

**Mutual Aid Box Alarm System – Illinois
Policy – Practices – Guidelines Manual**

Index #A-01-01

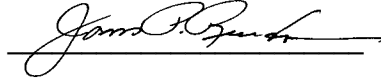
Adopted – 7-19-07

Revised:

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Subject: Enabling Policy and Structure
Functional Area: Administration
Category: Policy

Approved By:



Purpose:

A policy providing for the creation, adoption, approvals, categorization, cataloging and institutionalizing of policies, practices, guidelines and related support appendices.

Responsibility:

It is the responsibility of the MABAS Executive Board, MABAS staff, committee chairs, work group leaders, and liaisons to maintain the standard, format, and structure outlined within this policy.

Accountability:

The Chief Executive Officer shall be accountable to assure compliance with this standard. Should compliance not occur through the efforts of the CEO, the MABAS Executive Board President, 1st and 2nd Vice Presidents shall seek compliance.

Reporting Requirement:

None

1. Definitions, Criteria and Process

A. Policy Statement:

Requirements set forth in a policy require mandatory compliance by all applicable MABAS divisions, member departments and MABAS staff members. Policies are adopted by majority vote of the attending MABAS divisions at a regular quarterly meeting of the full Executive Board. All policies should comply with the following process:

- 1) Policies may be proposed by individuals, committees, work groups, liaisons, MABAS divisions, MABAS Executive Team or Board members, or the CEO of MABAS.
- 2) Draft policies should be reviewed and commented on by an appropriate committee and MABAS CEO. Committee Chairs and the CEO may support, oppose or remain neutral with appropriate comments on a draft policy. All comments will be presented at Executive Board meetings prior to consideration to adopt.
- 3) Draft policies with committee and CEO comments should be circulated to all MABAS divisions a minimum of thirty (30) days prior to a full Executive Board action to consider the policy.
- 4) The CEO may enact a policy and waive steps numbered 1, 2, and 3 if a need exists to immediately act. In order for the CEO to exercise the waiver the approval of a majority of the MABAS Executive Team (President, 1st Vice President, 2nd Vice President, and Treasurer) must be obtained. Should a waiver be exercised by the CEO and approval by a majority of the Executive Team the subject policy shall be processed through steps 1, 2, and 3 as soon as practical.
- 5) Compliance is obtained by following the written word of the policy involved.
- 6) Compliance to policy is mandatory by all MABAS - Illinois Divisions.
- 7) All policies are signed by the President of the MABAS Team/Board.

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B. Procedures:

- 1) Technical in nature providing a step-by-step process to achieve an end in a predictable, desirable and safe manner. Creations of procedures can be accomplished by individuals, committees, work groups, liaisons, MABAS divisions or MABAS staff.
- 2) Recommendations for approval of procedures can be processed through an appropriate committee and MABAS CEO.
- 3) Committees shall approve procedures through their concurrence and signature of their co-chairs and MABAS CEO.
- 4) MABAS President shall have final approval of procedures.
- 5) Procedures do not require approval by attending divisions at full Executive Board meetings, nor is a thirty (30) day circulation period required as if it were a policy.
- 6) Committees and the MABAS CEO may select to follow the policy adoption process regarding a procedure when the procedure may be considered controversial or cause hardships in the field when compliance is sought. This suggestion is at the discretion of the committee co-chair and/or CEO however, an enacted procedure appeal can be made at the request of any MABAS division for discussion at a full Executive Board meeting.
- 7) Compliance with procedures is achieved by following the written word and intent of the document. Discretion is allowed to obtain compliance so long as the anticipated end is achieved in a safe manner.
- 8) Compliance with procedures is mandatory.

C. Guidelines:

- 1) Neither a procedure nor a policy, guidelines are provided to provide an education, understanding or learned skill enabling someone to accomplish an end state. Accepted practices, best practices and parameters are often included in guidelines.
- 2) Guidelines may be submitted by individuals, committees, work groups, liaisons, MABAS divisions, or MABAS staff. Committees, MABAS branch chiefs or the MABAS CEO should review and support the guideline by signature of the author or coordinating entity agency head should also be included in the template under “Approved By” Header.
- 3) No formal Board approval is required to adopt guidelines.
- 4) Guidelines have no compliance requirements.

2. Organization

A. Template, Format, Cataloging:

- 1) All policies, procedures and guidelines shall conform to the template and format demonstrated in Attachment A.
- 2) Structure and cataloging of all policies, procedures and guidelines shall conform to the index shown in Attachment B. Amendments can be made with approval of the CEO or as required by this policy.

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B. Definitions for template and cataloging as demonstrated on Attachment A and B are as follows:

- 1) Index: Reference letter and number shown on Attachment B – structure and cataloging. (Example A-01:01 enabling policy and structure). A-01:02 would suggest a future policy which falls under the same subject area.
- 2) Adopted: Date originally adopted by appropriate Board, committee, or individual.
- 3) Revised: The date the document was last revised.
- 4) Page _ of _: Total pages covering the policy, procedure or guideline.
- 5) Subject: Section A – Governance; Section B – Operations; Section C – Mission Statement; Section D – Appendices and References.
- 6) Functional Area: Finance/Administration, Operations, Logistics, and Plans.
- 7) Category: Policy, Procedure, Guideline
- 8) Approved By: President – or (by action of full executive boards)
CEO – or
Committee Co-Chairs – or
Signed in accordance with this policy's requirements – President signs all Board approved policy adoptions.
- 9) Purpose: Why is the document needed and what is its intent to achieve?
- 10) Responsibility: Who or what level of organizational structure is responsible to obtain compliance?
- 11) Accountability: Who is the point of contact to facilitate compliance by responsible parties?
- 12) Reporting Requirements: Is there an ongoing requirement to report on the documents output, continuance or end?

C. Administration of Policies and Guidelines:

- 1) The Finance/Admin Branch Chief shall be responsible for the management, organization and archiving of policies, procedures and guidelines.
- 2) Specific responsibilities assigned to the Finance/Admin Branch Chief associated with policies, procedures and guidelines include:
 - a) Maintaining an update hard copy master document of originals – policies, procedures guidelines.
 - b) Maintaining a comprehensive electronic version of all policies, procedures, and guidelines.
 - c) Maintaining controlled access to all documents on the MABAS Website for authorize downloading.
 - d) Distribution to all MABAS division boards, staff and website.
 - e) Tracking any applicable reporting requirements.

Attachment “A”
Policy Template

Subject: Functional Area: Category: Approved By:	_____ _____ _____ _____
<u>Purpose:</u>	
<u>Responsibility:</u>	
<u>Accountability:</u>	
<u>Reporting Requirement:</u>	

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Attachment “B”
Structure and Cataloging

Chapters:

A. Governance and Administration

Sections:

01 – Enabling Policy and Structure

02 – Organizational Position Descriptions

03 – Organizational Committees, Liaisons and Work Groups

04 – Financial Matters

05 – Purchasing and Acquisition

06 – Publications

07 – Reimbursements

08 – Division Structures and Processes

B. Operations

01 – Incident Management and Coordination

02 – Mobility and Deployments

03 – Hazardous Materials

04 – Technical Rescue

05 – Underwater Rescue and Recovery

06 – Incident Management Assistance Teams

07 – Urban Search and Rescue

C. Mission Support

01 – Communications and Dispatch Centers

02 – Logistics and Equipment

D. Appendices and References

**Mutual Aid Box Alarm System – Illinois
Communications – MABAS ALERTING/COVERAGE**

Index #C-01-01

Adopted – 10/16/02

Revised:

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Subject: VHF Interoperability
Functional Area: Communications
Category: Policy

Approved By: MABAS Executive Board

Purpose:

To encourage all MABAS members and other Fire Departments to obtain base station, mobile and portable radio communications capability on interagency radio frequencies for use during times of serious emergencies or disasters.

Amendment 1 - To add four additional 12.5 kHz “narrow-band” frequencies to the list of fire service interoperability channels identified in Statement #1 approved by the MABAS Executive Board on October 16, 2002.

Responsibility:

This policy applies to all MABAS member agencies. It is encouraged that all fire departments and related emergency response organizations throughout Illinois adopt the procedures set forth herein.

Accountability:

Radio interoperability is the responsibility of every fire department in Illinois and therefore, compliance with this policy ultimately rests with each Fire Chief. Enforcement of this specific policy as it relates to MABAS rests initially with the Co-Chairs of the MABAS Telecommunications, Communications, and Dispatch Centers committee, then the MABAS CEO, followed by the MABAS President, 1st Vice President and 2nd Vice President.

Reporting Requirement:

There is no routine reporting requirement for this policy.

1. Background

Fire departments rely heavily on two-way radios to communicate between companies, departments, and other disciplines at emergency and disaster scenes. Fire Departments utilize radio frequencies in the VHF-Low, VHF-High, UHF and 800 MHz frequency bands for day-to-day operations. Newer technologies include the use of analog and digital transmissions and trunking technologies using incompatible protocols.

While these systems may meet the routine needs of individual departments, experience has shown that lack of interoperability between companies operating at an emergency scene can lead to serious and potentially life threatening consequences.

The FCC's national radio frequency band plan specifies four VHF-High Band radio frequencies for fire service interoperability and fireground operations. There are also five analog public safety mutual aid frequencies in the 800 MHz band plan. The state of Illinois has identified the frequency of 155.055 MHz (IREACH) as a statewide, interdisciplinary, coordination channel for use by police, fire, EMS, public works, highway and other governmental agencies.

Departments that utilize frequencies other than VHF-High Band for primary operations have developed various systems to communicate with MABAS departments at mutual aid calls. These systems include cross-band mobile repeaters and console patches to VHF base stations. These systems have many limitations, have tendencies to cause harmful interference, limit operating areas, may violate FCC rules, and could jeopardize the safety of personnel at emergency scenes.

NFPA standard 1221, **Standard for the Installation, Maintenance, and Use of Emergency**

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Communications Systems, Section 6-3.1.3 and 6-3.1.4 recommend that, “A simplex radio channel shall be provided for on-scene tactical communications” and “Communications system design shall be such that a portable radio is capable of operating properly within the dispatch area without the use of mobile radio frequency (RF) amplifiers”.

MABAS and the Illinois Emergency Management Agency (IEMA) have entered into an agreement to provide disaster response statewide. The potential exists for fire and EMS units to be operating for extended periods of time several hundred miles from their local jurisdiction or other distant jurisdictions may be operating in a stricken community during a disaster. Common mutual aid operations and fireground frequencies that will function statewide are essential.

