

# Missouri Department of Public Safety



Missouri Statewide Interoperability  
Network

DNR Park Rangers Conference  
April 2018



# Missouri Statewide Interoperability Network

## MOSWIN System Administration

- Develop/Enforce policy and procedure
- NOC Operations -managing the system resources, infrastructure
- Operational support – ICS205 process, cache radios, etc
- Bringing public safety agencies onto the system
  - All agencies are responsible for all their paperwork – not radio shops
  - All agencies are required to purchase their own advanced system keys
- Training and Outreach
  - All agencies must receive MOSWIN System Administration training prior to being allowed to operate radios on the system

(MOSWIN end user training available on a rolling basis across the state, find details at [www.moswin.mo.gov](http://www.moswin.mo.gov). Training is also available by request.)
- Statewide Interoperability Coordinator – SWIC
- ESF-2 Lead: state emergency declarations



## The Missouri Statewide Interoperability Network is: **the Statewide Interoperable Communications Platform**

MOSWIN was born out of the tragedy of 9/11. The terrorist attacks and the following investigation led to a nationwide initiative to improve first responder communication.



- Provides MOBILE coverage to 95% of the state's accessible roads.
- 1,200+ Public Safety Agencies with at least 1 radio on the system
- MOSWIN provides multidiscipline interagency communications statewide, regionally and locally.



# Missouri Statewide Interoperability Network

## Infrastructure Update

### **MOSWIN IS A MOBILE SYSTEM**

- Unity Gain Wide Band Antenna (148-174 MHz)
- Mobile radio antennae should utilize antennae that are capable of operating in this band to ensure optimum system performance. A Unity Gain quarter wave  $\frac{1}{4}$  antenna mounted to the roof of a vehicle with a transmit power of 50 watts and an ERP of 45 watts is the optimum antenna configuration for the MOSWIN network.
- A 5/8 wave or other gain antennae can be utilized in the MOSWIN network but the antenna gain must be offset by a reduction in transmit power (TPO) in the mobile radio to comply with MOSWIN FCC licensing.
  - Portable solution – responsibility of the Member Agency as stated in the MO DPS Member Agency
  - In-car repeaters may be necessary to support portable operations
  - **Level 1 agencies may link analog portable system to MOSWIN in compliance with the MOSWIN System Administration Intersystem Connection Policy**
  - **NO patching is allowed without MOSWIN System Administration approval**



- P-25 compliant trunked system
- Utilizes VHF and 700 MHz towers statewide.
- No Cost for access to Missouri Public Safety Agencies.



# Missouri Statewide Interoperability Network Member Agency Summary

<u>DISCIPLINES</u>	AGENCIES	RADIOS	LEVEL 1	LEVEL 2	CONTROL STATIONS
Law Enforcement	387	16,701	109	278	144
- Airport Law Enforcement	2	830	1	1	2
- Campus Law Enforcement	12	251	2	10	6
- Municipal Law Enforcement	271	12,594	62	209	76
- County Sheriffs	98	2,936	44	54	60
- Railroad Law Enforcement	4	90	0	4	0
Fire Departments	264	5,629	11	253	25
EMS Departments	74	951	11	63	21
Dispatch	62	265	5	57	58
Public Safety	5	388	3	2	4
Emergency Management	104	696	1	103	10
Hospitals	83	178	2	81	60
Public Health	116	275	1	115	96
Public Works/Transportation	42	2,466	1	41	2
Governmental Entities	36	689	0	36	26
State Agencies	26	5,724	11	15	13
Federal Agencies	21	2,377	10	10	6
Other Responders	19	995	3	16	17
Outstate Partners	2	70	0	2	0
Totals	1,241	37,404	168	1,073	482




# Missouri Statewide Interoperability Network

## MOSWIN System Administration Policy/SOP Review

- Level 1
- Level 2



		MISSOURI DEPARTMENT OF PUBLIC SAFETY MISSOURI INTEROPERABILITY CENTER	
<b>Policy Title: Level One Member Agency Policy</b>			
Version: 1.0	Issued: January 2014	Revised:	

**Purpose and Scope:**  
To define the requirements to attain and maintain Level 1 member agency status on the Missouri Statewide Interoperability Network (MOSWIN).

