: Radio Power Up



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To Power up the Radio

- Turn the Volume Knob clockwise to power the radio ON
- Your Radio will always ***power up to the last channel and Scan Mode (Scan On/Off) you were tuned to when your radio was powered off***
- Display screen will read “Self Test” and radio will give a short beep upon power up

On / OFF and Volume Control

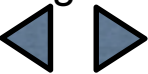


XTS 2500, Type II: Zones



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Navigate through Zones

- Press the menu select button that is directly below Zone
- Common Talk Groups are stored in **Zones** in your radio
- Prior to rebanding, **Banks** or **Zones** were associated with the A, B, and C Bank Switch
- Additional Zones to accommodate the previous Banks or Zones, plus Conventional Old and Conventional New Channels
- Zone through Zones using Left/Right Navigation Arrows 
- Press Home Button to select Zone



XTS 2500, Type II: Transmit Operation



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To Transmit

- Select the Talk Group/Channel you want to communicate with
- Listen for ongoing traffic and ensure open air before pressing the Push-To-Talk (PTT) Switch
- Press the PTT Switch, wait for the Talk Permit Tone and speak



XTS 2500, Type II: Transmit Operation



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Speaking into the Microphone

- Fully depress the PTT switch and wait for the beep. ***If you talk before you hear the Talk Permit Tone, some of what you said will be lost***
- Release the PTT switch when done speaking. For best results, keep messages brief (a few seconds)

PTT Switch



XTS 2500, Type II: Transmit Operation



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For BEST Results

- Hold the microphone about 2 inches from your mouth and speak at a normal conversation tone
- Shouting distorts your voice and DOES NOT increase radio range
- Always face the microphone

Microphone



XTS 2500, Type II: Receive Operation



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To Receive a Call

- Ensure that the radio is selected to the proper Talk Group /Channel
- When in Scan, select the channel that has the highest priority
- When turning the Scan OFF, this **ONLY** allows you to monitor the Channel which is in the radio display



XTS 2500, Type II: Audio Alerts



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REMEMBER! This is a Repeater-type system

If you talk before you hear the Talk Permit Tone, some of what you said will be lost

If you hear a tone when pressing the PTT, one of several things may be happening:

- No Signal
- All Channels are Busy
- Your Radio is Damaged
- Your Radio Battery is Depleted



XTS 2500, Type II: Audio Alerts



XTS 2500
Type II

If you receive a Busy Signal

- Release the PTT Switch
- Wait for the Talk Permit Tone
- Push the PTT and transmit your message

Notes on Busy Signals

- Delay is often very short (a few seconds)
- Remember to release the PTT and wait for the Talk Permit Tone.
- By repeatedly pushing the PTT, you are repeatedly placed “in line” for transmitting -- which makes your wait **longer!**



XTS 2500, Type II: Audio Alerts



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Fail Soft Mode

- Failure of Trunking System
- Radio automatically goes to Fail Soft
- Radio will beep every 10 seconds and display “Fail Soft” on screen

Notes on Fail Soft Mode

- Many Talk Groups will be put onto one channel, so you may hear departments you normally would not hear
- **EMERGENCY TRAFFIC ONLY!** Resources are limited, so restrict transmissions



XTS 2500, Type II: Audio Alerts



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Audio Alerts

- Talk Permit Tone
- Unprogrammed Channel/Extended Time in Program Scan Mode
- Busy Signal
- Low Battery
- Out-of-Range
- Emergency



XTS 2500, Type II: Audio Alerts



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Out of Range Tone

- If your radio is receiving the Out-of-Range Tone, your radio is NOT seen by the system
- You cannot Talk or Receive messages on trunked channels
- Talk Groups and the **Emergency Button** *will not work* when you are Out-of-Range
- Your operations may need to utilize Local Channels for communication



XTS 2500, Type II: **EMERGENCY** Operation



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The **Emergency** Button:

Used in situations that demand immediate communications.