The Federal Communications Commission (FCC) has designated four 12.5 kHz “narrow band” frequencies, three of which are for inter-system operation. As fire departments migrate to newer “narrow-band” two-way radio equipment, the four additional VHF fire frequencies could be integrated into MABAS’s overall communications plan.

Future fire service communications could dictate an alternate base to mobile frequency. To address this need, one of the new frequencies will be designated for base and mobile licensing.

2. Policy

The MABAS Telecommunications, Communications and Dispatch Committee hereby establishes the following policy:

1. The following analog simplex radio frequencies are hereby identified for fire service and public safety interoperability:

Frequency	CTCSS	Name	Purpose
154.265 MHz		210.7 Hz	IFERN*
153.830 MHz		69.3	Red Fireground
154.280 MHz		74.4	White Fireground
154.295 MHz		85.4	Blue Fireground
153.8375 MHz		91.5	Gold Fireground
154.2725 MHz		94.8	Black Fireground
154.2875 MHz		136.5	Gray Fireground
154.3025 MHz		67.0	IFERN2
155.055 MHz			IREACH

dispatch

Base/Mobile

Coordination

*IFERN (Interagency Fire Emergency Radio Network) replaces the old NIFERN moniker.

2. All fire service apparatus that has the potential to respond mutual aid to a department that uses a different dispatch radio band or technology, or that may respond as part of an IEMA/MABAS disaster response, should have at least one mobile and one portable radio capable of functioning on the frequencies identified in Section 1.
3. All fire department command vehicles should have radio capability on the five VHF-High Band frequencies identified in Section 1.
4. All fire department dispatch centers statewide should have base station transmit and receive capabilities on the IFERN frequency of 154.265 MHz. MABAS members should have capability to receive and decode the MABAS alert tones.

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5. Fire Departments that lack current FCC authorizations for the frequencies identified in Section 1 should immediately apply for proper frequency coordination and authorizations through the IMSA/IAFC frequency coordinator and FCC respectively.
6. MABAS Divisions are encouraged to apply for FCC authorizations on these frequencies.
7. The use of trunking technology, in-band or cross-band repeaters, or console based cross-band patches is strongly discouraged for tactical fireground operations.
8. In accordance with Illinois Department of Public Health rules, all ambulances shall have VHF-High band capabilities on the statewide MERCI frequency of 155.340 MHz utilizing a transmit CTCSS (PL) tone of 210.7 Hz (M2).

3. Conclusion

Interoperability between various fire departments and other public safety and governmental agencies at major emergencies or disasters is essential for organized and safe coordination of personnel and resources.

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Index #C-01-02

Adopted – 4-24-03

Revised:

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Subject: CTCSS Tones
Functional Area: Communications
Category: Policy

Approved By: MABAS Executive Board

Purpose:

To implement the use of Carrier Tone Coded Squelch Systems (CTCSS), also commonly known as “Private Line™” or “PL™” on the IFERN and fireground frequencies.

Responsibility:

This policy applies to all MABAS member agencies. It is encouraged that all fire departments and related emergency response organizations throughout Illinois adopt the procedures set forth herein.

Accountability:

Enforcement of this specific policy rests initially with the Co-Chairs of the MABAS Telecommunications, Communications, and Dispatch Centers committee, then the MABAS CEO, followed by the MABAS President, 1st Vice President and 2nd Vice President.

Reporting Requirement:

There is no routine reporting requirement for this policy.

Background:

When the MABAS organization was formed in the early 1970's, radio communications were primitive as compared to the systems and equipment in use today. Many radios were not capable of CTCSS and those that were CTCSS equipped were limited to a single tone frequency. Since numerous CTCSS tones were already in use throughout the Chicago metropolitan area, a single CTCSS tone for MABAS was not practical and carrier squelch mode was selected.

Radio spectrum has become increasingly congested, especially in the large metropolitan areas. This congestion includes the public safety radio frequency spectrum. Many base stations that monitor the IFERN frequency in carrier squelch mode are subjected to adjacent channel interference and frequency mixes. Adjacent states utilize the IFERN frequency for other purposes, which also cause unwanted interference. The result is radio volumes are muted, limiting the effectiveness of the frequency.

In the command unit environment, where multiple radios are being used in close proximity to one another, there is often unwanted noise received and sounded through the radio speakers. While mostly annoying, this problem can be masked by the use of different CTCSS tones on the various frequencies being used.

Most radio communications equipment in use today by the fire service is capable of multiple CTCSS tones, selected on a mode specific basis. Older equipment can also be inexpensively modified to transmit CTCSS tones.

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Adopted – 4-24-03

Revised:

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Policy:

The MABAS Telecommunications, Communications and Dispatch Committee hereby establishes the following policy:

1. All IFERN base station radios should be programmed or modified for transmit and receive CTCSS utilizing a tone frequency of 210.7 Hz (M2).
2. All fire service mobile/portable radios should be programmed or modified for transmit CTCSS utilizing the following tones:

IFERN	154.2650 MHz	210.7 Hz (M2)
RED Fireground	153.8300 MHz	69.3 Hz (WZ)
WHITE Fireground	154.2800 MHz	74.4 Hz (WA)
BLUE Fireground	154.2950 MHz	85.4 Hz (YA)
GOLD Fireground	153.8375 MHz	91.5 Hz (ZZ)
BLACK Fireground	154.2725 MHz	94.8 Hz (ZA)
GRAY Fireground	154.2875 MHz	136.5 HZ (4Z)
IFERN2	154.3025 MHz	67.0 Hz (XZ)

3. All MABAS Divisions and fire departments should be prepared to implement the use of CTCSS on the IFERN frequency with an absolute application date of January 1, 2006.
4. All base and communications/command van users should monitor the frequencies in the carrier squelch mode prior to transmitting as required by FCC regulations.

Conclusion:

Adding CTCSS to base station receivers should control unwanted co-channel and adjacent channel interference.

**Mutual Aid Box Alarm System – Illinois
Communications – USE OF THE IFERN AND IFERN2 FREQUENCIES**

Index # C-01-03

Adopted: 06/09/2005

Revised:

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Subject: Use of the IFERN and IFERN2 Frequencies
Functional Area: Communications
Category: Policy

Approved : MABAS Executive Board

Purpose:

To clarify the general policies and procedures related to the use of the Interagency Fire Emergency Radio Network (IFERN) frequency (154.265 MHz) as well as the recently designated IFERN2 frequency (154.3025 MHz).

Responsibility:

This policy applies to all MABAS Divisions and member Departments.

Accountability:

Enforcement of this specific policy rests initially with the Co-Chairs of the MABAS Telecommunications, Communications, and Dispatch Centers committee, then the MABAS CEO, followed by the MABAS President, 1st Vice President and 2nd Vice President.

Reporting Requirement:

There is no routine reporting requirement for this policy.

Background:

Traditionally, the IFERN frequency (formerly NIFERN) has been utilized by the MABAS organization for the dispatch of units and coordination of mutual aid responses to a stricken community. IFERN has also been utilized to coordinate mutual aid activities outside of a MABAS Box Alarm event between fire departments with dissimilar primary radio frequencies.

IFERN has experienced increased congestion due to the growing number of MABAS Divisions, member Fire Departments, and Box Alarm dispatches. As a result of comments addressed to the Communications Committee concerning the foregoing situations, this Advocacy Statement has been developed.

Other technologies are being implemented that will serve the need for wide area information dissemination that are better suited than IFERN. These technologies include EMnet, Law Enforcement Agencies Data System (LEADS) and Starcom21.

Policy:

The MABAS Telecommunications, Communications and Dispatch Committee hereby establishes the following policy:

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1. **MABAS BOX ALARMS:** Requesting, dispatching, and response to MABAS Box Alarms are appropriate uses of the IFERN frequency. This radio traffic will include, but not necessarily be limited to:
 - 1.1 The Incident Commander, or stricken entity's dispatch authority, requesting the MABAS Box Alarm dispatch including box alarm number, general incident information and staging area.
 - 1.2 Coordination of responding units to the emergency scene and/or staging area.
 - 1.3 Coordination of the staging area, including communications between the Incident Commander and Staging Officer.
 - 1.4 Routine updates, reports and/or requests for additional assistance or resources.
 - 1.5 Communications between the Incident Commander and the stricken community's local dispatch authority.

2. **CHANGE OF QUARTERS COMPANIES:** Coordination of units responding to change quarters into a stricken community is an appropriate use of the IFERN Frequency. This radio traffic will include, but not necessarily be limited to:
 - 2.1 Communications between the MABAS Division Dispatch and units responding to the stricken community for change of quarters.
 - 2.2 Communications between the change of quarters units and the stricken community's local dispatch authority to coordinate responses to additional emergencies within the community.

3. **MUTUAL AID COORDINATION:** Coordination of units responding to an emergency incident that involves one or more fire departments that utilize dissimilar primary dispatch frequencies is an appropriate use of the IFERN frequency. This may include responses involving automatic mutual aid or other similar emergencies that do not necessitate a MABAS Box Alarm.

4. **FIRE/EMS EMERGENCY CALL RELAY:** Relay of fire and/or EMS emergency incident information between Public Safety Answering Points (PSAPs) or fire service dispatch centers that utilize dissimilar primary dispatch frequencies.

5. **MULTIPLE DEPARTMENT TRAINING EVENTS:** The use of IFERN, as well as the MABAS fireground tactical frequencies, is appropriate when coordinating training events that involve multiple fire departments when one or more of the fire departments utilizes a dissimilar primary radio frequency. This type of training event may also include the dispatch of a MABAS Box Alarm for drill purposes.

6. **INFORMATIONAL ANNOUNCEMENTS:** The use of IFERN and/or the MABAS Alerting Tones for the purpose of wide-area dissemination of informational announcements **is not appropriate**. These types of informational announcements may include, but not be limited to:

Severe Weather Watches and Warnings
Hospital Bypass, Closure or Diversion
Apparatus In/Out of Service or Relocation
AMBER Alerts

7. **RETONING BOX ALARMS:** Frequently a MABAS Box Alarm assignment includes departments from adjacent MABAS Divisions. It **is not appropriate** for multiple MABAS Divisions to activate the MABAS Alerting Tones and dispatch units to the same incident. The MABAS Division with primary mutual aid dispatch responsibility for the incident will be responsible for all dispatch and radio traffic associated with that specific MABAS Box Alarm incident. The exception to this section is for an Inter-Divisional MABAS request that is beyond

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the last level of the Box Alarm Card. (Please refer to C-01-04 - MABAS ALERTING/COVERAGE for additional guidance.)

