# INTEROPERABLE COMMUNICATIONS

Communications between agencies can be accomplished in several ways depending on the agencies involved.

## Conventional Mutual Aid Channels

Conventional mutual aid channels in use will still remain viable to communicate with other users *off-network, within discipline.*  These channels can continue to be used as they are being used in today's conventional radio environment.  Typically these are *on-scene, incident based* channels.  Law Mutual Aid (VLAW 31 & 32), Sheriffs Net, Fire Mutual Aid (VFIR21), HEAR, etc. Every system radio must have the conventional mutual aid channels for their region and discipline.

## Conventional Interoperability Channels

Conventional IO channels are still available to all licensed users to communicate with other users *off-network, multi-discipline.*

**MTAC** is evolving into an itinerant or in-transit usage role.  It is a baseline default interoperability channel in Missouri for all public safety radios in the VHF band.  It can be used as a statewide calling channel and a coordination channel.  MTAC will be monitored at all PSAPS.

**VCALL 10** is the *on-scene*, *incident-based* calling channel.  **VTAC 11-14** are *on-scene, incident-based* tactical channels subject to assignment by the incident commander.  Every system radio must have the conventional interoperability channels.

## Frequency Sharing

Many times agencies will have agreements in place between them for both agencies to use a conventional channel licensed by one agency.  The license must reflect all the users working under that license.  Such agreements are strictly agency to agency and may be incident driven. Such agreements do not make the frequency commonly available and are revocable by the license holder.

## Trunked Tactical Talk Groups

Regional, discipline specific tactical talk groups have been provisioned in the system talk group list for *within discipline* communications *on-network, region-wide*.  There are **three Law** talk groups, **three Fire** talk groups, **three EMS** talk groups, and **two SWAT** talk groups *per region* - eleven per region.  While discipline specific, they are not for any specific agencies and are provided for all agencies to use at their discretion, subject to regional guidelines.  There are no specific monitoring guidelines. Every system radio shall have the tactical talk groups for their region and discipline.

## Trunked Regional Interoperability Talk Groups

Five Regional I/O talk groups per region are common to all system radios and can be used to communicate with other system users **on-network, region-wide.** Control stations at PSAPS throughout each region must have these talk groups.

While conventional channels are incident-based, the regional interoperability talk groups allow for multiple incident coordination and resource coordination region-wide. These talk groups have region-wide coverage which extends into counties bordering the region but not beyond that regional coverage area. These talk groups are available to all system users within the region, border counties, or deployable assets, such as mobile command posts, that may be used in the region.

These are regional talk groups and subject to regional policy. It is recommended that their usage remain consistent with other interoperability channels.

- o Recommend the first regional talk group be designated a calling channel
- o Recommend PSAP's in the region monitor the first regional talk group
- o Recommend regional interoperability talk groups remain non-discipline specific

Every radio on the system should have the five regional talk groups for their region. Non-system users or out of region users should use MTAC.

## Trunked Statewide Interoperability Talk Groups

Five statewide I/O talk groups are common to all system radios and can be used to communicate with other system users **on-network, statewide, multi-discipline.** Control stations at PSAPS throughout the state shall have these talk groups.

Where the regional interoperability talk groups are intended for coordination of multiple incidents within a region, the statewide interoperability talk groups are intended for coordination of incidents and resources in multiple regions. Statewide interoperability talk groups have inter-regional coverage and can be used by users roaming outside their home region.

The first statewide interoperability talk group is a hailing channel and it is recommended that it be scanned as a secondary to the regional calling channel. Statewide interoperability talk groups are non-discipline specific.

Every radio on the system should have the five statewide interoperability talk groups. Non-system users should use MTAC.

## Trunked Events Talk Groups

Forty-five events talk groups have been provisioned in the system for special event usage. These are available to any system users who wish to have them provisioned in their radios. Participants may use some, none, or all. The talk groups are normally disabled in the system and must to be activated for a specific duration on a site by site basis with prior request through the Network Operations Center (NOC). These talk groups can be requested by any system user agency to be used for **on-network, multi-discipline** communications by system users involved in the event. Some examples of events might include the governor's inauguration, the Tour of

Missouri, the Missouri state fair, local fairs or festivals, etc.  Usage of these talk groups would be subject to the guidelines of the event organizer or commander.

