Regional Area Multi Band Integrated System (RAMBIS)
STANDARD OPERATING PROCEDURE

Introduction
The public safety agencies in the MARC region recognize the need for interagency communication, interoperability, and cooperation. Regional law enforcement agencies, fire departments, and Emergency Medical Services (EMS) have well-established interoperability capabilities and mutual aid agreements in place. While these plans and agreements officially extend beyond jurisdictions, they tend to remain intra-discipline in practice. Today’s public safety realities highlight the need for agencies to work together to establish communications interoperability and mutual aid plans—not only across traditional jurisdictional boundaries, but across disciplines as well.

To remedy the lack of ability to communicate among disciplines, the region’s public safety agencies, as well as the public service agencies, have worked cooperatively to develop an intra-jurisdictional interoperability solution. This solution establishes dedicated radio channels with procedures that are accessible on communication equipment used by public safety personnel.

Purpose
The purpose of this SOP is to delineate the authority, roles, and procedures for agency personnel to use the intra-jurisdictional interoperability channels.

The principal objective of RAMBIS is to provide public safety personnel from various agencies a real-time means of direct voice communications. Not only will this enhance the efficiency of a multi-agency response, it will save lives by quickly disseminating critical information to participating emergency responder agencies at the scene of a significant incident anywhere in the MARC region.

Definitions
“COMC” means Regional Communications Coordinator. The COMC is responsible for accountability of available regional resources outlined in the TICP. The COMC is the single point of contact for allocation of available regional communications resources and will make the final determination of how those resources will be assigned. The COMC also serves as the coordinator for daily use of RAMBIS.

“COML” means Communications Unit Leader. The COML has the responsibility to allocate available frequencies and equipment during an actual event, based on the circumstances, agencies involved and available resources.

“ICS” means Incident Command System. The Incident Command System is a standardized, on-scene, all-hazard incident management concept.
“IOC” means Initial Operating Channel. RAM TAC2 is the designated initial operating channel.

“Interoperability” means the ability for public safety service and support providers (law enforcement, fire service, EMS, emergency managers, utilities, transportation, and others) to communicate with staff from other responding agencies, to exchange voice and/or data communications on demand in real time.

"MARC" means the Mid-America Regional Council.

“MARC Region” means the nine (9) county Kansas City metropolitan area composed of Cass, Clay, Jackson, Platte and Ray Counties in Missouri and Johnson, Leavenworth, Miami and Wyandotte Counties in Kansas.

“NIMS” means National Incident Management System.

"Public Safety Communications Board" means the policy board created by the Interlocal Cooperation Agreement signed by the participants in the Kansas City regional 9-1-1 system, or any subcommittee of the policy board.

"PSAP" means a public safety answering point, the location at which 9-1-1 calls are initially answered.

“RAMBIS” means Regional Area Multi-Band Integrated System. It is a multi-band system consisting of VHF / UHF / 800MHz Cross-Banded Repeaters. RAMBIS is a simulcast microwave system utilizing 10 tower sites in the MARC region. The system was designed to be brand agnostic for radio equipment, i.e. any brand, any Band (ex low VHF), analog voice subscriber units (including wideband) will be supported. The RAMBIS system is based on existing 800 MHz mutual aid / NPSPAC channels.

“RAM CALL” is the calling channel for RAMBIS. This is a call in channel for units to use to request the use of a tactical channel; RAM TAC1 or RAM TAC2. This channel is also used for units outside of the region to call on to ask for assistance.

“RAM TAC1 or RAM TAC2” means RAMBIS Tactical Channels 1 and 2. These are used for interoperable communications between units on all bands.

“RAM TAC3 and RAM TAC4” means RAMBIS Tactical Channels 3 and 4. These are used for interoperable communications on the 800 MHz band only.

“Tactical Interoperable Communications Plan”, also known as the “TICP” is intended to document what interoperable communications resources are available within the MARC region, who controls each resource, and what rules of use or operational procedures exist for the activation or deactivation of each resource. Every agency is allowed access to the TICP.
Scope
The scope of this SOP includes all public safety agencies including police, fire, and EMS as well as other public service agencies. These agencies have worked cooperatively to develop the intra-jurisdictional interoperability channels and standard operating procedures, which will be used at the agency command level during critical incidents. The Public Safety Communications Board is responsible for the policy guidance, budget and oversight for regional interoperability systems, which includes RAMBIS, to ensure that a high quality, reliable method of interoperable communications is available throughout the entire service area.