8. **ALTERNATE TRAFFIC FREQUENCY:** The use of IFERN as an alternate radio frequency for local radio traffic **is not appropriate**. This would include local dispatch or response communications when the primary dispatch frequency is over burdened.
9. **IFERN2:** The narrowband frequency of 154.3025 MHz (IFERN2) has been secured for statewide use in Illinois and Wisconsin as an alternate mutual aid dispatch frequency for the MABAS organization. Uses of IFERN2 include, but are not limited to:

9.1 Disaster Response: Command and Control at disaster scenes through the use of temporary fixed base stations and/or mobile command posts. This would include coordination of base camp operations.

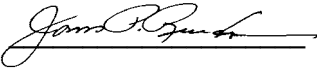
9.2 Wide Area Information Dissemination: A MABAS Division may elect to construct a network of fixed base stations and alerting receivers for the purpose of timely dissemination of information to member departments. (Note: Fixed Base Stations will require FCC authorization prior to construction.) Informational messages that may be broadcast on the IFERN2 frequency include, but are not limited to:

Severe Weather Watches & Warnings
Hospital Bypass, Closure or Diversion
Apparatus In/Out of Service or Relocation

Conclusion:

This policy provides policy and direction for the use of the MABAS dispatch frequencies, IFERN (154.265 MHz) & IFERN2 (154.3025 MHz). All MABAS Divisions and member departments are encouraged to enforce the disciplined use of these frequencies as advocated herein.

Approved by the MABAS Executive Board on June 9, 2005.

Subject: Emergency Management Network (EMnet) Secure Messaging System
 Functional Area: Communications
 Category: Policy
 Approved By: 

Purpose:
 To orient all MABAS members and MABAS Dispatch Centers to the Emergency Management Network (EMnet) text and messaging communications capability. This network will be essential for exchanging secure messages during times of serious emergencies or disasters.

To provide operational and technical information for setup, use, and vigilant monitoring of messages in the system.

To provide examples of how and when the system should be used.

Responsibility:
 This policy applies to all MABAS member agencies and dispatch centers. It is encouraged that all fire departments and related emergency response organizations throughout Illinois adopt the procedures set forth herein.

Accountability:
 EMnet is a project of the Illinois Terrorism Task Force, and as such, ultimate operation and enforcement of system policies rests therein. Enforcement of this specific policy as it relates to MABAS rests initially with the Co-Chairs of the MABAS Telecommunications, Communications, and Dispatch Centers committee, then the MABAS CEO, followed by the MABAS President, 1st Vice President and 2nd Vice President.

Reporting Requirement:
 There is no routine reporting requirement for this policy.

1. Background

Fire departments rely heavily on two-way radios to communicate between companies, departments, and other disciplines at emergency and disaster scenes. Phone lines, cellular phones, and email are also used. Newer technologies include the use of secure satellite and internet methods to exchange text messages and attached files between dispatch centers and fire agencies.

This advanced messaging capability can be extended to on-site command posts, Unified Command Centers, and specialty team operations centers when deployed.

The Illinois Terrorism Task Force is prepared to provide Comlabs EMnet systems to all fire agencies and dispatch centers throughout the state

2. Policy

1. Intended Uses

The following is a list of intended uses for the EMnet system:

- Statewide deployment orders
- Suggested training topics related to MABAS
- Meeting announcements
- Test dates and locations for OSFM
- Specialty team messages, support during deployments, accountability and current team status
- Weather alerting and EAS messaging
- Transmission of mission assignments / deployment orders from the State EOC to

- Specialty Teams and Resources via established protocols.
- Specialty status reports using pre-formatted electronic forms
- Paging/alerting of specialty teams, IMT, MAST, HAZMAT, TRT, etc via message forwarding from EMnet to text-enabled devices (including pagers, cell phones & Nextel) and email accounts
- Division-to-Division and/or MABAS-to-Division(s) messaging. This may include emergency and informational messaging from IEMA to MABAS
- DHS alert color changes and “just-in-time” reminders for action or considerations when moving to a different color alert
- IDPH alert messages, outbreaks, emergency and non-emergency messaging
- POD hospital status, messages relating to Mass Casualty Incidents, or patient distribution
- Chicago Transit Alerting Network (CTAN) for train and bus transportation alert messages in Northeast Illinois Metro Area.
- Other transportation alert messages such as significant road closures.

2. Technical Parameters

Basic technical parameters of the EMnet terminal (may be slightly different from site-to-site):

- Outside satellite dish and mount appropriate for the site (provided by grant).
- Computer with satellite interface card, flat-panel monitor, keyboard, mouse, speakers (provided by grant).
- Installation of hardware by a Comlabs-arranged contractor based on data provided in a site survey completed by the host agency (provided by grant).
- Land-based internet connection needed such as DSL, broadband on cable, dial-up service or wireless internet service. Note: Dial-up service is NOT recommended. Appropriate cable (Cat 5 or better) from hub/switch/router to computer prior to or at installation (provided by fire agency or MABAS dispatch agency).
- Redundant internet connections are suggested, especially for dispatch agencies and specialty team operations.
- System should be attached to a reliable power source such as UPS with generator backup.

3. Staffing Requirement

Dispatch Agencies:

- For dispatch agencies: 24 x 7 x 365 vigilant monitoring and responsiveness to messages.
- If in a MABAS Division Dispatch Center, the computer must be available to fire telecommunicators.

Fire Agencies:

- For fire agencies who are not staffed 24 x 7 x 365, it is recommended that they enable the message-forwarding feature to text page key personnel so that they can remotely receive urgent messages
- For fire agencies who are staffed, the computer speakers may be enabled to alert in-house personnel of urgent messages. They may also forward all urgent messages to key individuals via text-paging device.

4. Message Format

4.1 Any EMnet message created by or for any Fire service agency or special team are to include in the body of the message:

1. A "TO:" line indicating the intended recipient either by title or name and,

2. A "signature block" including the name and agency of the originator of the message.

4.2 Inbound messages may contain important text in the body of the message, and may contain attachments such as PDF, WORD, EXCEL, or other common file types. When attachments are provided, the attachments cannot be forwarded to paging devices, so the main text message must describe, in basic terms, the contents of the attachment.

4.3 Outbound messages may contain attachments.

4.4 All messages should have the "Request Receipts" box checked to create a log of when the message was sent, the intended recipients, when it arrived at each destination terminal, and when it was read (acknowledged) by the operator at the receiving station.

5. Message Groups

Message groups will be constructed such as all MABAS dispatch centers, or all fire agencies in a given MABAS division, etc.

6. Group Structure

In order to maintain a hierarchical messaging structure that follows the current structure of MABAS the following messaging relationships will be maintained.

6.1 IEMA & OSFM will be the only agencies that can address all fire agencies as one group.

6.2 MABAS HQ will be able to initiate a message to and receive a message from:

- RED Center and
- Orland Central

6.3 RED Center & Orland Central will be able to initiate a message to and receive a message from:

- MABAS HQ
- MABAS Division Dispatch Centers
- IEMA

6.4 MABAS Division Dispatch Centers will be able to initiate a message to and receive a message from:

- IEMA
- RED Center and Orland Central
- All Other MABAS Division Dispatch Centers
- Member Agencies within their Division (primary and secondary)
- PSAPs within their Division
- POD Hospitals
- County EMA Agencies

6.5 MABAS member agencies will be able to initiate a message to and receive a message from:

- Their Division Dispatch Centers
- Member agencies within their Division (primary and secondary)
- County EMA Agency

7. Message Priority Levels

7.1 Message priority assignment capabilities within the EMnet system are shown in the table below.

7.1.1 All messages initiated by a local agency will be Priority 1.

7.1.2 Messages initiated by OSFM, RED, Orland or Divisional Dispatch Centers

may be Priority 2 or 1.
 7.1.3 Messages initiated by IEMA or the JOC may be Priority 3, 2 or 1.

7.2 Message Priority Table

MESSAGE PRIORITY	AUTHORIZED ORIGINATORS	LEVEL OF URGENCY
1	<ul style="list-style-type: none"> • Municipal • Private • County • State • Federal Regional • Federal Nationwide 	Routine / Administrative
2	<ul style="list-style-type: none"> • County • State • Federal Regional • Federal Nationwide 	Urgent
3	<ul style="list-style-type: none"> • State • Federal Regional • Federal Nationwide 	Emergency
4	<ul style="list-style-type: none"> • Federal Regional • Federal Nationwide 	Major Disaster
5	<ul style="list-style-type: none"> • Federal Nationwide 	National Security Emergency
6	<ul style="list-style-type: none"> • Presidential 	National Security Emergency

Note: MABAS Division Dispatch Centers will have Message Priority 2 access.

8. Training

The system vendor and the Project Coordinator will provide basic and refresher training on the use of the EMnet system. (See Appendix 1)

9. Acronyms

CTAN	Chicago Transit Alerting Network
DHS	US Department of Homeland Security
EAS	Emergency Alert System
EMnet	Emergency Management Network
EOC	Emergency Operating Center
HazMat	Hazardous Materials Response Team
IEMA	Illinois Emergency Management Agency
IMT	Incident Management Team
ITTF	Illinois Terrorism Task Force
JOC	Joint Operations Center
MABAS	Mutual Aid Box Alarm System
MAST	Management Assistance Support Team
OSFM	Illinois Office of the State Fire Marshal
PSAP	Public Safety Answering Point (9-1-1 Center)
POD	A coordinating hospital within an EMS region
TRT	Technical Rescue Team

3. Conclusion

Mutual Aid Box Alarm System – Illinois			
Communications – EMERGENCY MANAGEMENT NETWORK SECURE MESSAGING SYSTEM			
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The EMnet tool is a powerful, secure method to send sensitive, complex, or sensitive information relating to disaster management, Homeland Security or non-emergency important information.

All agencies and MABAS Division dispatch centers should become familiar with EMnet and use it appropriately.