### Trunked Common Dispatch Talk Groups

Inter-agency Memoranda of Understanding, MOU's, may be established and agreed upon to allow agencies to share talk groups and communicate directly between agency users and dispatch centers *on-network*.  For example, many state agency vehicles have Highway Patrol dispatch talk groups in their radios and can communicate directly with communications centers and troopers on those talk groups*.*

### Announcement Talk Groups

Announcement groups are talk groups used to make announcements on specific predetermined talk groups.  Announcements made on the announcement groups will be heard by users on any of the talk groups in the announcement group.

## Mobile Operation

The radio system is designed with mobile *on-network* coverage of 95% throughout every individual county in Missouri resulting in an overall statewide coverage of over 97%.

## Portable Operation

The radio system is not designed to provide portable coverage.  Portable radios will be capable of communicating *on-network* when they are within the coverage of a tower site.  Performance is not predictable and is subject to terrain and distance from a tower site.  Therefore, *on-network* portable use is not recommended in unfamiliar areas where portable coverage is not well established such as remote or undeveloped areas.

## Digital Vehicular Repeater System Operation

Field portable usage should be in conjunction with the Digital Vehicular Repeater System (DVRS) if it is installed in a vehicle.  The DVRS extends mobile network coverage from the vehicle to the portable radio.  The portable user maintains contact with the radio network through the DVRS in the vehicle.  Both the portable radio and the mobile radio operate *on-network* through the DVRS.

## Talk Group Organization

In the radios, talk groups are organized into different ZONES.  Each zone can contain up to 16 talk groups.  The on-network talk groups should located in the first zones of the radio followed by the zones that contain the off-network conventional channels. The City of Sikeston's plan consists of 95 talk groups.  The talk groups in the plan are separated into 8 zones located in the first 8 zones of each radio (exception is the XTS 2500 model 1.5 portable which will only contain 7 zones of trunked talk groups due to lower mode capacity).  All radios that are on the system for the City of Sikeston will be programmed with all available talk groups listed in the fleet map for Sikeston giving Sikeston 1 overall programming template.  The features and accessibility to talk groups will be manipulated per radio by an administrator that oversees the security group for the

City of Sikeston.  The plan for the 8 zones starts with the local Sikeston talk groups and then continues with regional and state wide talk groups.  The plan is as follows:

## ZONE 1 – SIK

Zone 1 consists of local talk groups that are specific to Sikeston.  This will be the main zone for officers and communications.  Zone 1 also contains the emergency talk group that all emergency button activations will be reverted to in the event the officer activates his/her emergency feature on the radio.

**DISP** – **Dispatch talk group**.  This talk group is the main talk group for Communications and will be used and monitored in the Communication consoles.  This talk group will be used for assignment of calls to officers.  This talk group will be the main communications link between officers and dispatch as well as used as a talk group for communications between officers. This talk group will also be used for emergency/non emergency communications.

**FIRE – Fire talk group**.  This talk group will be used for day to day operations in Fire Division including dispatch to calls for service and ground operations at a fire scene with in the covered network.  This talk group will be patched with one conventional channel.  This talk group will be monitored by the consoles in Communications.

**CAR-Car to car talk group**.  This talk group will be used for communications between officers.  This may also be a talk group that is used on scene of special functions as well as being used at incidents where another talk group is required for operations.  This talk group will not be monitored at the consoles in Communications.

**EMS – Emergency medical services talk group**.  This talk group will be used by South Scott EMS for calls related to medical services.  This talk group will be monitored by consoles in Communications.

**TAC1 - Tactical talk group.**  There will be three talk groups labeled as TAC talk groups that are to be used for special functions/incidents where another talk group is required for operations.  All 3 TAC talk groups will be encrypted for more secure transmissions.  These talk groups can be assigned at an incident or prior to a function.  The Tac1 talk group will be available in the South Scott EMS radios as well as all DPS Officer's radios.   TAC1 talk group will be available in the Communications consoles.