These procedures are intended to provide additional process guidelines and are not intended to conflict with or supplant any other policies or procedures at individual public safety agencies in regards to radio communications.

RAMBIS Channels
The RAMBIS channels consist of dedicated UHF/VHF/800 MHz simulcast channels. This patched network permits users, operating on any of the three frequency bands, to communicate directly with other intra-jurisdictional interoperability channel users. This continuous patch allows interoperable communications to occur without the need to set up a patch during the early stages of an actual incident.

Usage
RAMBIS is listed as a communications asset in the Kansas City Region Tactical Interoperable Communications Plan. As outlined in the plan, whenever a communications asset is needed or used, the designated Regional Communications Coordinator (COMC) needs to be notified of the use of the asset.

RAMBIS is intended to be used for multi-jurisdictional and/or multi-discipline events that occur in local jurisdictions. RAMBIS will most likely be used for the first hour of communications during a major event.

Advance permission is not required for use of RAMBIS for multi-jurisdictional or multi-discipline incidents. Advance approval from a COMC is needed for use of RAMBIS in pre-planned events. When agency personnel or an incident COML have identified the need to use RAMBIS, they should notify their PSAP, verifying with the PSAP that the desired RAMBIS channel is not already in use for another incident. In turn, the PSAP will need to notify the COMC of the specific RAMBIS channels being used and the purpose for which they are being used.

RAMBIS can be used, and is encouraged to be used, when necessary to conduct day-to-day operations in a multi-jurisdictional environment; however the channel must be vacated if its use is required for emergency operations. RAMBIS may also be used when an agency experiences a total failure of the agency’s radio system.
Sample uses include:
Mass Casualty Event
Car Chase
Lost Child
Multi-discipline event within a single jurisdiction when local interoperable solutions are not available
Special Events-Dignitaries-Festivals (Pre-Planned Events)
    These events have to be pre-approved by the COMC. In the event of an actual emergency, the COMC has the authority to terminate the use of RAMBIS for the pre-planned event.

Initial Use
It is recognized that some events or incidents will be short in duration. It is also recognized that some incidents happen immediately and require quick use of interoperable communications assets, such as RAMBIS.

RAM TAC2 will be designated as the “Initial Operating Channel” or IOC. When an agency/field unit needs to utilize RAMBIS, they will start initial operations on this channel. Before using RAM TAC2, the agency wishing to use it must make sure that it is not already in use. This can be accomplished by listening to the channel. By starting operation on RAM TAC2, this will prevent an agency or field unit from tying up the main calling channel (RAM CALL). As soon as feasibly possible, the agency using the IOC will need to contact the COMC to further coordinate interoperable communications use and needs. Once the COMC is contacted, the COMC will make a system wide broadcast on the status of RAMBIS and which channels are being used. Once an agency has completed operations using RAMBIS, they need to notify the COMC. The COMC will make another system wide broadcast on the status of RAMBIS.

If a RAMBIS tactical channel (RAM TAC1 or RAM TAC2) is needed under normal circumstances, the requesting agency will use RAM CALL to contact the COMC to request the use of a tactical channel.

After Action Reports
At the conclusion of an event where RAMBIS was utilized, either the COMC or MARC Public Safety staff will complete an after action report.

Monitoring Channels
All PSAPs are encouraged to monitor the RAMBIS calling channel (RAM CALL). Some PSAPs may elect to monitor the tactical channels as well. However, it is recommended that PSAPs listen to the RAM CALL channel as a priority.
**Rules of Use**

**Plain Language**
Plain language is to be used when communicating on the RAMBIS channels. When necessary, the phonetic alphabet may be used to communicate over the channel.

**Radio Call Signs**
Units using RAMBIS should follow the Agency, Type and Unit Number naming convention for identification on the radio system. For example, “Overland Park Fire, Engine 42”, “KCMO Police 331”, or “Central Jackson County Fire, MED Unit 3.”

