

# City of Winchester

## Radio Communications System Training



**ONE DEPARTMENT - ONE FAMILY - ONE GOAL!**

# Training Plan

- Mandatory for all WFRD Career and Volunteer Personnel Prior to Using the System.
- 35 Class Offerings
- Class Room & Practical
- Review Department IB & Calendar for Dates and Times

# System Overview

- Cut-Over TBD
- F&R has 12- 800 mHz. takgroups vs. 3 old VHF analog Channels
- VHF Maintained for Interoperability
- 2 Antenna Sites
- 95% In Building Coverage
- Most City Services had Radio Access
- Radio Systems Manager to Manage

# System Overview

## Continued

- Emergency Alert Activation (EA)
- ALL Talkgroups are Recorded
- ECC Monitors only Specific Fire Talkgroup's
  - FR-1, FR-2, FR-3 & Win Call (Ch16)
- Presentation and SOP's on our Website

# SUBSCRIBER EQUIPMENT

# Subscriber Equipment Use

- WFRD SOP 6.3 Subscriber Unit Usage.
- WFRD SOP 6.8 Subscriber Unit ID System.

# Minitor Pagers



- New Minitor VI pagers distributed to command staff
- Existing Minitor V pagers will be reprogrammed and distributed to the Battalion Chiefs
- NO pagers will be distributed to the stations for personnel use. The portable will serve this role if needed

# Station Alerting

- All stations have been equipped with Minitor VI Pagers and Amplified Bases
- Tied to house alarms, lights, and speakers
- **NO** user intervention is needed
- **DO NOT** remove or modify these devices
- Will be made secure in the near future



# APX 7000 Portable

- Dual Band 800mhz/VHF
- Apparatus Position Specific
- Radio Identification
- Encryption (Officers only)
- Noise Cancelling Mics
- Soft Keys
- Home Keys
- Zone Operation



# APX 7000 Portable

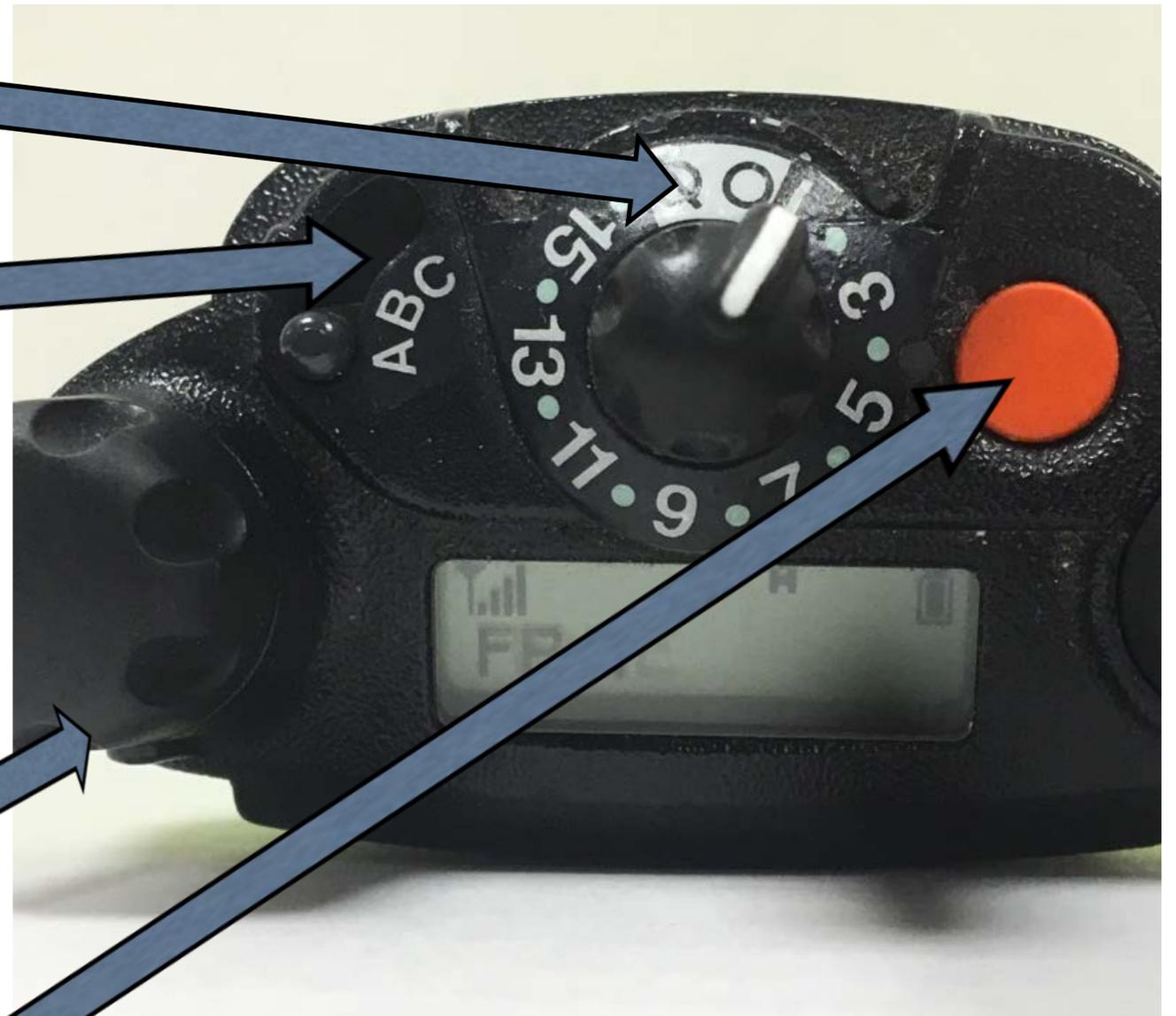
- 4-on each Fire Apparatus
- 2-on each Medic Units
- 5-Spares on BC-6
- 2-TEMO
- BC and up (Assigned Portables)
- 1-Volunteer Serv/Utilities
- 1-Bank Charger on BC-6
- 1-Bank Charger in each Station
- 1-Bank Charger at Station 6
- Spare Batteries for all Bank Chargers