**TAC2 - Tactical talk group.**  There will be three talk groups labeled as TAC talk groups that are to be used for special functions/incidents where another talk group is required for operations.  These talk groups can be assigned at an incident or prior to a function.  TAC2 talk group will be available in the Communications consoles.  TAC2 will only be available in radios assigned or used by DPS personnel.

**TAC3** – **Tactical talk group.**  There will be three talk groups labeled as TAC talk groups that are to be used for special functions/incidents where another talk group is required for operations.  These talk groups can be assigned at an incident or prior to a function.  TAC3 talk group will be available in the Communications consoles.  TAC2 will only be available in radios assigned or used by DPS personnel.

**SURV** – **Surveillance talk group**.  This talk group will be utilized only by the Criminal Investigations Unit and others that are assisting with investigations and it is to be used during surveillance operations.  This talk group will not be in the Communications console.  This talk group will encrypted for more secure transmissions.

**SOG – Special operations group talk group**.  This talk group will be utilized by officers associated with any operation(s) conducted by the special operations group.  This talk group will be encrypted for more secure transmissions. This talk group will be monitored by the consoles in Communications.

**ADMIN – Administration talk group**.  This talk group will be utilized by members of the administration only and it will not be monitored or available in the consoles located in Communications.  This talk group will be encrypted for more secure transmissions.

**CIU – Criminal investigations unit talk group.**  This talk group can be used for day to day operations and communications for personnel assigned to the Criminal Investigations Unit.  This talk group will be monitored by the consoles in Communications.

**AG1 – Announcement group talk group**.  This talk group will be used to combine specified talk groups as one in order for a single message to be communicated to all of the talk groups at once.  This talk group will be monitored and available in the consoles located in Communications.

**TRNG – Training/Test talk group**.  This talk group will be used for maintenance on the in-network radio system as well as training on the in network radio system.  This talk group will be monitored by consoles in Communications.

**SCHOOL – Sikeston public school talk group.**  This talk group will be used for communications between the Sikeston Public School System and DPS Communications as well as officers that are assigned to the schools on a daily basis and officers that are working any details in cooperation with the schools.  This talk group will be patched with the existing conventional radio system that the public schools currently utilize as their main communications.  This talk group will be available in the consoles in Communications.

**PAGING – Paging talk group.**  This talk group was initially going to be patched with the conventional paging channel  to allow officers to hear all pages that were sent by Communications, however this idea has been abandoned and this talk group will be an extra talk group to be utilized in the future.  This talk group is monitored by the Communications console.

**EMERG – Emergency talk group**.  This talk group will be used to receive all emergency transmissions that are activated by officers.  This talk group will be monitored at all times by the consoles in Communications.  The emergencies will be activated by officers when they press the orange emergency button located on the top of the portable or on the face of the mobile.

## ZONE 2 – TAC

Zone 2 consists of discipline-specific tactical talk groups as well as a regroup talk group that will be used for dynamic regrouping.  The talk groups contained in this zone are regions specific and are described as follows:

**E FIRE 1 – Region E Fire talk group**.  This talk group will be used for regional incidents that require the use of discipline specific talk groups.  This talk group will be 1 of 3 that are assigned for fire apparatus and personnel at an incident where the command personnel have determined that the regional talk groups should be utilized.  This talk group will be available in all mobiles, portables and will be available in the consoles located in Communications.

**E FIRE 2 - Region E Fire talk group**.  This talk group will be used for regional incidents that require the use of discipline specific talk groups.  This talk group will be 1 of 3 that are assigned for fire apparatus and personnel at an incident where the command personnel have determined that the regional talk groups should be utilized.  This talk group will be available in all mobiles, portables and will be available in the consoles located in Communications.

**E FIRE 3 - Region E Fire talk group**.  This talk group will be used for regional incidents that require the use of discipline specific talk groups.  This talk group will be 1 of 3 that are assigned for fire apparatus and personnel at an incident where the command personnel have determined that the regional talk groups should be utilized.  This talk group will be available in all mobiles, portables and will be available in the consoles located in Communications.

**E LAW 1 – Region E Law talk group**. This talk group will be used for regional incidents that require the use of discipline specific talk groups.  This talk group will be 1 of 3 that are assigned for law enforcement equipment and personnel at an incident where the command personnel have determined that the regional talk groups should be utilized.  This talk group will be available in all mobiles, portables and will be available in the consoles located in Communications.