**Standard:**  
This standard defines the criteria and requirements for Level 1 agencies.

**Definition: Level 1 - Daily Use / Dispatch**  
Level 1 member agencies are defined as those member agencies who utilize MOSWIN as their primary communications platform in support of internal agency communications such as day-to-day operations/dispatch.

**Process:**  
Agencies seeking Level 1 access to MOSWIN must submit the following:  
Complete all MOSWIN member agency documents for review and approval.

**Member Agency Agreement**  
Letter of Intent - marked Level 1 with proposed "cut-over" date ([Form MO 812-10002](#))  
Add a Radio ([Form MO 812-10000](#))  
Talkgroup Request ([Form MO 812-10005](#))  
Non-Owned Talkgroup Request (if applicable) ([Form MO 812-10007](#))  
[Radio Programming Security Agreement](#)  
DPS may request additional information and/or engage in further discussion with agencies seeking Level 1 membership.

Upon completion and approval of Member agency documents the agency must:

- Complete MOSWIN member agency training prior to cut-over
- Submit agency fleetmap
- Submit agency codeplug (console, mobile, portable example)
- Demonstrate the ability to dispatch internal talkgroups for day-to-day operations.\*
- Provide a contingency plan for MOSWIN maintenance outages
- "Cut-over" on approved scheduled date.

\* Interoperable Talkgroup Procedures Policy prohibits the use of the MOSWIN assigned PSFAP control stations for dispatching day-to-day/internal operations. Daily use will not be allowed on channels established for interoperability or disaster use.  
\* MOSWIN Member Agency Agreement states emergencies should only be cleared by the agency whose personnel declared the emergency, unless they have a written agreement in place for another agency to do so and clear their emergency activations.

**Controls and Measures:**  
MOSWIN System Administration will review system talkgroup activity data to confirm Level 1 member agency is conducting internal day-to-day operations on internal talkgroups.

**Responsibility/Assignment:**  
The department head of an agency requesting Level 1 member agency status is responsible for notifying MOSWIN System Administration with the agency's proposed cut-over date prior to cut-over. The department head of any Level 1 member agency must notify MOSWIN System Administration with any proposed change in agency level of use on MOSWIN.

## Radio System Users

Level One Users - Use MOSWIN for day to day operations. They may request their own internal talk groups.