**NIMS and Incident Command System (ICS)**
Each agency will use ICS and NIMS as an operational guide at incidents where the intra-jurisdictional interoperability channel is activated. All communications on the RAMBIS system will be NIMS compliant.

**Training**
Participating agencies will be responsible for ensuring that their personnel are familiar with this SOP and are properly trained. Training on the RAMBIS system will be supplemented with a training video, lesson plan, PowerPoint and other reference materials.

**Testing**
During standardized testing, the testing agency will communicate with participating public safety and public service agencies on the intra-jurisdictional interoperability channel.

There will be two different phases of radio testing:

- **Communications Center Testing**
  The system will be tested three times per month to insure that it is operational on all frequency bands (UHF/VHF/800 MHz). The following is the recommended testing process:
  10\(^{th}\) of the Month – 0630 hours
  20\(^{th}\) of the Month – 1430 hours
  30\(^{th}\) of the Month – 2230 hours

  Testing will be initiated by Johnson County Emergency Communications Center. A roll call format will be used to test the system. At the end of the test, any agency either not listed on the roll call or missed can test at that time.

- **Operational Testing**
  If possible, field units should be used to test the operational status of the system. The system should be tested on each RAMBIS channel (RAM CALL, RAM TAC1, RAM TAC2).
## APPENDIX

<table>
<thead>
<tr>
<th>VHF Frequency Band</th>
<th>Label</th>
<th>Mobile Rx CTCSS</th>
<th>Mobile Tx CTCSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>161.8000 rx/ 157.2000 tx</td>
<td>RAM CALL</td>
<td>156.7 Hz</td>
<td>156.7 Hz</td>
</tr>
<tr>
<td>161.8875 rx/ 157.2875 tx</td>
<td>RAM TAC1</td>
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<td>156.7 Hz</td>
</tr>
<tr>
<td>161.9375 rx/ 157.3375 tx</td>
<td>RAM TAC2</td>
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<table>
<thead>
<tr>
<th>UHF Frequency Band</th>
<th>Label</th>
<th>Mobile Rx CTCSS</th>
<th>Mobile Tx CTCSS</th>
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<tbody>
<tr>
<td>453.2125 rx / 458.2125 tx</td>
<td>RAM CALL</td>
<td>156.7 Hz</td>
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<tr>
<td>453.4625 rx / 458.4625 tx</td>
<td>RAM TAC1</td>
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<td>156.7 Hz</td>
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<tr>
<td>453.7125 rx / 458.7125 tx</td>
<td>RAM TAC2</td>
<td>156.7 Hz</td>
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<table>
<thead>
<tr>
<th>800 MHz</th>
<th>Label</th>
<th>Mobile Rx CTCSS</th>
<th>Mobile Tx CTCSS</th>
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</thead>
<tbody>
<tr>
<td>851.0125 mob rx/ 806.0125 mob tx</td>
<td>RAM CALL</td>
<td>156.7 Hz</td>
<td>156.7 Hz</td>
</tr>
<tr>
<td>851.5125 mob rx/ 806.5125 mob tx</td>
<td>RAM TAC1</td>
<td>156.7 Hz</td>
<td>156.7 Hz</td>
</tr>
<tr>
<td>852.0125 mob rx/ 807.0125 mob tx</td>
<td>RAM TAC2</td>
<td>156.7 Hz</td>
<td>156.7 Hz</td>
</tr>
<tr>
<td>852.5125 mob rx/ 807.5125 mob tx</td>
<td>RAM TAC3</td>
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<tr>
<td>853.0125 mob rx/ 808.0125 mob tx</td>
<td>RAM TAC4</td>
<td>156.7 Hz</td>
<td>156.7 Hz</td>
</tr>
</tbody>
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NOTE: RAM TAC3 and RAM TAC4 = Since RAM TAC3 and RAM TAC4 only exist on 800 MHz, they should be the channels of choice when all the agencies and disciplines involved have 800 MHz or 700 MHz radios. This will leave TAC1 and TAC2 available for incidents where cross-band operation is needed.