APPENDIX 1

Vendor Contact:

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Comblabs is the vendor providing this product, see: www.COMLABS.COM

EMnet Customer Support
Customer Support Engineer
305 East Drive, Suite L
Melbourne, FL 32904
Phone: (321) 409-9898 ext. 301

Logistics Administrator (Installation and site survey contact)
305 East Drive, Suite L
Melbourne, FL 32904
Phone: (321) 409-9898 ext. 309

Local Support for the Illinois Grant

Alan Choutka
Illinois EMnet Project Coordinator
Office Hours: Monday & Friday / 8AM – 4:30PM
Office – General 630-682-7925
Office – Desk 630-407-2908 (w/ voicemail)
Fax 630-682-7931
E-mail Alan.Choutka@dupageco.org
EMnet IL. 008

**Mutual Aid Box Alarm System – Illinois
Starcom21 for Interoperability**

Index # C-01-01.05	Adopted: 10/22/2008	Revised:	Page 1 of 4
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Subject:	Starcom21 Interoperability
Functional Area:	Communications
Category:	Policy
Approved :	MABAS Executive Board

Purpose:

To orient all MABAS members and MABAS Dispatch Centers to the State of Illinois STARCOM21 statewide trunked radio system.

To provide operational and technical information for setup, use, and monitoring of messages on the STARCOM21 radio system.

To provide examples of how and when STARCOM21 should be used.

Responsibility:

This policy applies to all MABAS Dispatch Centers and member agencies. It is encouraged that all fire departments and related emergency response organizations throughout Illinois adopt the procedures set forth herein.

Accountability:

Radio interoperability is the responsibility of every fire department in Illinois and therefore, compliance with this policy ultimately rests with each Fire Chief. Enforcement of this specific policy as it relates to MABAS rests initially with the Co-Chairs of the MABAS Telecommunications, Communications and Dispatch Centers committee, then the MABAS CEO, followed by the MABAS President, 1st Vice President and 2nd Vice President. Enforcement of operations, policies and procedures on the Starcom21 radio network also rests with Motorola, Inc, the network owner/operator, and the Illinois Terrorism Taskforce.

Reporting Requirement:

There is no routine reporting requirement for this policy.

Background:

STARCOM21 is a Motorola-owned, Trunked Radio System, which has a business relationship with the State of Illinois. State agencies and some county and municipal public safety agencies have user agreements with Motorola/STARCOM21. Users of the system for daily dispatch have various types of contract agreements with Motorola under the state contract. The Illinois Terrorism Taskforce (ITTF) provided grants that included delivery of STARCOM21 radios to all fire, police, emergency management, public health agencies as well as other entities. Other entities include Public Safety Answering Points (9-1-1/dispatch centers), special response teams and others.

The occasional use of the system (defined herein) does not obligate agencies to a user contract nor will they experience routine billing for such use. The radios issued under the ITTF grant include: portable radios, fixed base-stations, installed mobile radios, transportable mobile radios in carrying cases. Configurations were based on user needs and capabilities at the time of the grant.

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Policy:

The MABAS Communications Committee hereby makes the following recommendations for both member and non-member first responders:

1.1 Intended Uses: The following is a list of uses for the STARCOM21 radio system:

- Statewide deployment coordination
- Pre-approved drills or exercises
- Pre-approved special events
- Testing of radios
- Specialty team communications, support during deployments, accountability, and team status reports
- Division-to-Division and/or MABAS-to-Division(s) messaging relating to major deployments. This may include emergency and informational messaging from IEMA to MABAS. STARCOM21 does not take the place of IFERN, EMnet, or phonelines.
- Necessary and urgent messaging with Public Health agencies.

1.2 Vendor contact:

Motorola is the vendor providing the system radio equipment.

See: Appendix 1

1.3 Basic technical parameters of the STARCOM21 radio:

- 1.3.1 The installation and deployment of STARCOM21 radios may vary from site-to-site or agency-to-agency.
- 1.3.2 All STARCOM21 radios, whether base, mobile, or portable shall maintain certain basic talk groups and channels per MABAS guidelines. Users should not cause to have MABAS talk groups eliminated from the radio.
- 1.3.3 "Base stations" may be Consolette or may be a mobile radio attached to a 100VAC-to-12VDC power supply. Local users may or may not interface the base radio to a dispatch console. This would be done at the agency's cost in most cases. These radios should be installed with a fixed, outdoor, base station antenna.
- 1.3.4 "Mobiles" may be affixed to a command vehicle, chief's car, or specialty response vehicle. This would be a Motorola XTL5000 or equivalent with a fixed mobile antenna.
- 1.3.5 "Transportable" radios are typically mobile radios that are placed in weather resistant carry-cases and deployed with mobile antenna with a magnetic base, a length of coaxial cable for the antenna, and a method to attach the radio to a vehicle such as a cigarette lighter plug. This would be a Motorola XTL5000 or equivalent.
- 1.3.6 "Portable" radios are typically issued to specialty teams or individuals with specific assignments within MABAS. This would be a Motorola XTS5000 or equivalent.
- 1.3.7 Other custom installations may be required within the MABAS purview such as specialty teams, special mobiles owned by MABAS, or for special events.

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1.4 Staffing requirement – dispatch agencies:

- 1.4.1 For dispatch agencies: 24 x 7 x 365 vigilant monitoring and responsiveness to messages on the “MABAS Statewide Talk Group” is to be reinforced.
- 1.4.2 If the “base” radio is installed at a MABAS Division dispatch center, the control of the radio must be available to Fire Telecommunicators
- 1.4.3 For major deployments, RED Center (or Orland as Secondary) will give notice on the use of the STARCOM21 radio, Talk Group assignment, and expectations of use. This will be done as part of the deployment message. These messages will be sent via FAX, EM-net terminal, or other authorized means.

1.5 Requirements for Fire Agencies with STARCOM21 Mobiles and Portables:

- 1.5.1 Refer to the companion document for radio signatures within MABAS (C-01-05.05 *Communications – Radio Signatures for MABAS-IL*). Responding units shall use the radio signature format contained in that document.
- 1.5.2 MABAS deployed units shall use the TO-FROM format. For example:

“RED Center FROM EMS Taskforce 19”
“MABAS Division 15 FROM MABAS 201”
“TRT Strike Team 16 FROM RED Center”

1.6 Training:

- 1.6.1 Periodic testing of the STARCOM21 radios is encouraged.
- 1.6.2 Extended use for a specific drill or training session shall be coordinated through the MABAS-IL office.
- 1.6.3 Personnel who are expected to operate STARCOM21 radios must have been given and orientation on this Policy and C-01-05.05 *Communications – Radio Signatures for MABAS-IL*.

Conclusion:

The STARCOM21 radio system is a wide-area method to send and receive voice messages relating to large incidents, disaster management, Homeland Security or critical information for MABAS deployments.

All agencies and MABAS Division dispatch centers must become familiar with STARCOM21 and use it appropriately.

**Mutual Aid Box Alarm System – Illinois
Starcom21 for Interoperability**

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APPENDIX A

Starcom21 Contact Information

**Mutual Aid Box Alarm System – Illinois
Communications – Interoperability with Chicago Fire Department**

Index # C-01-01.06

Adopted: 11/30/2007

Revised:

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Subject: INTEROPERABILITY WITH CHICAGO FIRE DEPARTMENT
Functional Area: Communications
Category: Guideline

Approved By: MABAS-IL Communications Committee

Purpose:

To provide MABAS member departments and MABAS dispatch centers with operational guidelines for interoperability with Chicago Fire Department during:

1. MABAS responses into the City of Chicago for response to an incident scene.
2. MABAS responses into the City of Chicago to provide Change of Quarters units.
3. MABAS responses where the Chicago Fire Department responds outside of Chicago.

The following is a general guideline that may be modified by Chicago Fire Department Command Staff (CFD), Chicago Office of Emergency Management & Communications (OEMC) and, for incidents outside of the City of Chicago, the Incident Commander.

Responsibility:

This policy applies to all MABAS member agencies and dispatch centers, especially those in the six-county Chicago metropolitan area. However, during a major disaster, under the IEMA/MABAS Statewide Response Plan, fire departments from all areas of Illinois may be tasked with response to Chicago. Therefore, all MABAS fire departments and dispatch centers should be familiar with this Guideline.

Accountability:

Accountability for this specific guideline rests initially with the Co-Chairs of the MABAS Telecommunications, Communications & Dispatch (TCD) Committee, then the MABAS CEO, followed by the MABAS President, 1st Vice President and 2nd Vice President.

Reporting Requirement:

There is no routine reporting requirement for this policy. However, the MABAS Committee, CFD and OEMC should conduct a post event debriefing following any drill or MABAS activation that requires the implementation of this Guideline.

Background:

CFD has activated the MABAS system on several occasions in the recent past. Due to the size of Chicago, and the associated complexity of fire, EMS and dispatch operations, routine CFD and MABAS procedures require modification when suburban fire departments have been dispatched into Chicago as the result of a serious incident or other event. This Guideline has been developed to assist both CFD and other MABAS fire departments with planning, preparation, training for, and operating at major incidents as it relates to dispatch, response and communications procedures.

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Guideline:

The MABAS Telecommunications, Communications and Dispatch Committee has established the following guideline:

1. Radio Interoperability

Generally, Chicago and suburban fire departments will utilize the MABAS VHF Radio Interoperability Plan as found in MABAS policy C.01.01-01 *Communications – VHF Interoperability* for interoperable communications between fire departments at incidents within the City of Chicago or surrounding areas.