# APX 7000 Portable

Top

- Talk Group/Channel Knob
- A-B-C
  - A - **WFRD** Home
  - B - Clarke & Warren
  - C - **Frederick**
- On/Off/Volume
- EA Button



# APX 7000 Portable

## Left Side Button Configuration

- Monitor(Carrier Sql.)
- PTT
- Screen Flip (Top) -  
Hold/Light - Tap
- RSSI – Radio Signal  
Strength Indicator



# APX 7000 Portable

## Back Buttons

- Noise Cancelling Mics
- Soft Keys
- Home Key
- Keypad



# APX 7000 Portable

## Remote Speaker Mic

- Attached to Portable & in Leather Case
- Noise Canceling Capability
- Speak Across the RSM
- 1"-2" from Mouth or Mask
- Carry Position - Drain Holes
- PPE Orientation



# APX 7000 Portable

## Remote Speaker Mic

- Emergency Activation Button

- Volume

- Light / On-Off

- PTT

- Alternate Button



# HT 750 Portable

## Existing VHF

- Maintained for Mutual Aid
- Will be Reprogrammed with FCFR Channel Plan (VHF)
- Operations, Command Support & Special Events.
- Cache stored at Fire Administration at TPSC.

# HT 1250 Portable

## Existing VHF

- Maintained for Mutual Aid
- Will be reprogrammed with FCFR Channel Plan (VHF)
- Operations, Command Support, Special Events, and Hazmat
- 1 Assigned to Command Staff vehicles.
- 2 Assigned to Battalion 6.
- Spare Cache stored at Fire Administration at TPSC.



# HT 1000 Portable

## Existing VHF

- Will be Reprogrammed with City VHF Interop and Fredrick County Training Frequencies.
- Will be maintained for Training and Special Events.

# Adding Subscriber Units

- **WFRD SOP 6.3** – No subscribers will be added without the approval of WFRD Fire Chief and the Radio Systems Manager.
- City policy under development.
- Motorola Contract based limitations at startup.
- Only Motorola Equipment will be authorized to be used on the system.

# Personal Radios

- **No** use of personal VHF equipment due to liability, NO EA capability and potential system patching interferences
- **No** use of personal 800 radios.