Think “**LIFE AND DEATH**”



XTS 2500, Type II: **EMERGENCY** Operation



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Declaring an **Emergency**

- **Instantaneous** Transmit
- **“HOT MIC”**: When activated, your microphone will automatically open for 10 Seconds
- **Emergency Button** must be depressed to activate an emergency



XTS 2500, Type II: **EMERGENCY** Operation



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Clearing the **Emergency**

- Once you have transmitted your emergency you need to clear your radio from the **Emergency Mode**
- **First**, speak with dispatch to verify that Emergency can be cleared
- Then **turn the radio off and back on again**



XTS 2500, Type II: Scanning



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800 MHz Radio can Scan 15 Talkgroups

- Only scan Talkgroups within the **WEST** or **EAST** at one time
- When set to a selected channel AND Scanning, any message from that selected channel will **override** the scanned Talkgroups
- When responding to another Zone / Region, switch radio to the Zone / Region where the incident exists
- Responding units will then be in direct communications with Incident Commander or Officer in Charge



XTS 2500, Type II: Scanning



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Scan ON/Off, Program Scan

Entering Scan Mode

- By pushing the Scan On/Off button, your radio will enter Scan Mode
- Look for the Scan Symbol in the radio display to ensure that Scan mode is On
- Turning the Scan Off allows you to **ONLY** monitor the Channel which is in the radio display. To resume scanning, press the Scan On/Off button



Note:

When your radio is powered OFF and then ON, it will remain in the mode that you left it (Scan On or Scan Off)

XTS 2500, Type II: Programming a Scan List



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Press and hold the Scan Button. The radio will beep once. A flashing □ symbol and **SEL DEL RCL** (above Soft Keys) will appear on the display screen. The radio is in programming mode

1. Rotate the “channel” knob to a “channel” you wish to add or delete to your scan list. Use the Soft Keys to navigate through Zones

2. Press button directly below (SEL) or (DEL) on the display of the radio to Select or Delete “channels”. The “Z” Scan Symbol means the “channel” has been added to the scan list

3. Press the soft key **RCL** (Recall) to review all the Talkgroups currently in your scan list

4. When finished making changes, press the **HOME** button until the flashing □ disappears; your radio is ready for use

Note:

If the radio is left in the program mode (flashing □) too long, the radio will sound a continuous tone until the Home button is pressed



XTS 2500, Type II: Programming a Scan List



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Interruption during Programming a Scan List

- Programming can be interrupted by turning the radio OFF/On or if the PTT is pushed to transmit
- Radio will be taken out of Program Scan to Operation Mode
- If this occurs, **VERIFY** that changes to your Scan List have been saved by returning to Program Scan mode



XTS 2500, Type II: Nuisance Delete



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Nuisance Delete

- When the radio scans to a channel you do not want to hear, you can temporarily remove the channel from your scan session by pressing the **Nuisance Delete** button
- For each channel that is a “nuisance,” simply press the Nuisance Delete button, until you have only the channels you want to hear
- Channels that have been Nuisance Deleted are re-enabled by changing the Channel Selector knob or powering your radio OFF/ON



**Nuisance
Delete**

Note:

You cannot “delete” Priority Channels

XTS 2500, Type II: Side Cover & Accessories



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Side Cover

- The **side cover** keeps the radio's Accessory Connector contacts clean when no accessory is connected
- The side cover is removable to utilize accessories such as a shoulder mounted microphone



Side Cover



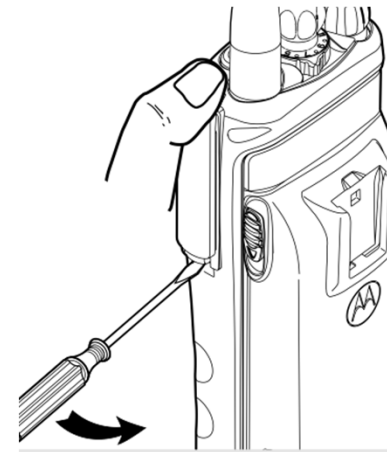
XTS 2500, Type II: Side Cover & Accessories