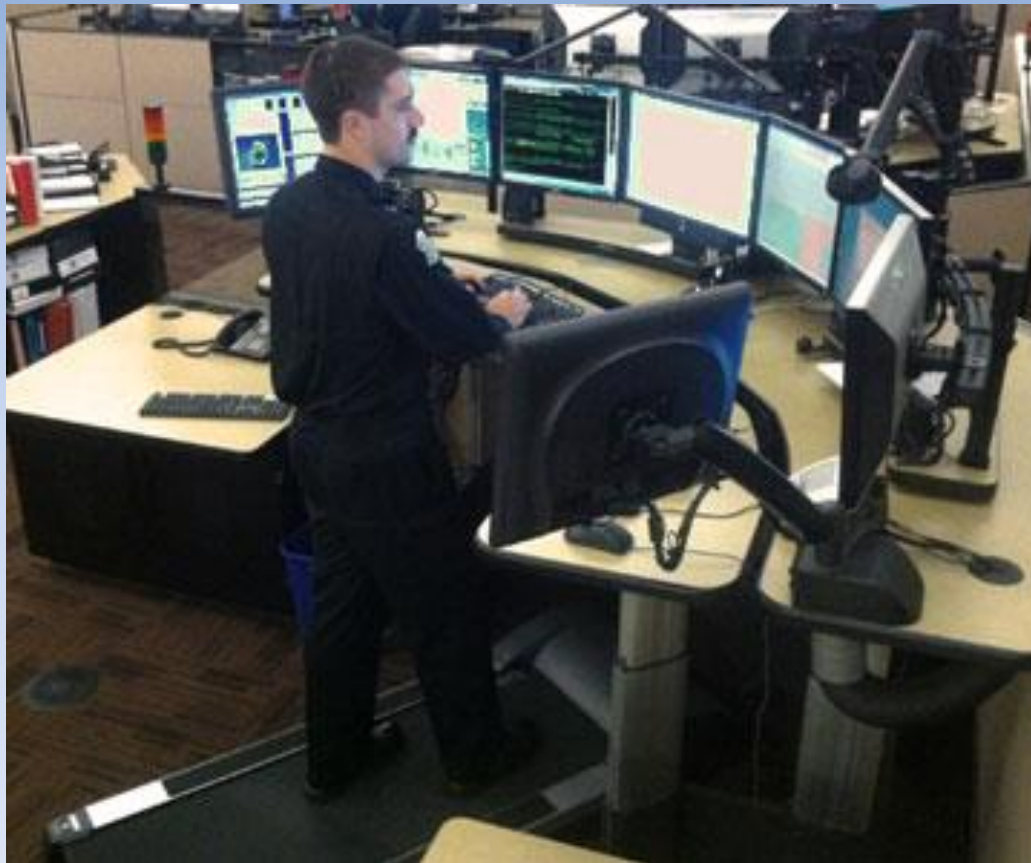
Level Two Users - Use their own radio system for day to day operations. Use MOSWIN for communications interoperability during emergencies or planned events.



# Communications Interoperability (I/O)

- In general, interoperability refers to the ability of emergency responders to work seamlessly with other systems or products without any special effort.
- Communications interoperability also makes it possible for emergency response agencies responding to catastrophic accidents or disasters to work effectively together.
- Finally, it allows emergency response personnel to maximize resources in planning for major predictable events.

# Talk Groups

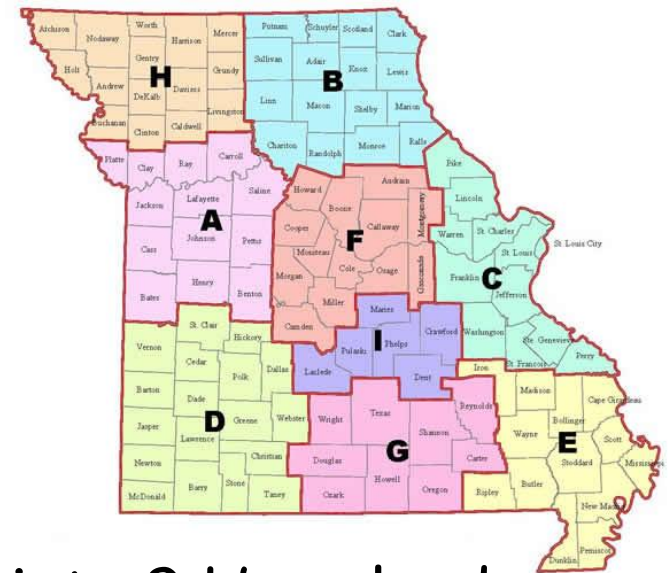


# Talk Groups

Talk group - A uniquely named group of radios that can share calls and messages.

- A talk group's normal communications do not require interfacing with other talk groups.
- Typically, the majority of the radio user's communications are within a select few talk groups.
- Remember talk groups do not enhance interoperability, they create paths of communication.

# Talk Groups - Region I/O Channels



- The state of Missouri is divided into 9 Homeland Security Regions.
- Every MOSWIN member agency will have it's own Regional I/O talk groups and Regional Event I/O talk groups.

## Communications Interoperability (I/O)

### Public Safety Answering Points (PSAPs)

- Control Stations at 24 hour PSAPs statewide will provide local users and travelers an emergency contact point.
- Control Stations should rest on their Region I/O call.
- All Control Stations are asked to scan the following channels:

**County All**  
**County Travel**  
**MO I/O Call**



## Talk Groups - Region I/O Channels

Regional talk groups are designed to provide the interoperable platform for multi-jurisdictional, multi-agency, multi-disciplinary emergency events.