# APX 4500 Mobile

- SERV, Utility & Admin Vehicles
- APX 4500  
800mhz  
Standalone  
Radio
- XTL 1500 VHF  
Standalone  
Radio



# APX 4500 Mobile

## Button Configuration

- Emergency Button
- Power Button
- Menu Select Buttons



# APX 4500 Mobile

## Button Configuration

- Up/Down Button

- Dimmer Button

- Home Button



- Volume and Channel Selection

# XTL 1500

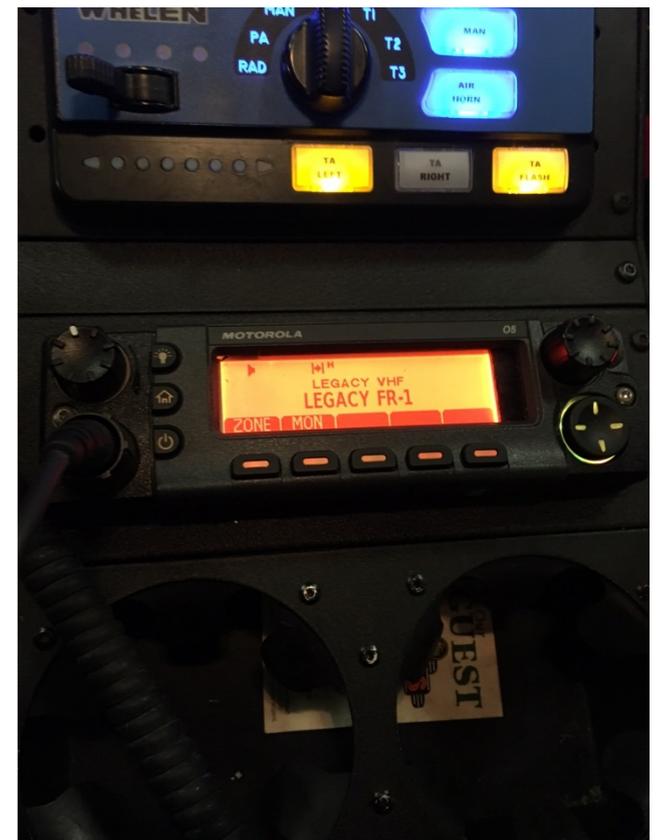
VHF

- Re-programmed with FCFR Channel Plan (VHF)
- Installed in all Serv/Admin & Utilities
- Setup to receive County and City (VHF) EA's.