2. Suburban Response to Chicago – Non-Disaster Declaration

Chicago Fire Department command staff will determine the need for additional fire and/or EMS resources as the result of a specific incident, series of incidents, or other unusual event. Incidents could include fires, mass-casualty, technical rescue and/or hazardous materials incidents. Activation of a CFD MABAS response will usually be the first level of response into Chicago, pre-declaration of a disaster. The following process will generally be followed (except for incidents at O'Hare International Airport that are addressed under a separate policy):

- A. MABAS Division 9 (OEMC) will activate the MABAS alerting tones on the IFERN frequency following normal MABAS Box Alarm dispatch procedures. The CFD MABAS Box Alarm Number, Alarm Level, Staging Area, MABAS Divisions and Unit Types due will be broadcast over IFERN after the MABAS Alerting Tones. Division 9 will be the primary dispatch for these MABAS alarms. In the event Division 9 is unable to dispatch a CFD MABAS alarm, then RED Center will be the primary back-up and Orland Central will be the secondary back-up MABAS Dispatch Center for Division 9.
- B. Upon receipt of a MABAS Alarm for Chicago, suburban MABAS Division Dispatch Centers should review the appropriate Chicago MABAS Box Alarm Card(s) activated, and determine if any resources from their Division are due. **MABAS DIVISIONS MUST PRE-DETERMINE PRIMARY AND SECONDARY UNITS AND CHIEFS FOR ASSIGNMENT TO CHICAGO, SIMILAR TO UNITS ASSIGNED TO AN INTERDIVISIONAL REQUEST. IN ADDITION, CHIEF OFFICERS ASSIGNED SHALL BE FULL (5-BUGLED) CHIEFS, PREQUALIFIED AND CREDENTIALLED BY MABAS AND CFD.** Chiefs will also be assigned to respond to the CFD command post. If the City of Chicago activates the Joint Operations Center (JOC), a second MABAS Chief will be dispatched to OEMC to represent MABAS in the JOC.
- C. Suburban MABAS Dispatch Centers that have units due to a Chicago incident should acknowledge receipt of Chicago's dispatch with a **brief** transmission on the IFERN frequency. For example: "*Division 9, Division 1 acknowledges your MABAS request.*"
- D. Affected suburban MABAS Divisions Dispatch Centers must contact the appropriate departments to determine resource status. **CFD MABAS ALARMS SHALL NOT BE REBROADCAST ON IFERN BY SUBURBAN MABAS DIVISIONS.** Suburban MABAS Divisions must establish procedures for notifying their departments without the use of IFERN, similar to an activation of the statewide response plan. These methods could include telephone, EMnet, LEADS, or other radio/data system.

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Communications – Interoperability with Chicago Fire Department**

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- E. Units responding to Chicago will report, via IFERN, directly to Division 9 that they are responding. This initial check in message should include only the responding department's MABAS Division number, department name, apparatus type, and location of staging area enroute to. Suburban MABAS Division Dispatch Centers should continue to monitor the status of their units on IFERN, but, in an effort to reduce unnecessary radio traffic, should not acknowledge their Division's units on IFERN.
- F. Suburban units responding into Chicago for an ongoing or escalating event should, unless directed otherwise, respond to the assigned staging area using warning lights and siren, traveling with due regard for other motorists and pedestrians. Units reporting to Chicago for a pre-planned event should not travel using warning lights and sirens,
- G. Suburban units must continuously monitor IFERN from their apparatus radio. **UNITS RESPONDING TO CHICAGO MUST BE EQUIPPED WITH A VHF MOBILE RADIO.** Division 9 may redirect inbound units to other incidents, staging areas, or for change of quarters to CFD stations.
- H. CFD and/or OEMC will maintain a cache of CFD portable radios for use by Suburban companies. Once a suburban company has received a CFD portable radio, dispatching for that unit will be switched to CFD dispatch frequencies as follows:

Fire Units – Cermak Road and North	CFD MAIN Fire Frequency
Fire Units – South of Cermak Road	CFD ENGLEWOOD Fire Frequency
EMS Units – Cermak Road and North	CFD AMBULANCE NORTH Frequency
EMS Units – South of Cermak Road	CFD AMBULANCE SOUTH Frequency

Note: Cermak Road is also known as 22nd Street.

Suburban units should continue to monitor IFERN on their apparatus radios, as IFERN will be used as a back-up for the CFD dispatch frequencies listed above.

- I. Incident scene tactical as well as command and control communications will be conducted on the six (6) MABAS fireground frequencies (RED, WHITE, BLUE, GOLD, BLACK & GRAY). Suburban units responding into Chicago must be equipped with one or more VHF portable radios that have IFERN, IFERN2 and the six MABAS fireground channels pre-programmed.

3. CFD Response to Suburban Incidents

- A. CFD has/will develop internal policies that regulate or determine a response from Chicago to a suburban MABAS incident.
- B. CFD units responding to a suburban incident will communicate with the appropriate suburban MABAS Division Dispatch Center using the IFERN frequency. CFD units must continuously monitor IFERN from their apparatus radio.
- C. CFD units responding to an ongoing or escalating MABAS incident should, unless directed otherwise, respond to the assigned staging area using warning lights and siren, traveling with due regard for other motorists and pedestrians. Chicago units reporting to a suburban area for a pre-planned event should not travel using warning lights and sirens,

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- D. Incident scene tactical as well as command and control communications will be conducted on the six (6) MABAS fireground frequencies (RED, WHITE, BLUE, GOLD, BLACK & GRAY). CFD units responding to a MABAS incident must be equipped with one or more VHF portable radios that have IFERN, IFERN2 and the six MABAS fireground channels pre-programmed.

4. Map Systems & Locations

- A. MABAS has prepared and distributed detailed maps of the City of Chicago to all Illinois MABAS Divisions. These maps include the locations of all City of Chicago fire stations, police stations, hospitals and fire department support facilities. Suburban MABAS Divisions, Divisions 1 through 27 (except Division 25), will be receiving one (1) map book for each fire station within the Division, in addition to several spare map books. **UNITS RESPONDING TO CHICAGO SHOULD HAVE A MABAS-CHICAGO MAP BOOK IN EACH RESPONDING VEHICLE.**
- B. CFD will provide a GPS based mapping system to suburban units at the same time that portable radios are distributed. These GPS based maps have preloaded points including CFD fire stations and hospital emergency rooms.
- C. CFD will be installing MABAS storage boxes at each fire station near the communications area (joker stand). These boxes will be secured with a MABAS padlock that can be opened with the MABAS Change-of-Quarters Knox Key.
- D. CFD will provide still district maps, alarm box keys, Marshal Line (telephone) instructions and other information for use by change-of-quarters units. All supplies removed from the CFD storage boxes must be returned and re-secured before the unit returns from Chicago.
- E. CFD & MABAS will develop/provide regional maps for the Chicago suburban area. CFD will maintain these maps at pre-determined locations for rapid deployment when CFD units are deployed outside of the City of Chicago.

5. CFD Hose Fitting Adapters

- A. MABAS has provided suburban MABAS Divisions with hose fitting adapters to adapt National Standard Fire Service Thread (NST) used by suburban departments to Iron Pipe Thread (IPT) used by CFD. **ALL SUBURBAN DEPARTMENTS RESPONDING TO CHICAGO SHOULD BE IN POSSESSION OF THE CFD HOSE FITTING ADAPTERS.**
- B. MABAS has provided CFD with hose fitting adapters to adapt National Standard Fire Service Thread (NST) used by suburban departments to Iron Pipe Thread (IPT) used by CFD. These adapters have been strategically pre-positioned by CFD. **ALL CFD UNITS RESPONDING OUTSIDE OF CHICAGO SHOULD BE IN POSSESSION OF THE SUBURBAN (NST) HOSE FITTING ADAPTERS.**

6. Response to Chicago – Disaster Declaration

Disaster declarations are coordinated by the Illinois Emergency Management Agency (IEMA). In the event IEMA declares a disaster requiring response of MABAS assets to Chicago, MABAS resources dispatched to Chicago will be conducted in accordance with the IEMA/MABAS Disaster Response Agreement and the MABAS Statewide Response Plan will be implemented. RED Center will be the primary MABAS coordination center for response under the statewide response plan, with Orland Central serving as the back-up MABAS coordination center.

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Communications – Interoperability with Chicago Fire Department**

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The MABAS Statewide Response Plan will be followed for a response following a disaster declaration, including the use of convoys, passwords, and reception centers.

7. CFD Response – Disaster Declaration

CFD will follow the Statewide Response Plan for all responses outside of Chicago that originate as the result of said plan.

8. Training

To maintain a high level of readiness, training by CFD, OEMC and suburban fire departments and dispatch centers is necessary concerning this guideline. The MABAS TCD will coordinate with CFD and OEMC various training opportunities for both CFD and suburban departments. It is encouraged that affected MABAS Divisions, dispatch centers and fire departments utilize the provided training opportunities at least on an annual basis.

9. Acronyms

CFD	Chicago Fire Department
EMnet	Emergency Management Network
IEMA	Illinois Emergency Management Agency
IPT	Iron Pipe Thread
IFERN	Interagency Fire Emergency Radio Network Dispatch Frequency
IFERN2	Interagency Fire Emergency Radio Network Alternate Dispatch Frequency
ITTF	Illinois Terrorism Task Force
JOC	Joint Operations Center
MABAS	Mutual Aid Box Alarm System
NST	National Standard Fire Hose Thread
OEMC	Chicago Office of Emergency Management & Communications
TCD	MABAS Telecommunications, Communications & Dispatch Committee

10. Conclusion

Interoperable communications between MABAS departments and Chicago Fire Department are essential for effective mutual aid command, controls and communications. All affected fire departments and MABAS Division dispatch centers should become familiar with EMnet and use it appropriately.

**Mutual Aid Box Alarm System – Illinois
Communications – MABAS ALERTING/COVERAGE**

Index #C-01-02-01

Adopted – 2/5/04

Revised:

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Subject: Statewide Radio License
Functional Area: Communications
Category: Policy

Approved By: MABAS Executive Board

Purpose:

To permit the sharing of the MABAS statewide radio authorization, WQAG579, for the IFERN and IFERN2 dispatch frequencies and the Red, White, Blue, Gold, Black & Gray fireground frequencies with MABAS member departments operating under the signed MABAS agreement and their affiliated emergency response entities.

Responsibility:

This policy applies to all MABAS member agencies. It is encouraged that all fire departments and related emergency response organizations throughout Illinois adopt the procedures set forth herein.

Accountability:

Enforcement of this specific policy rests initially with the Co-Chairs of the MABAS Telecommunications, Communications, and Dispatch Centers committee, then the MABAS CEO, followed by the MABAS President, 1st Vice President and 2nd Vice President. Ultimately, however, ultimate authority regarding the enforcement of radio operations and licensing rests with the Federal Communications Commission (FCC).

Reporting Requirement:

There is no routine reporting requirement for this policy.

1. Background

The Mutual Aid Box Alarm System (MABAS), an intergovernmental agency, has been granted an authorization by the Federal Communications Commission to operate mobile and temporary fixed base stations throughout the State of Illinois on the eight (8) "MABAS" frequencies. This authorization was obtained to ensure fire service interoperability throughout Illinois at emergency incidents and disaster scenes.