Region Call is the in-region call channel. If your jurisdiction borders another region(s) you should have those Talk Groups (TG) readily available - in some cases scanning may be possible





# Talk Groups - Region I/O Channels

## General Information

- Region I/O Call is the "Call" channel.
- Move extended conversations from the Call Channel to Reg I/O 1 thru 4.
- Return to Region I/O call after extended conversation.



## Talk Groups - Region Events Channels

Regional talk groups are designed to provide the interoperable platform for multi-jurisdictional, multi-agency, multi-disciplinary non-emergency events.

“Regional Event” talk groups require activation from the Missouri Interoperability Center.

Example: State Fair/presidential visit/county wide exercise



# Talk Groups - Region Discipline Channels

A REG GROUPS
REGA IO CALL
REGA IO 1
REGA IO 2
REGAIO 3
REGA IO 4
A EVENT 1
A EVENT 2
A EVENT 3
A EVENT 4
A EVENT 5
A LAW 1
A LAW 2
A LAW 3
A SWAT 1
A SWAT 2

A REG GROUPS
REGA IO CALL
REGA IO 1
REGA IO 2
REGAIO 3
REGA IO 4
A EVENT 1
A EVENT 2
A EVENT 3
A EVENT 4
A EVENT 5
A EMS 1
A EMS 2
A EMS 3
A FIRE 1
A FIRE 2
A FIRE 3

## Talk Groups - State Wide - MO I/O Call

“Statewide” talk groups are designed to provide the interoperable platform for multi-jurisdictional, multi-agency emergency events involving more than one region.

MO I/O Call is the out-of-region call channel. Monitored by MO SEMA control room and by MO SEOC during declared emergencies.



## Talk Groups - State Wide - MO Events

“Statewide Event” talk groups are designed to provide the interoperable platform for multi-jurisdictional, multi-agency, multi-disciplinary non-emergency preplanned events involving more than one region.

“Statewide event” talk groups require activation from the Missouri Interoperability Center.



# Conventional Channels

Conventional VHF channels.

Will operate even when MOSWIN will not.

MTAC

VLAW31

VLAW32

VCALL10

VTAC11

VTAC 12

VTAC 13

VTAC 36

VTAC 36D

VTAC 37

VTAC 37D

MO only Tactical Channel

LE Mutual Aid

LE Mutual Aid

Calling Channel

Tactical

Tactical

Tactical

Tactical Repeater

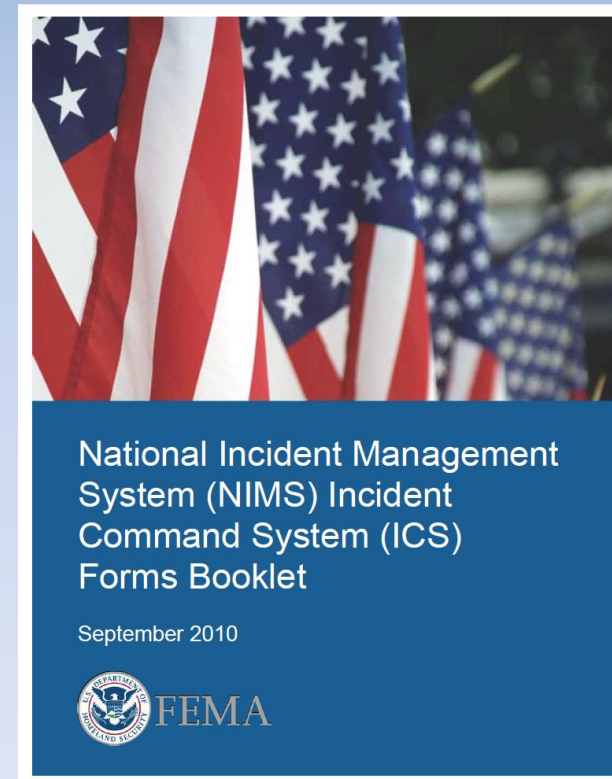
Tactical Repeater

Tactical Repeater

Tactical Repeater

# Incident Command

Standard ICS 205 - Communications plan.