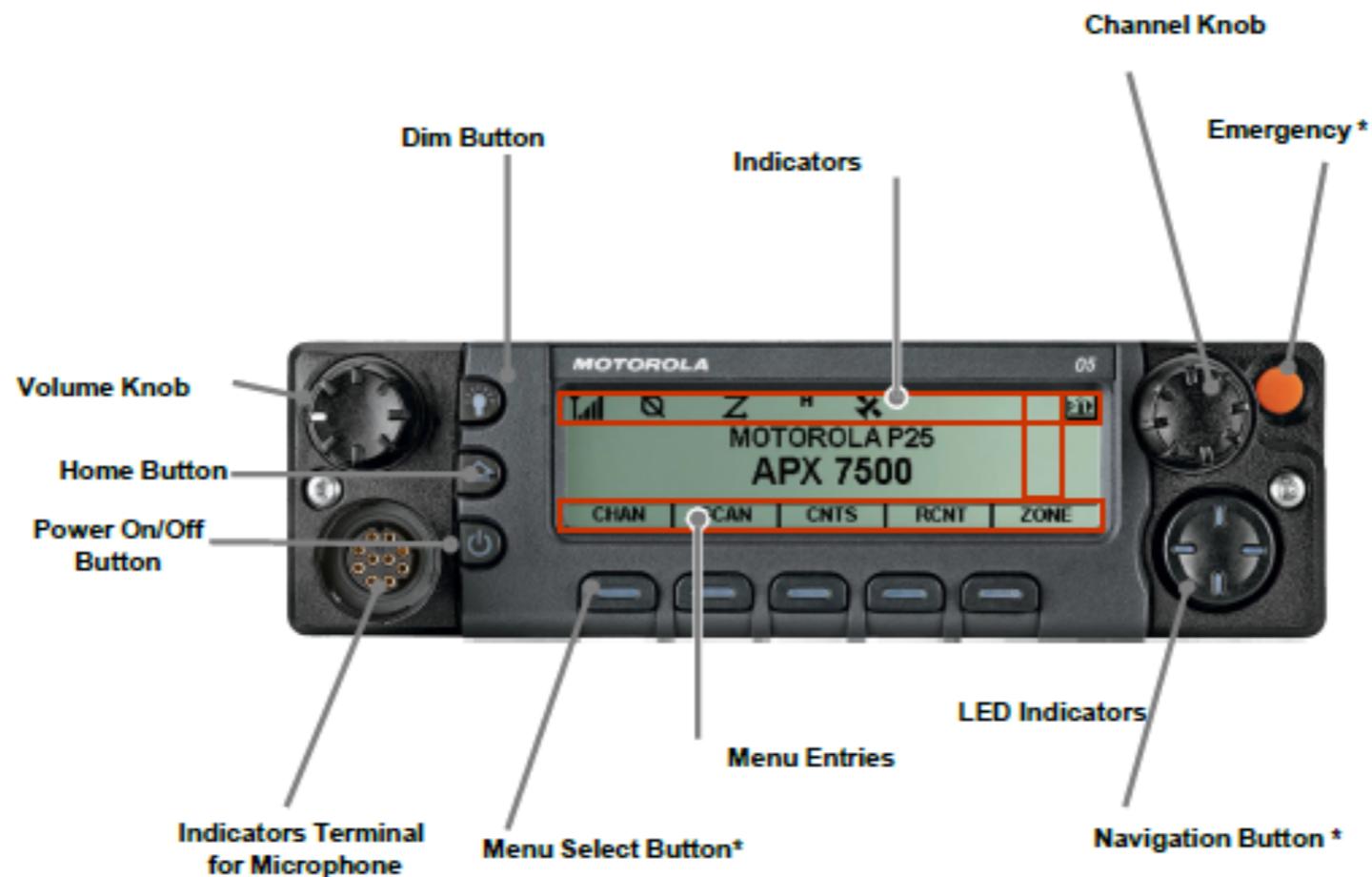
# APX 7500 Mobile

- Dual Band 800/VHF
- Placed in Fire & EMS Apparatus.
- Dual Head Version in Battalion 6 & Chief 6.



# APX 7500 Mobile

## Button Configuration



# Subscriber Unit Daily Operations and Maintenance

- **WFRD SOP 6.6** Subscriber Unit Maintenance.
- Daily Checks
  - Riding Position Specific
  - Battery Charging/Replacement
  - Leather Straps
- Missing Radio Procedure
- Radio Maintenance Procedure

# Zones & Talk Groups

800mhz Trunked System and VHF

- Zones/Channels/Talk Groups - Definitions
- Common Names across the system
- All F&R radios (Portables & Mobiles) are Programmed the same for Consistency and ease of use.
- **WFRD SOP 6.5** Radio Designators.
- **WFRD SOP 6.7** Radio Talkgroups and Zones.

# Fire & Rescue Zones

Zone 1	Winchester (800)
Zone 2	Clarke County & Warren County (VHF)
Zone 3	Frederick County (VHF)
Zone 4	City Agency Interop (800)
Zone 5	Regional Disaster (800)
Zone 6	Regional Disaster (VHF)
Zone 7	Legacy VHF (will be removed after cutover)
Zone 8	Training (VHF)

# RADIO OPERATIONS

# Plain Language Communications

- **WFRD SOP 6.1** Plain Language Radio Communications.

# Paging System

- Fire-1 (800) is Permanently Patched to Interop-1 (VHF).
- Paging with Tone & Voice Heard on Interop-1 (VHF).
- Only Voice will be Heard on Fire-1 (800).

# Paging System Changes

- Addition of Command Officer Tone & Use.
- Addition of Fire Marshal Tone
- Citywide tone on Structure Fire Assignments 24/7.