2. Policy

The MABAS Telecommunications, Communications and Dispatch Committee hereby establishes the following policy:

In accordance with Part 90, Subpart H, Section 179 of the Federal Communications Commission's rules and regulations, *Shared Use of Radio Stations*, the MABAS Executive Board hereby authorizes the shared use by member MABAS departments and their affiliated emergency response organizations, that qualify for public safety licensure, frequencies authorized by the Federal Communications Commission (FCC) on call sign WQAG579 provided that all of the following conditions are met:

1. The use of the identified MABAS frequencies will be restricted to emergency scene communications and official training activities. Use of the frequencies for non-emergency activities is prohibited.
2. Member departments using the MABAS authorization agree to abide by all applicable FCC rules and regulations.
3. Member departments using the MABAS authorization agree to abide by all relevant

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MABAS Communications Advocacy Statements.

4. Member departments using the MABAS authorization agree to limit transmit power to a maximum of ten (10) watts on the Red, White, Blue, Gold, Black & Gray fireground frequencies.
5. Member departments must only program IFERN 2 and Gold, Black and Gray fireground frequencies using narrowband emissions.

3. Conclusion

The FCC has the authority to cease radio operations, levy monetary fines and seize radio equipment, even public safety radio equipment, which is being operated in violation of their rules. Neither the Mutual Aid Box Alarm System nor the MABAS Executive Board will accept responsibility for operations by member or non-member entities on the eight (8) MABAS frequencies that are in conflict with FCC rules or are in conflict with this advocacy statement, MABAS rules and regulations or any other local, state or federal law. Any sanctions imposed by the Federal Communications Commission, including fines, costs and attorney's fees incurred by MABAS due to a member or non-member entity's improper use of the MABAS frequencies shall be the responsibility of the offending party.

**Mutual Aid Box Alarm System – Illinois
Communications – MABAS ALERTING/COVERAGE**

Index #C-01-02-02

Adopted – 10/16/2002

Revised:

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Subject: Radio Licenses
Functional Area: Communications
Category: Guideline

Approved By: MABAS Executive Board

Purpose:

To encourage all MABAS members and other Fire Departments to obtain current FCC Radio Station Authorizations (licenses) for all stations and frequencies frequently used for routine or emergency radio communications.

Responsibility:

This guideline applies to all MABAS member agencies. It is encouraged that all fire departments and related emergency response organizations throughout Illinois adopt the procedures set forth herein.

Accountability:

Radio licensing is the responsibility of every fire department in Illinois and therefore, compliance with this guideline ultimately rests with each Fire Chief. Enforcement of radio rules is the responsibility of the Federal Communications Commission (FCC). Enforcement of this specific guideline as it relates to MABAS rests initially with the Co-Chairs of the MABAS Telecommunications, Communications, and Dispatch Centers committee, then the MABAS CEO, followed by the MABAS President, 1st Vice President and 2nd Vice President.

Reporting Requirement:

There is no routine reporting requirement for this guideline.

1. Background

Fire departments rely on the use of two-way radio communications for alerting personnel of emergency calls, coordinating emergency scene activities and communications with dispatch and mutual aid departments. Experience has shown that many departments are in violation of FCC regulations for various reasons including, but not limited to:

- Operating stations, both fixed and mobile, on frequencies for which they are not licensed.
- Operating stations utilizing radio licenses that have expired.
- Operating stations utilizing antenna heights or output power levels that exceed those authorized by the FCC.
- Operating base radio stations on mobile only frequencies such as the national fireground frequency of 153.830 MHz.
- Improperly using licensed fireground or mutual aid frequencies for routine call dispatch.

2. Guidelines

The MABAS Telecommunications, Communications and Dispatch Committee hereby establishes the following guideline:

1. Chief should ensure that a complete audit of radio operations and FCC

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Communications – MABAS ALERTING/COVERAGE**

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Adopted – 10/16/2002

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Authorizations is conducted within their Department to determine that all stations and frequencies routinely utilized by their Department are properly licensed.

2. The above audit should include a review by a qualified radio service technician that all base and mobile units are operating within the technical specifications of their FCC Authorization(s).
3. Fire Departments that lack current FCC Authorizations consistent with their operations should immediately apply for proper frequency coordination and authorizations through the IMSA/IAFC frequency coordinator and FCC respectively. Information concerning licensing procedures and frequency coordinators can be found at the FCC website www.fcc.gov.
4. Fire Departments utilizing fireground or mutual aid frequencies for routine dispatch operations in violation of FCC rules should cease improper activity on those frequencies as soon as possible and revert to other appropriate and licensed frequencies or immediately apply for proper frequencies through the IMSA/IAFC frequency coordinator and the FCC.

3. Conclusion

The FCC has the authority to cease radio operations, levy monetary fines and seize radio equipment, even public safety radio equipment, which is being operated in violation of their rules. The MABAS Special Radio Committee encourages all fire departments to operate within the parameters of their FCC Radio Station Authorization(s). Departments that lack appropriate FCC Radio Station Authorizations are encouraged to coordinate and obtain proper licenses as soon as possible.

**Mutual Aid Box Alarm System – Illinois
Communications – MABAS BOX ALARM CARDS**

Index # C-01-03.01

Adopted: 03/02/2005

Revised:

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Subject: MABAS Box Alarm Cards
Functional Area: Communications
Category: Policy

Approved : MABAS Executive Board

Purpose:

To help coordinate the design of MABAS Box Alarm Cards for new and existing MABAS Divisions using one standardized template containing all of the required information needed to dispatch a MABAS Box Alarm and for the MABAS Box Alarm to be easily understood by emergency personnel and telecommunicators.

Responsibility:

This recommended practice applies to all new and existing MABAS Divisions wishing to have one template for use throughout their division that incorporates the traditional style card with recommended changes designed to make dispatching MABAS Box Alarms easier for telecommunicators and emergency service personnel.

Accountability:

Enforcement of this specific policy rests initially within each MABAS Division then the MABAS CEO, followed by the MABAS President, 1st Vice President and 2nd Vice President.

Reporting Requirement:

There is no routine reporting requirement for this policy.

Background:

MABAS is currently experiencing rapid growth throughout numerous locations, with many new divisions being formed. Many of these new divisions have limited internal experience to draw upon in developing box alarm cards and have requested assistance with the design process as well as a generic box alarm card in an electronic format. The MABAS Communications Committee was tasked with this responsibility at the MABAS Executive Board meeting in February 2004. The MABAS Communications Committee has developed a standard template that contains all of the required elements needed to be able to design a MABAS Card and to be able to dispatch MABAS resources easily by a primary or secondary dispatch center.

Several changes to the “**traditional style**” card have been recommended to make is easier for telecommunicators and emergency service personnel to understand and reduce the number of errors during alarm dispatch. Those changes include:

- The four-letter abbreviations for each department should be discontinued and full names are to be used. 8-point Arial Font should be the minimum size font used.

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- The “**Change of Quarters**” section on the older style cards has been a source of many errors and omissions. The new style card incorporates the “**Change of Quarters**” into the top portion of the alarm response area.
- Some departments may bring “**Change of Quarters**” companies into their stations and leave them there to handle further calls in their jurisdiction, throughout all the alarms. Others departments may bring “**Change of Quarters**” companies into the stations and move them to the scene on the next level of alarm. These are both allowable alternatives.
- “**Change of Quarters**” companies will be placed in the column for “**Change of Quarters**” and the station where they are expected to go will be placed in parenthesis. The address and directions to get to that station should be placed in the “**Information**” section.
- The new style card does not limit the number of alarms that each department can have on their card. Each division can add as many alarms, per card as desired, by adding additional rows to the card.
- It is recommended that the last level of alarm be reserved for “**Interdivisional Request**” and that level should include the “**1st CHOICE, 2nd CHOICE and 3rd CHOICE**” of which divisions to call when extra equipment is needed. (This request does not refer to, or should be confused with, the State of Illinois’ Mutual Aid Response Flow Plan.)
- The bottom of the card should be kept for addresses for the change of quarter’s stations and other pertinent information or instructions.
- The card is designed to be placed in a clear plastic sheet protector with reinforced holes and to be placed in a 3-ring binder and/or on computer. Do not punch holes in the box alarm card, as that will make is harder to read and duplicate.

Policy:

The MABAS Telecommunications, Communications and Dispatch Committee hereby establishes the following policy:

1. Each box alarm card should include the following: The top section of the card is to include: “**Department Name, Box Alarm Type, Effective Date, MABAS Division #, Box Alarm #, Location or Area of Alarm, and Authorized Signature.**” There will be no other changes to this area.
 - 1.1 The next section is the “**Local Dispatch Area**” and will be the responsibility of the local dispatch authority. This is not a **MABAS** area and may include: “**Still, Full Still, Working Still, Automatic Aid, General Alarm, Etc.**” This area may be any number of rows that you choose for your division or department.
 - 1.2 “**Change of Quarters**” has been added to the Still Alarm areas, and may be filled in, left blank, or deleted.
 - 1.3 The Box Alarm Card is designed around a progressive structure. **It is imperative that all still alarm companies be dispatched by the local dispatch authority prior to or simultaneously with the MABAS Box Alarm request.** It is not the responsibility of the MABAS Dispatcher to dispatch companies listed on a Box Alarm Card before the Box Alarm level.
 - 1.4 The next section is the “**MABAS BOX ALARM**”. This is where MABAS dispatching starts. Column headings may include: “**Alarm Level, Engines, Tenders, Trucks, Squads, EMS, Chiefs, Special Equipment, Change of Quarters**”, or others for specialized cards and as standardized throughout a Division.