**E LAW 2 - Region E Law talk group**. This talk group will be used for regional incidents that require the use of discipline specific talk groups.  This talk group will be 1 of 3 that are assigned for law enforcement vehicles and personnel at an incident where the command personnel have determined that the regional talk groups should be utilized.  This talk group will be available in all mobiles, portables and will be available in the consoles located in Communications.

**E LAW 3 - Region E Law talk group**. This talk group will be used for regional incidents that require the use of discipline specific talk groups.  This talk group will be 1 of 3 that are assigned for law enforcement equipment and personnel at an incident where the command personnel have determined that the regional talk groups should be utilized.  This talk group will be available in all mobiles, portables and will be available in the consoles located in Communications.

**E EMS 1 – Region E EMS talk group.**  This talk group will be used for regional incidents that require the use of discipline specific talk groups.  This talk group will be 1 of 3 that are assigned for emergency medical services equipment and personnel at an incident where the command personnel have determined that the regional talk groups should be utilized.  This talk group will be available in all mobiles, portables and will be available in the consoles located in communications.

**E EMS 2 - Region E EMS talk group.**  This talk group will be used for regional incidents that require the use of discipline specific talk groups.  This talk group will be 1 of 3 that are assigned for emergency medical services equipment and personnel at an incident where the command personnel have determined that the regional talk groups should be utilized.  This talk group will be available in all mobiles, portables and will be available in the consoles located in Communications.

**E EMS 3 – Region E EMS talk group**.  This talk group will be used for regional incidents that require the use of discipline specific talk groups.  This talk group will be 1 of 3 that are assigned for emergency medical services equipment and personnel at an incident where the command personnel have determined that the regional talk groups should be utilized.  This talk group will be available in all mobiles, portables and will be available in the consoles located in Communications.

**E SWAT 1 – Regions E Special Weapons and Tactics talk group**.  This talk group will be used for regional incidents that require the use of discipline specific talk groups.  This talk group will be 1 of 2 that are assigned for SWAT team members and equipment at an incident where the command personnel have determined that the regional talk groups should be utilized.  This talk group will be available in all mobiles, portables and will be available in the consoles located in Communications.

**E SWAT 2 - Regions E Special Weapons and Tactics talk group**.  This talk group will be used for regional incidents that require the use of discipline specific talk groups.  This talk group will be 1 of 2 that are assigned for SWAT team members and equipment at an incident where the command personnel have determined that the regional talk groups should be utilized.  This talk group will be available in all mobiles, portables and will be available in the consoles located in Communications.

**REGROUP – Regrouping talk group**.  This talk group will be utilized by a system administrator for the purpose of dynamic regrouping.  This talk group will only be usable when officers are assigned by system administrator to the talk group for regrouping purposes.


## ZONE 3 – REG

Zone 3 consists of 15 region specific interoperability talk groups.  The use of these talk groups should be determined by command personnel on scene of an incident within the specified region.  The following talk groups will be available in all portables and mobiles.  The regional interoperability talk groups in Sikeston's plan are as follows:

**C I/O 1 – Region C interoperability**.  1 of 5 region C multi discipline interoperability talk groups that will be utilized in Region C.  The use of this talk group will be determined by the command personnel on scene and will follow the guidelines as described by the regional policy.

**C I/O 2 – Region C interoperability**.  1 of 5 region C multi discipline interoperability talk groups that will be utilized in Region C.  The use of this talk group will be determined by the command personnel on scene and will follow the guidelines as described by the regional policy.

**C I/O 3 - Region C interoperability**.  1 of 5 region C multi discipline interoperability talk groups that will be utilized in Region C.  The use of this talk group will be determined by the command personnel on scene and will follow the guidelines as described by the regional policy.

**C I/O 4 - Region C interoperability**.  1 of 5 region C multi discipline interoperability talk groups that will be utilized in Region C.  The use of this talk group will be determined by the command personnel on scene and will follow the guidelines as described by the regional policy.

**C I/O 5 - Region C interoperability**.  1 of 5 region C multi discipline interoperability talk groups that will be utilized in Region C.  The use of this talk group will be determined by the command personnel on scene and will follow the guidelines as described by the regional policy.

