



APX 6000

Montgomery County Emergency Services 800 MHz Rebanding Training

APX 6000 Portable Radio



Before You Begin...



APX 6000

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



APX 6000: Overview



APX 6000

Radio Functions:

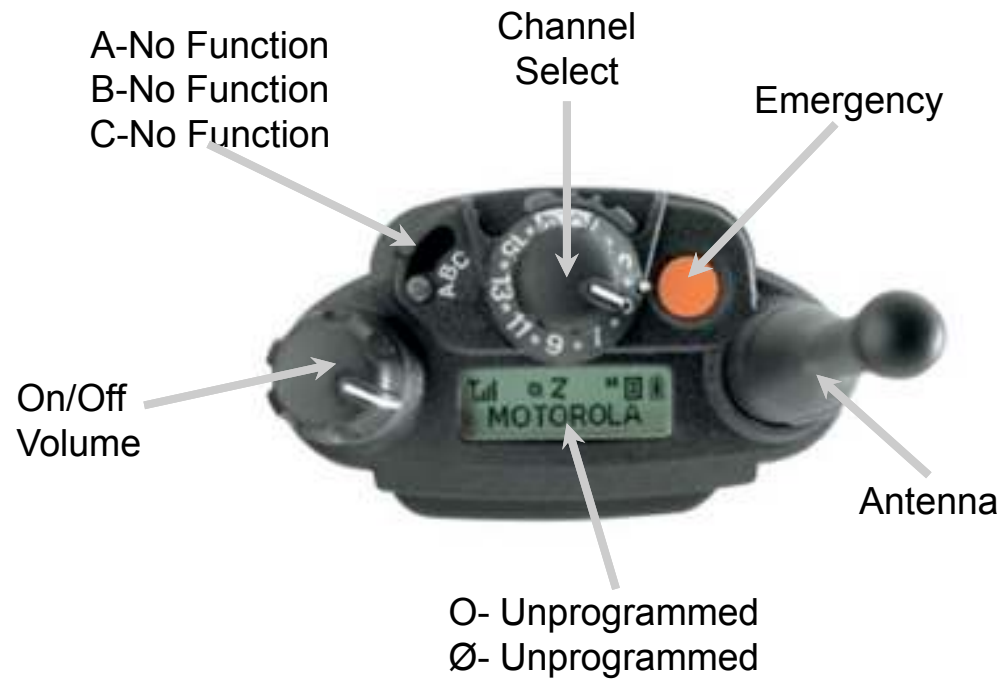
- Radio Operation
- Audio Alerts: Tones & Bonks
- Emergency Operation
- Scan, Nuisance Delete
- Side Cover & Accessories
- Battery Care
- Antenna
- How to Report a Problem



APX 6000: Overview



APX 6000



APX 6000: Side Panel Controls



APX 6000

Side Control Panel

- Back Light
- Push-to-Talk (PPT)
- ScanOn/Off/Program Scan Mode
- Nuisance Delete



APX 6000: Front Panel Controls



APX 6000



Menu Select Buttons

Associate with whatever function is directly above them

Home Button

Closes out of a programming session.

APX 6000: Front Panel Controls



APX 6000

4 - Way Navigation

- **Left/Right:** Navigates zones when radio is in Program Scan Mode. Adjusts programmable date and clock when clock mode selected
- **Up/Down:** Navigates talkgroups when in Program Scan Mode. adjusts programmable date and clock when clock mode selected. Navigates talk groups when in scan program mode.



APX 6000: 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

APX 6000: Zones



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Navigating Through Zones

- Press the Menu Select button that is directly below Zone Up (ZN UP) or Zone Down (ZN DN)
- 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 Up or Zone Down will navigate you through your Zones in the Channel Matrix
- Channel Select Knob to tune to the desired channel
- Zone up or Zone Down select button to return home



APX 6000: 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

Channel Selector



APX 6000: 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



APX 6000: 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
- **Note:** APX 6000 is equipped with Dual Microphones and Speakers, one on each side of the radio unit

Microphone



APX 6000: Receive Operation



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To Receive a Call

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

Channel Selector



APX 6000: 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



APX 6000: Audio Alerts



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!**

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APX 6000: 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



APX 6000: 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



APX 6000: 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



APX 6000: **EMERGENCY** Operation



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The **Emergency** Button:

Used in situations that demand immediate communications

Think “**LIFE AND DEATH**”



APX 6000: **EMERGENCY** Operation



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Declaring an **Emergency**

- **Instantaneous** Transmit
- “**HOT MIC**”: When activated, your microphone will automatically open for 10 Seconds. Both LCD screens will feature **Emergency** operation indicators in orange
- **Emergency Button** must be depressed to activate an emergency
- Identify yourself and state your **emergency**
- You will be immediately heard at the dispatch center



APX 6000: **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**



APX 6000: 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



APX 6000: Scanning



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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



Scan On/Off

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)

APX 6000: 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 menu 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 4-Way Navigation arrow to navigate through Zones.
2. Press the button directly below (SEL) or (DEL) on the display of the radio to Select or Delete “channels”. The Scan Symbol Z means the “channel” has been added to the scan list
3. Press the soft key RCL (recall) to review all the talk groups currently in your scan list
3. When finished making changes, press the HOME button until the flashing disappears. Your radio is ready for use



Note:

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

APX 6000: 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



APX 6000: 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

Note:

You cannot “delete” Priority Channels



APX 6000: 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



APX 6000: 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*



APX 6000: 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



APX 6000: 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

APX 6000: Battery Care



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Replacing the Battery

- To replace the battery, align the battery pack with the radio unit and push the battery pack upward
- The battery will snap into place



APX 6000: 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) | MIS (old) | Digital (new) |
| | In Motion | Parked | On Hip | Head Level |
| 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



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For System Questions

Contact:

Rick Lohwasser, Assistant Director for Technical Services

(610) 631 - 6542

rlohwass@montcopa.org



Video Training



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

eoctech@montcopa.org



Video Training



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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.

KTL Series

XTR Series

APX Series

Astro Spectra 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"/> |