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- 1.4.1 Department names are to be spelled out and are to be in at least 8-point, Arial font.
 - 1.4.2 Card is to be read left to right. Departments are to be sent to the scene unless in the “**Change of Quarters**” area.
 - 1.4.3 In “**Change of Quarters**”, the department listed is to be sent to the fire station listed in parenthesis. The addresses should be given in the information portion of the box alarm card, or on back of the card.
 - 1.4.4 In the “**Special Equipment or Other**” column, apparatus or equipment that does not fall into the primary categories can be listed.
2. The number of alarm levels is left to the individual fire department to determine. MABAS starts at the “**Box Alarm Level**”, proceeds to the “**2nd Alarm Level, 3rd Alarm Level, 4th Alarm Level, 5th Alarm Level**”, and may continue through any number of levels that are put on the cards.
 - 2.1 The last level of alarm is reserved for “**Interdivisional Request**” and that level should include the “**1st CHOICE, 2nd CHOICE and 3rd CHOICE**” of which divisions to call when extra equipment is needed. (This request does not refer to, or should be confused with, the State of Illinois’ Mutual Aid Response Flow Plan.)
3. The bottom of the card should be left for “**Special Instructions or Information**”. Included in the Special Instructions should be the addresses for the stations listed in the “**Change of Quarters**” and any other pertinent information.
4. To eliminate clutter and confusion on box alarm cards, the following information **should not** be included on the front of box alarm cards:
 - 4.1 **Telephone numbers for responding agencies.** The MABAS System is designed to use radio alerting on the “**IFERN Frequency**” (Interagency Fire Emergency Radio Network) to notify departments due to respond. This includes departments within adjacent MABAS divisions.
 - 4.2 **Area for Response District Maps.** If a department desires to include maps for the response jurisdiction, change of quarters stations locations, etc., this information may be included on the back of the box alarm card.
 - 4.3 **Shaded Areas or Color Copies.** The use of shading or color, other than black, is discouraged for various features on box alarm cards may limit the readability of the document after photocopying.
5. New cards should be sent out to all of the departments on the cards for a minimum thirty-(30) day review/approval process. They shall be stamped draft, not signed and the effective date left blank. If there is no response from a department within the 30 day period, it will be understood that the draft cards are acceptable. After the 30-day review/approval process, cards shall be formalized by the addition of the authorized signature (actual or electronic) and effective date on each card. They shall then be sent out to each department in the Division and all departments listed on the cards at least seven (7) days prior to the effective date. It is the responsibility of each department to notify and copy their dispatch center.
6. To facilitate timely and accurate requests for a MABAS Box Alarm by a stricken agency, each Department should maintain current copies of the Box Alarm Cards for their Department in all emergency response vehicles.
7. Each MABAS Division may decide on a standardized numbering system for box alarm cards for use in their division. The following numbers should be reserved by MABAS for system wide use:
 - 7.1 BOX #888, METRA/PACE BUS/Transportation Emergencies

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- 7.2 BOX #999, Weapons of Mass Destruction
- 8. Examples of different types of Box Alarms, using the standard format, are included as guides to completing new cards for your divisions.
- 9. Appendices
 - 1. Definitions
 - 2. Sample Box Alarm Cards

Approved by the MABAS Executive Board on March 2, 2005.

Appendix 1
Definitions

Cell Title	Definition
Department Name	The name of the Fire Department issuing the card.
Box Alarm Type	The type of emergency situation covered by the card.
Effective Date	The date the use of the card is authorized to begin by the issuing department.
MABAS Division	The Division in which the Fire Department holds a membership.
Box Alarm Number	The number for the card designated by the Fire Department. The numbering system should be coordinated with the other members of the Division.
Location or Area	This can be a single location or building; a geographical portion of the departments area of response or the entire area of response.
Authorized Signature	The signature of the Fire Chief of the department issuing the card.
Local Dispatch Area	This portion of the card is intended to show the response for any units prior to the Box Alarm level. The primary responding units will be those of the local department and possibly outside departments generally using auto-aid agreements.
Alarm Level	This refers to the designation given by the issuing department for responses to this location prior to the Box Alarm level. This allows for the two levels prior to the Box Alarm level. The name of the alarm levels will be based on local preference. Includes the names of the departments that are committed to provide this type of equipment at the alarm level designated.
Engines	Based on local designations.
Tenders	Based on local designations.
Trucks	Based on local designations.
Squads	Based on local designations.
Chiefs	Can include Chief, Deputy Chief, Assistant Chief, Battalion Chief or those staff officers acceptable to the members of the Division.
Special Equipment	Any ancillary units, individuals or specialized apparatus that would be beneficial for the type of alarm designated by the card. These resources may or may not be owned and operated by the member departments.
Change of Quarters	This lists the station/s that will house units from neighboring departments. The specific units that are specified on each level will respond to other emergency calls for the duration of the original call or moved up to the scene during further alarms.

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MABAS Box Alarm	This portion of the card is intended to show the response for any units starting at the Box Alarm level. These responses are covered by the MABAS mutual aid agreements.
Alarm Level	This refers to the Box Alarm, 2 nd Alarm, 3 rd Alarm, etc. to the ultimate level deemed appropriate by the department to handle the possible emergency situations. Includes the names of the departments that are committed to provide this type of equipment at the alarm level designated.
Engines	Based on local designations.
Tenders	Based on local designations.
Trucks	Based on local designations.
Squads	Based on local designations.
Chiefs	Can include Chief, Deputy Chief, Assistant Chief, Battalion Chief or those staff officers acceptable to the members of the Division.
Special Equipment	Any ancillary units, individuals or specialized apparatus that would be beneficial for the type of alarm designated by the card. These resources may or may not be owned and operated by the member departments.
Change of Quarters	This lists the station/s that will house units from neighboring departments. The specific units that are specified on each level will respond to other emergency calls for the duration of the original call unless they are asked to move up to the scene.
Special Instructions	This area is reserved for any information that will allow the MABAS telecommunicators handling the radio communications for the incident to have quick access to specific information to assist responding units. Some of these could be the address of the change of quarter's stations, special contact numbers for key department members, and numbers for departments that are due to respond that may have special contact requirements.
Interdivisional Request	An Interdivisional Request is activated when all companies have been dispatched on the specific Box Alarm Card have been dispatched and additional companies are required for a large scale incident. During an Interdivisional Request, speed of response is important. The Division providing companies determines which departments and units respond based upon pre-determined Interdivisional or Task Force response cards. Types of Interdivisional cards may include Fire, Engine Only, Tender Only, Ambulance, Haz-Mat or Specialized Rescue.
Task Force Request	A Task Force Request refers to activation of MABAS assets through the State of Illinois Mutual Aid Response Flow Plan. This type of request is intended for extended duration incidents where Quality and Quantity of Response takes president over speed of response.

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Appendix 2

Sample Box Alarm Cards

The sample box alarm cards are provided to assist departments with the understanding of the new card format. The first card is blank and can be used as a template for a department's Box Alarm Cards.

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Communications – DEVELOPMENT AND USE OF INTERDIVISIONAL BOX ALARM CARDS

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Subject:	Development and Use of Interdivisional Box Alarm Cards
Functional Area:	Communications
Category:	Policy
Approved :	MABAS Executive Board

Purpose:

To provide guidance and direction to member divisions, departments and incident commanders with regards to development and utilization of Interdivisional Box Alarm Cards.

Responsibility:

This policy applies to all MABAS Divisions and member Departments.

Accountability:

Enforcement of this specific policy rests initially with the Co-Chairs of the MABAS Telecommunications, Communications, and Dispatch Centers committee, then the MABAS CEO, followed by the MABAS President, 1st Vice President and 2nd Vice President.

Reporting Requirement:

There is no routine reporting requirement for this policy.

Background:

MABAS has long recognized the need to mobilize large numbers of emergency response personnel for major incidents that will exceed the normal response characteristics of a single fire department and even a single MABAS division. Examples of these types of incidents include, but are not limited to, major fires, mass casualty incidents, tornadoes, earthquakes, terrorist attacks, technical rescue events and hazardous materials incidents. MABAS allows for two primary mechanisms for organizing a major response to an incident; Interdivisional Responses and individual state responses through state Emergency Management or EMAC.

Policy:

The MABAS Telecommunications, Communications and Dispatch Committee hereby establishes the following policy:

1. Definitions

INTERDIVISIONAL BOX ALARM – Interdivisional Box Alarms are an extension of a fire department's box alarm system for use at major incidents when all alarm levels on the box alarm card have been requested and additional manpower and/or equipment resources are needed. This type of response is requested from division to division and is generally used when speed of response is important and the event will usually be of a shorter duration (less than 12 hours). This may also be used for major incidents prior to activation of state resources when adjacent resources are needed immediately while state response assets are being mustered.

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STATE RESPONSE – Individual states may develop operational response plans for major emergencies and disasters. Generally these response plans are not designed for speed of response, but quantity and sustainability of resources to a stricken area. These plans may also include responses under the state’s Emergency Management Assistance Compact (EMAC).

ILLINOIS STATEWIDE RESPONSE FLOW PLAN – MABAS in conjunction with the Illinois Emergency Management Agency (IEMA) can mobilize numerous task forces and strike teams of fire, emergency medical, hazardous materials and technical rescue personnel and equipment to respond to a significant incident or disaster. These responses are authorized by IEMA and/or the State Emergency Operations Center (SEOC) and are not designed for speed of response but quantity and sustainability of response to the stricken area. Generally these responses will last between 72 hours and 10 days. Personnel and equipment responding under the Statewide Response Flow Plan generally become assets of the State of Illinois with reimbursement of manpower and expenses and insurance becoming the responsibility of the State.

TASKFORCE – A MABAS taskforce is comprised of a number of different types of response apparatus and personnel organized to function as a complete response team. There are generally two (2) types of task force responses:

FIRE/DISASTER TASKFORCE – A fire/disaster taskforce is a self contained response team capable of responding to routine fire and emergency medical related calls in a stricken area. The table below describes the equipment and manpower requirements for a normal Fire/Disaster Taskforce:

Resource Type	Quantity	Personnel/Unit
Chief with Aide	1	2
Engines	3	4
Trucks	1	4
Heavy Squad	1	4
Ambulances	3	2
Total Units & Personnel	9	28

HAZARDOUS MATERIALS TASKFORCE – A Hazardous Materials Task Force is a self contained response team capable of responding to a Level “A” hazardous materials incident with little or no support from resources in the stricken area. The table below describes the equipment and manpower requirements for a normal Hazardous Materials Taskforce:

Resource Unit Type	Quantity	Personnel/Unit
Chief with Aide	1	2
Engine	1	4
ALS Ambulance	1	2
Level A Haz-Mat Techs	1	10
Haz-Mat Equipment Unit	1	2
Total Units/Personnel	5	20

STRIKE TEAM – A strike team is defined as a fixed number of like units and personnel. Strike teams can be composed of engines, trucks, squads, tenders, ambulances, brush units, divers, hazardous materials or technical rescue.