**E I/O 1 – Region E interoperability**.  1 of 5 region E multi discipline interoperability talk groups that will be utilized in Region C.  The use of this talk group will be determined by the command personnel on scene and will follow the guidelines as described by the regional policy.

**E I/O 2 - Region E interoperability**.  1 of 5 region E multi discipline interoperability talk groups that will be utilized in Region C.  The use of this talk group will be determined by the command personnel on scene and will follow the guidelines as described by the regional policy.

**E I/O 3 - Region E interoperability**.  1 of 5 region E multi discipline interoperability talk groups that will be utilized in Region C.  The use of this talk group will be determined by the command personnel on scene and will follow the guidelines as described by the regional policy.

**E I/O 4 - Region E interoperability**.  1 of 5 region E multi discipline interoperability talk groups that will be utilized in Region C.  The use of this talk group will be determined by the command personnel on scene and will follow the guidelines as described by the regional policy.

**E I/O 5 - Region E interoperability**.  1 of 5 region E multi discipline interoperability talk groups that will be utilized in Region C.  The use of this talk group will be determined by the command personnel on scene and will follow the guidelines as described by the regional policy.

**G I/O 1 – Region G interoperability**.  1 of 5 region G multi discipline interoperability talk groups that will be utilized in Region C.  The use of this talk group will be determined by the command personnel on scene and will follow the guidelines as described by the regional policy.
**G I/O 2 - Region G interoperability**.  1 of 5 region G multi discipline interoperability talk groups that will be utilized in Region C.  The use of this talk group will be determined by the command personnel on scene and will follow the guidelines as described by the regional policy.
**G I/O 3 - Region G interoperability**.  1 of 5 region G multi discipline interoperability talk groups that will be utilized in Region C.  The use of this talk group will be determined by the command personnel on scene and will follow the guidelines as described by the regional policy.
**G I/O 4 - Region G interoperability**.  1 of 5 region G multi discipline interoperability talk groups that will be utilized in Region C.  The use of this talk group will be determined by the command personnel on scene and will follow the guidelines as described by the regional policy.
**G I/O 5 - Region G interoperability**.  1 of 5 region G multi discipline interoperability talk groups that will be utilized in Region C.  The use of this talk group will be determined by the command personnel on scene and will follow the guidelines as described by the regional policy.


## ZONE 4 – MHP

Zone 4 consists of Missouri State Highway Patrol talk groups.  The talk groups included are described as follows:

**E DISP2 – Troop E dispatch talk group.**  This talk group will be available only in DPS dispatch consoles.  This talk group will be used as a communications link between the DPS dispatch console and Troop E's dispatch console when the conventional point to point channel is inoperable.
**E CAR2 – Troop E car to car talk group.**  This talk group will be available in all portables and mobiles.  This talk group can be utilized by officers as a way to communicate with Highway Patrol officers in the region.  This talk group should only be utilized by officers as a way of contacting the Highway Patrol officers when they are unable to make contact using the conventional mutual aid channels.

## ZONE 5 – MIO

Zone 5 consists of the 5 statewide interoperability talk groups as defined previously in this document.

**MO I/O 1 – Missouri interoperability talk group.**  This is 1 of 5 statewide multi discipline interoperability talk groups that have been defined for multiple regional incident use.
**MO I/O2 - Missouri interoperability talk group.**  This is 1 of 5 statewide multi discipline interoperability talk groups that have been defined for multiple regional incident use.
**MO I/O 3 - Missouri interoperability talk group.**  This is 1 of 5 statewide multi discipline interoperability talk groups that have been defined for multiple regional incident use.
**MO I/O 4 - Missouri interoperability talk group.**  This is 1 of 5 statewide multi discipline interoperability talk groups that have been defined for multiple regional incident use.
**MO I/O 5 - Missouri interoperability talk group.**  This is 1 of 5 statewide multi discipline interoperability talk groups that have been defined for multiple regional incident use.