## "Standing ICS205"

**KEY:** All interoperable communications plans involving MOSWIN are based on the following assumptions:

- Radios are programmed to policy standard  
All PSAPs , EMDs, and Level II agencies are monitoring your home Region I/O Call.
- Reg I/O Call is the in-region "Calling" channel.

**Will be used for Governor declared state of emergencies.**





## "Standing ICS205"

**KEY:** All interoperable communications plans involving MOSWIN are based on the following assumptions:

- MO IO Call is the out-of-region "Calling" channel and should be in your scan list
- MO IO Call is monitored by the MO SEMA control room. MO SEOC monitors during activations.

**Will be used for Governor declared state of emergencies.**





## **“Standing ICS205”**

**MO DPS Interop ICS205 in place 24/7/365**

**Contact MOSWIN System Administration for extended incidents 1 hour +**

**MIC will assist/create ICS205 for you**

**MIC 855-4-MOSWIN**

# Training/Exercise





***STRENGTHENING MISSOURI'S PUBLIC SAFETY THROUGH BETTER  
COMMUNICATIONS***

The capability to communicate across jurisdictional and discipline lines (interoperability of communications) is one of the top priorities of Missouri's homeland security program. Ensuring that neighboring jurisdictions and multiple disciplines can communicate with each other leads to better emergency and disaster response and ultimately makes for safer communities.



<a href="#">Interoperable Communications Home</a>
<a href="#">Joining MOSWIN</a>
<a href="#">Policies</a>
<a href="#">MOSWIN Member Agency Handbook</a>
<a href="#">MOSWIN Levels of Use and Terms</a>
<a href="#">MoSCAP Grant Program</a>
<a href="#">Funding</a>
<a href="#">MOSWIN User Maps</a>
<a href="#">Resources</a>
<a href="#">Training Calendar</a>
<a href="#">Contact Us</a>

**Related Links**

[Office of Homeland Security Home](#)

<https://dps.mo.gov/dir/programs/intercomm/docs/exercise-policy.pdf>

<https://dps.mo.gov/dir/programs/intercomm/docs/related-ics-205-exercise-example.pdf>

<https://dps.mo.gov/dir/programs/intercomm/docs/related-radio-exercise-summary-example.pdf>

# Training

**Courtney, Bryan**

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**From:** Rave Alert-MOSWIN System Administration <moswin.sysadmin@dps.mo.gov>  
**Sent:** Friday, April 13, 2018 8:36 AM  
**To:** Courtney, Bryan  
**Subject:** UPDATE - Upcoming MOSWIN training dates in your area

Dear Missouri Public Safety Stakeholder,

*In the original announcement there was an incorrect start time given for the Region F training. The correct start time is 9:00am. Sorry for the confusion.*

Please be advised that Missouri Statewide Interoperability Network System Administration has scheduled training in your area to provide support for agencies currently operating or interested in MOSWIN.

This 1 hour training will focus on the following:

- General explanation of MOSWIN system operation and purpose
- Explanation of how MOSWIN provides a platform for interoperable communications
- Preparing your agency to participate in monthly interoperability testing
- Using MOSWIN for internal operable communications
- Review of MOSWIN policy and standard operating procedures for interoperable talkgroups
- Explanation of how to join MOSWIN, add a radio, programming discussion
- MOSWIN staff will have radios on hand to demonstrate using a system compatible radio & using the interoperable talkgroups
- Question and Answer session

**This class is POST approved; your POST number is required to get credit.**

**Region A**

May 1, 2018 2:00 pm  
Johnson County Central Dispatch E911, 315 Hawthorne Boulevard, Warrensburg, MO