# ECC Dispatch Procedures

- **WFRD SOP 6.2** ECC Dispatch Procedures
- Marking-up and Responding Process

# Dispatch Sequence

DISPATCH SEQUENCE		
All Incident Types	EMS and 3 or less Engine Response	4 or more Engine Response
Between the hours of <b>0700-2100</b>	Between the hours of <b>2100-0700</b>	Between the hours of <b>2100-0700</b>
Set off: <b>1 Beep or Special All-Call Tone</b> (see below)	Set off: <b>1 Beep</b>	Set off: <b>Special All-Call Tone</b> (This sets off group house alarms)
Identify: Announce units to respond and the talkgroup to respond on  1 Beep = Talkgroup Fire-3 Special Tone = Talkgroup Fire-2	Identify: Announce units to respond and the talkgroup to respond on	Identify: Announce units to respond and the talkgroup to respond on
Set off: <b>City Page</b>	Set off: <b>House Alarms</b> (Specific to station) <b>City Page</b> (Multi-unit responses Only)	Set off: <b>House Alarms</b> (All stations) <b>City Page</b>
Announce: Initial general announcement and the talkgroup to respond on	Announce: Initial general announcement and the talkgroup to respond on	Announce: Initial general announcement and the talkgroup to respond on
Repeat: Units to respond	Repeat: Units to respond	Repeat: Units to respond
Units mark-up on designated Fire talkgroup	Units mark-up on Fire-3	Units mark-up on Fire-2
Announce: Enhanced general announcement	Announce: Enhanced general announcement	Announce: Enhanced general announcement
***Note*** Responding units do not have to acknowledge the enhanced GA.		

# Alert Tones

- 3 or less engine Resource Tone 
- 4 or more engine Response 
- Evacuation Tone 

# Incident Flow

## WINCHESTER FIRE AND RESCUE DEPARTMENT

### Communication Operational Decision Matrix

800 mHz			VHF			
Fire-1 Dispatch	Fire-2	Fire-3	VHF Interop-1 Dispatch	VHF Interop-2	VHF Interop-3	VHF Interop-4
(Permanent patch to VHF Interop-1)	(Manual patch to VHF Interop-2)	(Manual patch to VHF Interop-3)	Simplex (Permanent patch to 800 Fire-1)	Repeated (Manual patch to 800 Fire-2)	Simplex (Manual patch to 800 Fire-3)	Simplex

### Radio Operations for Incident Scenarios

(Follow each scenario from left to right)

Incident Type	Incident Scenario	Responding	Operations	Tactical
1	City Incident (No Mutual Aid Requested)	Fire-2 or 3 As assigned by ECC: (EMS and 3 or less engine on Fire-3, 4 or more engine response on Fire-2)	Fire-2 or 3 As assigned by ECC: (EMS and 3 or less engine on Fire-3, 4 or more engine response on Fire-2)	Fire-4 thru Fire-10 utilized by the I.C.  Fire Admin use PD-1 (unified command)
2	City Incident (Mutual Aid Requested)	Fire-2 or 3 VHF Interop-2 or 3 As assigned by ECC: (EMS and 3 or less engine on Fire-3, 4 or more engine response on Fire-2)	Fire-2 or 3 VHF Interop-2 or 3 As assigned by ECC: (EMS and 3 or less engine on Fire-3, 4 or more engine response on Fire-2)	Fire-4 thru Fire-10 utilized by the I.C.  VHF Interop-2,3,4 patched by ECC to appropriate TAC talkgroup at the request of the I.C.  Fire Admin use PD-1 (unified command)
3	City Incident (Mutual Aid, no City units responding)	VHF Interop-2 or 3 (Mutual Aid) (VHF Interop-2 or 3 patched to Fire-2 or 3 by ECC upon dispatch)	Fire-2 or 3 VHF Interop-2,3,4 (VHF Interop-2 or 3 patched to Fire-2 or 3 by ECC upon dispatch)	<b>NO 800 tactical talkgroups used.</b> (VHF Interop-2,3,4 used as necessary)
4	Mutual Aid Incident (Assist from City)	Fire-2 or 3 (As assigned by ECC)	Zone 2,3,5,6 As appropriate for Mutual Aid jurisdiction	<b>VARIABLES</b> As instructed by Mutual Aid jurisdiction

Fire-1 and Interop-1 are semi-permanently patched  
Fire-2 and 3 are manually patched to Interop 2 and 3 respectively as needed

# VHF Operation

Frederick/Clarke/Warren

- City Operations vs. County Operations
- County EA Activation
- Channel 15 Use
- ECC Patching
- Incident Commander Patching

# EA Activations and Responder Safety

- **WFRD SOP 6.4** Emergency Activation and Responder Safety
- Activating/Cancelling the EA in Winchester
- Activating/Cancelling the EA in Frederick
- Other Responder Safety Operations.

# Where to go for help !

- Follow the Chain of Command
- Document problems via email so it can be tracked.
- Chief Baldwin, Deputy Chief Kensinger, BC Duckwall are points of contact at Fire Administration for system issues.

Questions ?