<u>**ZONE 6, 7, 8 – EVT**</u>

**Zones 6, 7, 8 – Event talk groups.** Zones 6, 7 and 8 consist of forty five event talk groups that have been defined in this document on page 2. There are 45 events talk groups in the 30 in zones 6 and 7 and the last 13 in zone 8. These talk groups are also multi discipline talk groups. The exception to this will be for radios that are only capable of up to 150 modes such as the model 1.5 Motorola XTS 2500. In radios that are limited to 150 modes or less, the event talk groups 31-45 may be left out to allow for more programming of conventional frequencies.

<u>**Priority Levels –**</u> each talk group in the system has a designated priority level from 1 to ten. The talk groups are categorized for the assignment of priority as shown below.

<u>**1 – Emergency**</u>
<u>**2 – Blank**</u>
<u>**3 – Public Safety Dispatch, All group calls, Car to Car**</u>
<u>**4 – Blank**</u>
<u>**5 – Interoperability, Common Dispatch/Shared**</u>
<u>**6 – Blank**</u>
<u>**7 –Administrative**</u>
<u>**8- Blank**</u>
<u>**9 – Other agencies and roaming**</u>
<u>**10 – Training**</u>

Announcement groups have the same priority as the highest priority talk group in the announcement group.

# <u>Storm Plans</u>

These are inevitably situations that fall beyond the normal communications procedures and require specialized communications preparation or reaction. The following are some categorizations of circumstances and possible preparations or reactions. (Processes for triggering these plans are to be determined by the governance group.

<u>**Normal Operations**</u>

Under normal circumstances individual officers/employees will operate on the talk groups as they are listed above to be used. Interaction between users and between agencies is handled as routine and is carried on the day to day business channels.

**ACTION** - Normal radio traffic is handled on open dispatch talk groups between field units and dispatch. Unit to unit traffic is handled on mobile user talk groups. Agency to agency communications may be by phone, conventional point to point radio, or by shared talk group arrangements.

## Planned Event Operations

Often there is a need to enhance communications capabilities for a specific event that is known well in advance.  In these situations the communications enhancements may be to support a higher volume of routine traffic, such as rodeo or a sobriety check point.  They might also be used as a preparedness measure in case incidents should occur within the event that would overwhelm the normal communications operation, such as a large gathering of people at a county fair where a carnival ride could malfunction or a high profile sporting event that could lead to fan rioting.

**ACTION** - For planned events, the EVENTS talk groups can be activated in advance for the area surrounding the event to allow additional talk paths for personnel working the event and responders to any incidents within the event.  Event communications may be partially or entirely carried on EVENT talk groups.  EVENTS talk groups will be activated for agencies as they are requested.

## Urgent Situations

Urgent situations may require special communications attention.  Such communications may need to be encrypted to preserve confidentiality.  Some examples might be: a warrant round up, a high risk warrant service, a multiple person felony arrest, a water evacuation operation, etc.

**ACTION** - An incident that may produce a large amount of radio traffic or demand a great deal of focus without interruption should be moved to a dedicated talk group with a dedicated radio operator if possible.  This allows other personnel to continue with routine traffic while urgent traffic is handled separately.

## Emergency Situations

Emergency situations may require a coordinated response of several responders and multiple agencies.  A larger structure fire with injured persons and blocked highways may require fire, EMS, and law enforcement responders from multiple agencies to work together on an incident.

**ACTION** - In a localized incident such as on involving a single building, on-scene shared talk groups or conventional interoperability channels should be used by the incident commander to facilitate communications within the incident perimeter and back to dispatch.  In a large scale, wide area incident such as a tornado touch-down, wide area shared dispatch talk groups, regional interoperability talk groups, and statewide interoperability talk groups are available to incident commanders for response coordination.

## Deployment Situations

In prolonged incidents or incidents in areas of requiring enhanced communications, it may be necessary to deploy additional communications equipment or self contained dispatch operations near the incident scene.

**ACTION** - Cross-band operations, video surveillance, coverage enhancement, etc, all may require that specialized operations be established in the field to support the incident response.

Such a response may also take the on-scene communications off-network while communications from the scene back to dispatch centers remains on-network. There are numerous apparatus with varying degrees of communications capability already available. These apparatus should be equipped with on-network radios. Deployable equipment to add radio system capacity to an incident area is under development.