**Region B**

May 8, 2018 10:00 am  
National Guard Armory, 1616 South Missouri St, Macon, MO

**Region C**

May 9, 2018 10:00 am  
Warren Co Emergency Management, Suite 101, 101 Mockingbird Lane, Warrenton, MO

**Region D**

May 3, 2018 1:00 pm  
Joint Emergency Training Facility, 495 Gretna Road, Branson, MO

**Region E**

May 22, 2017 9:00 am  
Jackson Civic Center, 381 Deerwood Drive, Jackson, MO 63755

**Region F**

# Training

May 24, 2018 9:00 am (*corrected start time*)  
Cole County Fire Protection District, 5206 Monticello Rd, Jefferson City, MO

**Region G**

May 21, 2018 1:00 pm  
Howell County EOC, 180 Kentucky St, West Plains, MO

**Region H**

May 2, 2018 1:00 pm  
Region H Hazmat Building, 312 W. Colorado, St. Joseph, MO  
\*\*\**Please note new location address*\*\*\*

**Region I**

May 23, 2018 2:00 pm  
Meramec Regional Planning Commission, #4 Industrial Drive, St. James, MO

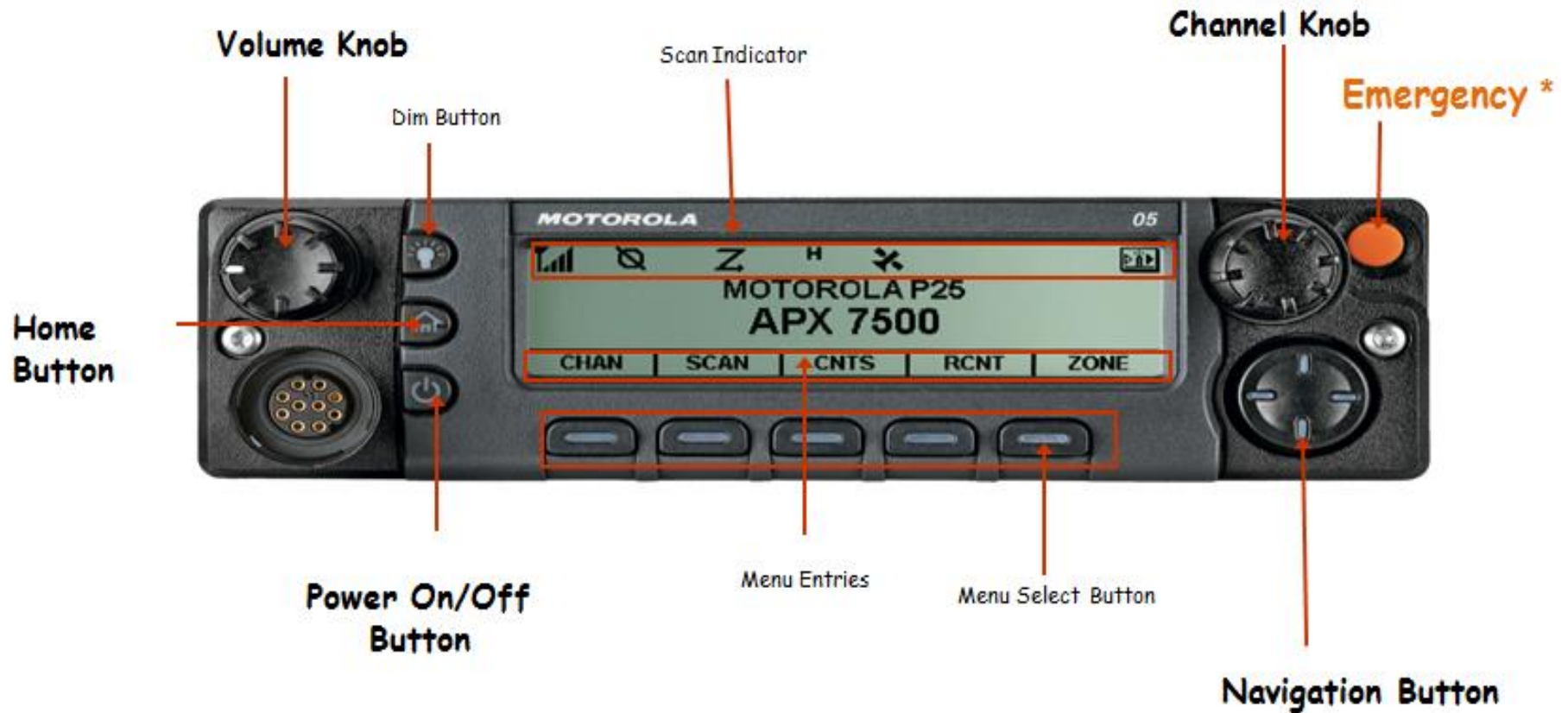
**PLEASE RSVP WITH THE REGION YOU ARE ATTENDING IN THE SUBJECT LINE TO  
[Kristy.Goans@dps.mo.gov](mailto:Kristy.Goans@dps.mo.gov).**