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Removing the Side Cover

- To remove the **side cover**, loosen the set screw and lift the cover from the base
- Accessories or the side cover can be reattached by hinging at the top and then smoothing downward with your thumb. *Accessories may have a set screw that needs tightened*



XTS 2500, Type II: Battery Care



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Proper Battery Care

- Proper battery care enhances the usefulness of the radio battery. The battery should be recharged as soon as practical when the Low Battery indication appears
- A fully charged battery provides approximately 8 to 12 hours of service (*depending on the battery type*) before recharging is required. *This time will be reduced if more than 5% of the time is spent transmitting, or if the battery is not fully charged or its capacity has deteriorated*
- Additional accessories will contribute to loss of battery power



XTS 2500, Type II: Battery Care



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Removing the Battery

- To remove the battery simply depress the 2 battery release switches -- one located on each side of the battery -- and pull the battery pack downward simultaneously
- Slide the battery pack down and away from the radio to release battery from the radio unit

Battery Release
Switches



XTS 2500, Type II: Battery Care



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Replacing the Battery

- To replace the battery, be sure to place the battery hinges into the receiving clips on the base of the radio first
- Then snap battery into place

Hinge



XTS 2500, Type II: Antenna



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Proper Antenna Care

- Never replace the standard, half wave, flexible 7 1/2 inch, system recommended antenna with an after-market antenna. For questions, please reference the County policy
- Do not replace the factory supplied antenna with a Stubby antenna as it will not provide optimum radio frequency propagation. Radio talk-out will be degraded.
- Do not over tighten the antenna

Reporting a Problem



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Radio Repair Shop

Monday - Friday, 8:00 AM to 4:00 PM
(610) 631 - 6511

- Lost or Stolen Radios
- Radio Error (Document all Error Codes)



Reporting a Problem



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Radio Incidents

Fill out a Radio Incident Report Form

Fax to: (610) 631 - 6536

Form is available to download on-line at:

www.dps.montcopa.org

Type "Radio Incident Report" in the Search



Richard K. Lohwasser
Assistant Deputy Director
Montgomery County Emergency Dispatch Services
50 Eagleville Road
Eagleville, Pennsylvania 19403-1425
610-631-6542 Office
610-631-6536 Fax

Radio Incident Report

Department:		Officer, or Operator:		
Date:	Time:	Radio Unit ID:		
Weather Conditions:				
Location:		In Building:	Outside:	
		Talkgroup/Channel?		
Mobile (Unit #):		Portable (Unit #):		
Model/Type	MCS (old)	Astro (new)	MTS (old)	Digital (new)
	In Motion	Parked	On Hip	Head Set
Problem:				
Does radio make a no system "bark"? (a "bark" tone every 20 seconds)				
Does radio "bark" when you try to transmit?				
Receive problem: (explain)				
Transmit problem: (explain)				

Reporting a Problem



**XTS 2500
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For System Questions

Contact:

Rick Lohwasser, Assistant Director for Technical Services

(610) 631 - 6542

rlohwass@montcopa.org



Video Training



**XTS 2500
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Questions not answered within the video can be emailed directly to:

eoctech@montcopa.org



Video Training



**XTS 2500
Type II**

Please complete the short survey at completion of your review of relevant videos

Acknowledgement of Training

Please complete the following information in acknowledgement of viewing applicable training videos.

*** Required**

First Name *

Last Name *
Department or Company *
Please type full department or company name, not number.
Training Videos reviewed: *
Please check all that apply.

XTL Series
 XTS Series
 APX Series
 Astra Spectrum Series
 MCS Series
 MTS Series
 Other:

I certify that I have viewed and understand the information provided in the training videos selected above. I understand that if I have any additional questions regarding the training materials, I should contact my shift supervisor. *

By checking this box, I acknowledge and accept the above statement.

Please answer the following questions as they apply to the video training course. *
Lowest - Highest (1 - 5)

	1	2	3	4	5
How well did the course content meet your needs?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How much better will you be able to operate your radio, as related to your job duties, now that you have taken the course?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>