## Contingency Plans

**Capacity Overload** - In the event too many users try to access the talk paths available at a given site, the system will reject excess users trying to access the site by sending a "busy" tone to the radio. Capacity overload conditions are usually of short duration, but during an incident the conditions may persist.

To overcome overload conditions in the short term, traffic may be restricted to emergency traffic only. An announcement should be made by dispatch on announcement talk groups to hold routine traffic until the incident is cleared. Another short term solution method may be to combine personnel on multiple talk groups on a saturated site to a single talk group. This frees channels at the site for other talk groups.

Another short term solution method may be to combine personnel on two multiple talk groups on a saturated site to a single talk group. This frees channels at the site for other talk groups.

A medium term solution is to increase system capacity by deploying a site on wheels with additional system radios. That solution is under development.

Increasing capacity is a long term solution for persistent overload issues but it cannot be addressed in the short term.

**Connectivity Failure** - In the event a radio site is still operational but isolated from the radio network the site will enter "Site Trunking" mode. Talk groups will continue to operate between users in their talk group within range of the tower site but the site is no longer connected to dispatch centers or other tower sites. Depending upon the user's location, it may be possible to stay connected to the network through an adjacent tower site. If that is not possible, it will be necessary to relay radio traffic through users still on the network or make contact with conventional radios.

**Site Trunking Failure** -   In the event of a complete loss of the network system incuding being disconnected from the site tower radios will enter a FailSoft mode. If a radio enters FailSoft mode all communications should be changed to Sikeston Fire Ground conventional frequency/channel.

**Site Failure** - If a site fails completely and is no longer operational, it may still be possible to stay on network through an adjacent tower site. If the user is not within range of another tower site, it will be necessary to relay radio traffic through users still on the network or make contact with conventional radios.

## Dynamic Regrouping

Dynamic Regrouping is a system function that places individual units into a new predefined talk group. This function is based on specific unit identifiers and is configured by the network operations center (NOC). When activated by the NOC, specific units are placed into a pre-designated dynamic talk group together. There can be more than one dynamic talk group defined in the system but a radio can only be in one. When activated the user display toggles between "regroup" and the talk group they were previously on. Dynamic talk groups are under development.

## Console Patching

Console patching is a function of the dispatch console that allows the radio operator to temporarily join multiple talk groups together to operationally act as one. When activated by the radio operator, all users on the selected talk groups will be patched together as though they were on one talk group. There is no change in the status of the user radio; it remains on the same talk group. The groups remain patched together until deactivated by the radio operator. This function may be used to bridge users on disparate talk groups together so they can talk direct or to make announcements on multiple specific talk groups.

## ID assignment for users in Sikeston

An identification number will be assigned to each system radio in all departments. The range of ID numbers currently assigned to Sikeston is 50000-50499. This number may change at any time to better serve the operation of the statewide system. With the current ID numbers provided the following is the way that ID's are assigned to radios currently being used on the system in Sikeston:

50000 – 50249 – are issued in order for mobile radios on the system

50250 – 50499 – are issued in order for portable radios on the system

## SOFT BUTTON CHOICES AND RADIO FUNCTION OPTIONS

The charts on the following pages contain recommendations for the various model radios that are used by Sikeston Department of Public Safety. The following selections are only optional and may be changed in the future to better accommodate the users at the department.

## XTS 2500 MOD I

| | |
|---|---|
| **ORANGE BUTTON** | |
| Conv - Emer | Trunk - Emer |
| | |
| **16 POS ROTARY SWITCH** | |
| Conv - Chan Sel | Trunk - Chan Sel |
| | |
| **Side button 1 - Purple Button** | |
| Conv - Sel | Trunk - Sel |
| | |
| **Side button 2** | |
| Conv - Zone Up | Trunk - Zone Up |
| | |
| **Side button 3** | |
| Conv - Zone Down | Trunk - Zone Down |
| | |
| **3 POS CONCENTRIC SWITCH** | |
| **Position A** | |
| Conv - Scan | Trunk - Scan |
| | |
| **Postion B** | |
| Conv - Blank | Trunk - Blank |
| | |
| **Postion C** | |
| Conv - Scan Prog | Trunk - Scan Prog |