Bryan Courtney, Director  
Missouri Department of Public Safety  
Missouri Interoperability Center  
2413 E. McCarty St  
Jefferson City, Missouri 65101

# Subscriber Unit



## Radio Parts and Controls





## Emergency Button

The emergency button on MOSWIN radios or consoles should only be used in case of imminent personal danger.

*How to activate* - Press **Orange** button for one second. The word “emergency” will appear in red on the screen and the radio will beep. Others on the same channel will hear the beep.

*Announce* - ACCIDENTAL activations on air.

*How to cancel*- Press and hold until you hear an audible tone. (4 or 5 seconds)

Policy states emergencies should only be cleared by the agency whose personnel declared the emergency.

The activation of the emergency button moves all of your radio traffic to the front of the line.

# Selecting a channel



1. Press Zone - County & Agcy will begin to flash.
2. Turn Channel Knob to desired talk group.
3. Press Home.

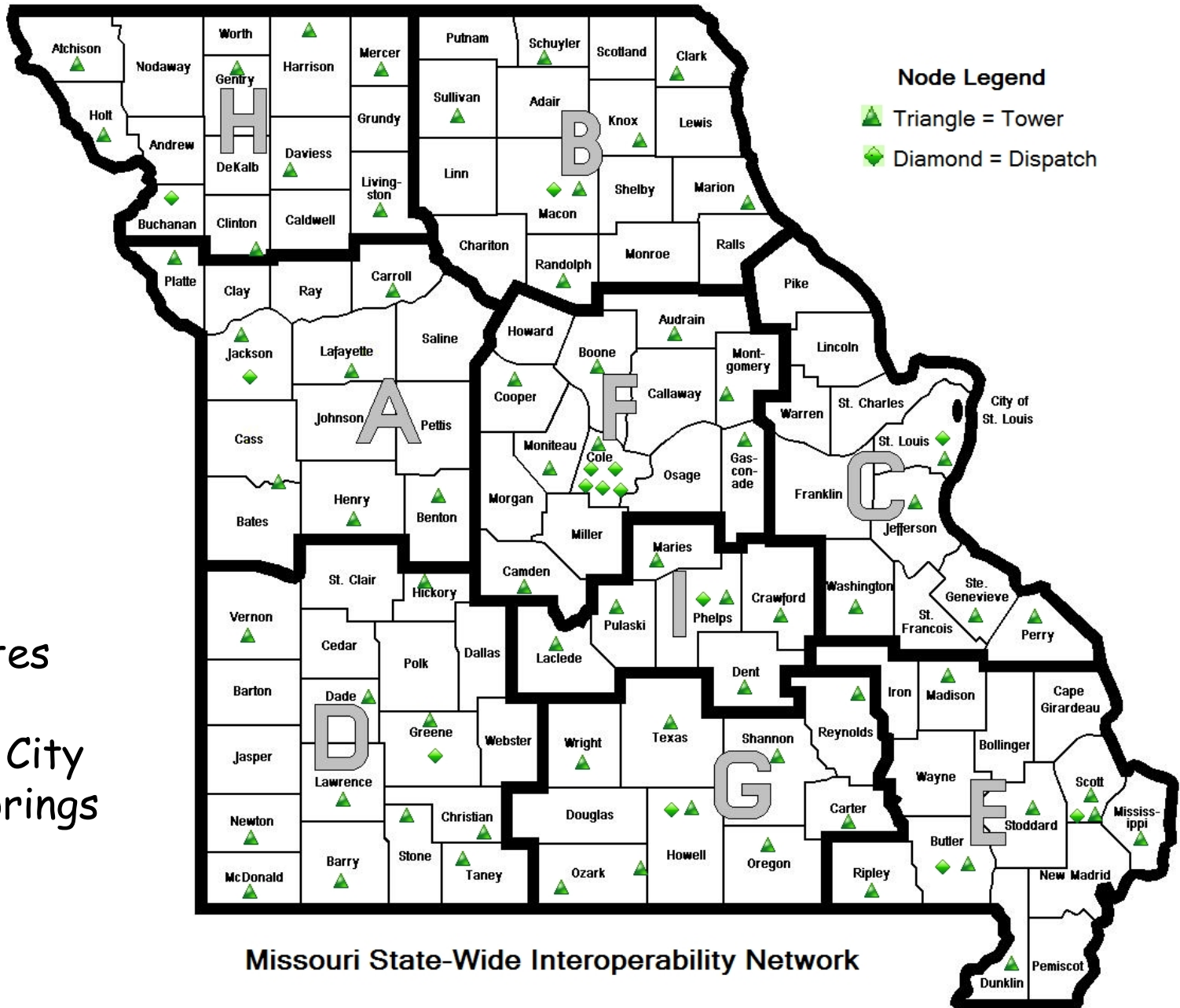
## Channel Presets (MS buttons)