## XTS 2500 MOD II

| | |
|---|---|
| **ORANGE BUTTON** | |
| Conv - Emer | Trunk - Emer |
| | |
| **16 POS ROTARY SWITCH** | |
| Conv - Chan Sel | Trunk - Chan Sel |
| | |
| **Side button 1 - Purple Button** | |
| Conv - Sel | Trunk - Sel |
| | |
| **Side button 2** | |
| Conv - Nuis/del | Trunk - Nuis/del |
| | |
| **Side button 3** | |
| Conv - Light | Trunk - Light |
| | |
| **3 POS CONCENTRIC SWITCH** | |
| **Position A** | |
| Conv - Scan | Trunk - Scan |
| | |
| **Postion B** | |
| Conv - Blank | Trunk - Blank |
| | |
| **Postion C** | |
| Conv - Scan Prog | Trunk - Scan Prog |

| **Menu Items** | |
|---|---|
| | |
| **CONV** | **TRUNK** |
| Zone up | Zone Up |
| Zone Down | Zoine Down |
| Zone Sel??? | Zone Sel??? |
| | |

## XTS 2500 MOD III       APX 7000R no keypad

| | | | |
|---|---|---|---|
| | | | |
| **ORANGE BUTTON** | | **ORANGE BUTTON** | |
| Conv - Emer | Trunk - Emer | Conv - Emer | Trunk - Emer |
| | | | |
| **16 POS ROTARY SWITCH** | | **16 POS ROTARY SWITCH** | |
| Conv - Chan Sel | Trunk - Chan Sel | Conv - Chan Sel | Trunk - Chan Sel |
| | | | |
| **Side button 1 - Purple Button** | | **Side button 1 - Purple Button** | |
| Conv - Sel | Trunk - Sel | Conv - Sel | Trunk - Sel |
| | | | |
| **Side button 2** | | **Side button 2** | |
| Conv - Nuis/del | Trunk - Nuis/del | Conv - Zone Up | Trunk - Zone Up |
| | | | |
| **Side button 3** | | **Side button 3** | |
| Conv - Light | Trunk - Light | Conv - Zone Down | Trunk - Down |
| | | | |
| **3 POS CONCENTRIC SWITCH** | | **3 POS CONCENTRIC SWITCH** | |
| **Position A** | | **Position A** | |
| Conv - Scan | Trunk - Scan | Conv - Scan | Trunk - Scan |
| | | | |
| **Postion B** | | **Postion B** | |
| Conv - Blank | Trunk - Blank | Conv - Blank | Trunk - Blank |
| | | | |
| **Postion C** | | **Postion C** | |
| Conv - Scan Sel | Trunk - Scan Sel | Conv - Scan Sel | Trunk - Scan Sel |

| Menu Items | | Toggle switch top | |
|---|---|---|---|
| **CONV** | **TRUNK** | Conv - blank | Trunk - blank |
| Zone Up | Page/Call | | |
| Zone Down | Zone Up | | |
| Zone Sel ?? | Zone Down | | |

# APX 7000R with keypad

| | |
|---|---|
| **ORANGE BUTTON** | |
| Conv - Emer | Trunk - Emer |
| | |
| **16 POS ROTARY SWITCH** | |
| Conv - Chan Sel | Trunk - Chan Sel |
| | |
| **Side button 1 - Purple Button** | |
| Conv - Mon | Trunk - Mon |
| | |
| **Side button 2** | |
| Conv - Light | Trunk - Light |
| | |
| **Side button 3** | |
| Conv - Talk around | Trunk - Talk around |
| | |
| **3 POS CONCENTRIC SWITCH** | |
| **Position A** | |
| Conv - Blank | Trunk - Blank |
| | |
| **Postion B** | |
| Conv - Scan | Trunk - Scan |
| | |
| **Postion C** | |
| Conv - Scan Prog | Trunk - Scan Prog |

| | |
|---|---|
| **Toggle switch top** | |
| Conv - Key lock/blank | Trunk - key lock/blank |

| | |
|---|---|
| **Menu Items** | |
| | |
| **CONV** | **TRUNK** |
| Zone Up | Page |
| Zone Down | Call |
| | Zone Up |
| | Zone Down |
| | Chan |