Find the channel you want.

Pick a MS (1-5) preset key you want to use

Press and hold until it beeps



Master Sites

Jefferson City  
Weldon Springs

116 sites

Missouri State-Wide Interoperability Network

# Missouri Statewide Interoperability Network

## Infrastructure Update

- 78 VHF sites (5 channels per site)
- 38 700 MHz sites
- System coverage drive testing complete – 95% mobile coverage confirmed via testing
- additional 700 MHz sites planned to supplement coverage
- Other sites in the pipeline:
  - Gainsville, Houston, Richmond, Marble Hill, Memphis, Coffey Hollister, Stewartsville, Rich Fountain
  - Antenna realignments scheduled for Canton and Stoutsville ASAP
  - Site improvements scheduled for Drake, Freistatt, Dayton/Aaron, Arcola
  - Troop H antenna switch-out to omnis – Complete

**? Coverage gaps?**



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# Missouri Statewide Interoperability Network

## MOSWIN System Administration

- MOSWIN Control Station Monthly Exercises
  - This exercise is occurring in RHSOC regions on a monthly basis
- SEMA, DHSS, others
- Exercise policy
- Emergency Alarms – responsibility of agency that declares emergency to clear the alarm.
- MO DPS Interoperable Talkgroup Usage
  - I/Os, Disciplines active 24/7/365 approved for usage without notification for **interoperability**
  - Extended events on I/Os, Disciplines require notifying MOSWIN Sys Adm
  - Events not active – require request to MOSWIN Sys Adm IAP, SOP, ICS205

# Missouri Statewide Interoperability Network

## MOSWIN System Administration Resources for Member Agencies

- Website [www.moswin.mo.gov](http://www.moswin.mo.gov)  
(Policy, forms, information on accessing the system, training calendar, resources)
- 855-4-MOSWIN
  - 24/7 help line (Technical issues and Administrative Qu
- [moswin.sysadmin@dps.mo.gov](mailto:moswin.sysadmin@dps.mo.gov)





Questions?

# Missouri Department of Public Safety



Bryan Courtney

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844 4 MOSWIN