The following table identifies the types of recognized strike teams for MABAS and the quantity of response units and/or technicians:

Type	Chiefs	Engines	Trucks	Squads	Tenders	EMS	Brush	Divers	Haz-Mat Techs	Tech Rescue Techs
Engine	1	5								
Trucks	1		3							
Squads	1			3						
Tenders	1				5					
Ambulance	1					5				
Brush Unit	1						5			
Divers	1							10		
Haz Mat	1								10	
TRT	1									10

The following table identifies the manpower (staffing) levels for all strike team unit types:

Resource Unit Type	Personnel/Unit
Chief with Aide	2
Engine	4
Truck	4
Squad	4
Tender	2
Ambulance	2
Brush Truck	2

2. INTERDIVISIONAL CARD DEVELOPMENT – MABAS Divisions are encouraged to examine available resources from their member departments and develop Interdivisional Box Alarm Cards for any and all resources determined to be available for speed of response deployments generally lasting less than twelve (12) hours. This card is to be developed for outbound resources responding to an incident in another MABAS Division.

2.1 INTERDIVISIONAL BOX ALARM TYPES – The following types of Interdivisional Box Alarm Cards may be developed:

- Fire/Disaster Taskforce
- Hazardous Materials Taskforce
- Technical Rescue Taskforce
- Dive Rescue Taskforce
- Engine Strike Team
- Truck Strike Team
- Squad Strike Team
- Tender Strike Team
- Brush Unit Strike Team

2.2 SAMPLE INTERDIVISIONAL ALARM CARDS – Sample taskforce and strike team interdivisional box alarm cards are attached as appendix A.

2.3 CONSIDERATIONS – MABAS Divisions should take the following into consideration when developing Interdivisional Box Alarm Cards:

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- 2.3.1 MABAS Divisions should be cautious about committing too many resources from their Division to an interdivisional response. For example, if a MABAS Division only has 2 truck companies, they should not develop a card for a truck strike team.
- 2.3.2 When determining which departments should be included on the interdivisional card, MABAS Divisions should take manpower availability into consideration, especially weekday manpower.
- 2.3.3 For geographically large or populated MABAS Divisions, multiple Interdivisional Box Alarm Cards may be desired based on different geographical areas.
- 2.3.4 MABAS Divisions should have two (2) levels for each Interdivisional Box Alarm Card, Primary and Secondary. Primary Units are first to be dispatched with Secondary Units used for fill-in when necessary.

3. REQUESTING AN INTERDIVISIONAL RESPONSE - Generally the Incident Commander of a major incident will recognize the need for additional resources beyond the last alarm on their local box alarm cards. At that time, the Incident Commander will request interdivisional resources through their MABAS Division Dispatcher.

3.1 DETERMINING RESOURCE NEEDS – The Incident Commander must determine the type and quantity of resources needed at the incident. That determination may involve requesting a taskforce assignment or one or more strike teams.

Example 1: An IC at a major rural fire may require 10 additional tenders to shuttle water. The IC would request two (2) tender strike teams, one from each of two different MABAS Divisions.

Example 2: An IC at a mass casualty incident may need 20 additional ambulances. The IC would request four (4) ambulance strike teams, one from each of four different MABAS Divisions.

Example 3: A community is experiencing a rash of fire outbreaks caused by over pressurization of the natural gas distribution system. A senior command officer may request a fire taskforce assignment from one MABAS Division to help battle the fires.

3.2 REQUESTING RESOURCES – The IC must request the interdivisional assignment through their primary/back-up MABAS Division Dispatcher. The request should include type of interdivisional assets requested, number of taskforces or strike teams requested, and which MABAS Division(s) the resources are requested from.

4. DISPATCHING AN INTERDIVISIONAL RESPONSE – The MABAS Division Dispatcher may receive a request for interdivisional resources for an incident within their Division as well as another Division requesting resources be sent to them.

4.1 REQUEST FOR STRICKEN DIVISION TO RECEIVE AID – When the stricken MABAS Division Dispatcher receives a request for Interdivisional Mutual Aid from an Incident Commander at an active incident within their Division, the MABAS Dispatcher must copy the type(s) and quantities of resources requested. Based on the types quantities of units requested, the stricken MABAS Division Dispatcher will determine the number of Interdivisional Requests that are required.

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- 4.1.1 If the affected department has listed preferences for interdivisional requests on their Box Alarm cards, the stricken MABAS Dispatcher should contact the requested Division(s) in order of preference on the local card. This contact can be via radio (IFERN) or by telephone.
- 4.1.2 In the event that the active Box Alarm Card does not list preferred choices for interdivisional requests, then the local MABAS Dispatcher has the authority to select adjacent Divisions to request aid from. The stricken MABAS Dispatcher should take into account response time and whether or not resources from the neighboring Division(s) are already being utilized at the incident.
- 4.1.3 The stricken MABAS Division Dispatcher requesting interdivisional mutual aid must continue to monitor the IFERN frequency and account for the interdivisional mutual aid units as they acknowledge response and/or arrive on scene.
- 4.1.4 Each MABAS Division Dispatch Center should maintain a map showing the locations of MABAS Divisions along with telephone listings for each MABAS Division Dispatch Center. This information can be located at www.MABAS.org.

4.2 REQUEST FOR DIVISION TO SEND OUTBOUND AID – When the MABAS Division Dispatcher receives a request for outbound Interdivisional Mutual Aid from a stricken MABAS Division, the MABAS Dispatcher must copy the type(s) and quantities of resources requested, as well as the department requesting aid and the staging area. The MABAS Dispatcher should immediately determine whether or not their Division has appropriate Interdivisional Box Alarm Cards to match the type of response or units requested. If a requested taskforce or strike team card does not exist, the MABAS Dispatcher should immediately decline the request. If a card exists for the type of units or response requested then the following dispatch procedure should be followed:

- 4.2.1 The MABAS Dispatcher should locate and review the appropriate Taskforce or Strike Team Interdivisional Box Alarm Card for their Division that matches the resource type requested.
- 4.2.2 The MABAS Division Dispatcher sending aid should activate the MABAS Alerting Tones on IFERN in the same manner as routine Box Alarm dispatches, or follow other local Division dispatch procedures. When dispatching Interdivisional requests on IFERN, the MABAS Dispatcher must announce the type of interdivisional request, MABAS Division and Department requesting aid, location of the staging area and units due to respond.

For Example: “MABAS Division 1 to all locals, Division 101 is requesting an Interdivisional Box Alarm for an Ambulance Strike Team for the Kenosha Fire Department. Staging will be at Highway 50 and Green Bay Road. The following ambulances are due: Arlington Heights, Rolling Meadows, Schaumburg, Wheeling and Palatine and a Chief from Prospect Heights. Responding units switch to IFERN and acknowledge Division 1.” (repeat the message)

- 4.2.3 When a MABAS Division is sending a complete Taskforce or Strike Team, all responding units are encouraged to muster at a designated Point of Departure and respond to the incident as a single resource. If a MABAS Division is requested to send less than a complete Taskforce or Strike Team, individual units may respond directly to the designated staging area.

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- 4.2.4 The MABAS Division Dispatcher sending aid should monitor the IFERN frequency and acknowledge their units responding on the interdivisional request. Once all due units are responding, the MABAS Dispatcher sending aid should contact the MABAS Dispatcher requesting aid via telephone and advise that all requested units are responding and provide the names of the departments and unit types.
- 4.2.5 In the event that a department due as a primary response unit is not available, the MABAS Dispatcher can fill in from the second level of the Interdivisional Box Alarm card.
- 4.2.6 A Division may request a total number of units less than a full Strike Team assignment. In that situation, the MABAS Dispatcher sending aid will limit the units assigned from the Interdivisional Card to match the number of units requested.

5. UNIT RESPONSE TO AN INTERDIVISIONAL REQUEST – Units dispatched on an Interdivisional Box Alarm assignment should follow local Division response policies.

- 5.1 The Taskforce/Strike Team Leader, unless individual units are requested, should notify their Division Dispatcher when the requested units are responding. The stricken Division Dispatcher should be notified when they arrive at the staging area.
- 5.2 When units are released, the Taskforce/Strike Team Leader, unless units are released individually, should notify the stricken MABAS Division Dispatcher. Taskforces, Strike Teams, or individual units should notify their own MABAS Division Dispatcher when they arrive back at their assigned quarters or point of departure.

Conclusion:

This policy provides information and direction for development and implementation of Interdivisional Box Alarm cards.

Approved by the MABAS Executive Board on the 28th day of February, 2007.

**Mutual Aid Box Alarm System – Illinois
Communications – MABAS ALERTING/COVERAGE**

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Subject:	MABAS Alerting/Coverage
Functional Area:	Communications
Category:	Policy
Approved :	MABAS Executive Board

Purpose:

To specify recommended paging tone formats and coverage areas for the MABAS radio alerting system.

Responsibility:

This policy applies to all MABAS member divisions and their dispatch centers.

Accountability:

Enforcement of this specific policy rests initially with the Co-Chairs of the MABAS Telecommunications, Communications, and Dispatch Centers committee, then the MABAS CEO, followed by the MABAS President, 1st Vice President and 2nd Vice President.

Reporting Requirement:

There is no routine reporting requirement for this policy.

Background:

MABAS has used a standard two-tone sequential radio alerting system since the early 1970s. This system is simply comprised of paging encoders at MABAS Division dispatch centers that transmit specific paging tones on the IFERN (154.265 MHz) frequency and radio receivers that decode and alert when the proper tone code is received.

Paging encoders have variable encoding formats. Some receivers fail to properly decode when shortened paging tone formats are used.

MABAS Divisions can cover large geographical areas and may dispatch alarms that include departments in adjacent Divisions. Improperly positioned, or under designed, base radios may fail to effectively cover geographic areas where alerting is necessary.

Policy:

The MABAS Telecommunications, Communications and Dispatch Committee hereby establishes the following policy:

1. Paging encoders should be programmed for a two-tone sequential paging format using the timing for Tone A of 1.5 seconds with the timing for Tone B of 3.5 seconds with no delay between tones. Tone A is 1082.0 Hz and Tone B is 701.0 Hz.

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2. MABAS Divisions are encouraged to conduct tests with member departments, and departments they dispatch from neighboring Divisions, to ensure the transmit signal is adequate to open alert radios. An acceptable engineering standard is to provide 95% mobile coverage throughout the desired coverage area. If deficiencies are found, the base radio system should be re-engineered and application for license modifications, if necessary, be processed so that both primary and back-up dispatch centers effectively cover their service areas.

Conclusion:

Transmission of alerting signals using proper tones, timing formats and signal strengths will ensure that all agencies due on a specific alarm are properly notified of a MABAS box alarm event.

Approved by the MABAS Executive Board on 10/16/2002.

**Mutual Aid Box Alarm System – Illinois
Communications – Testing the MABAS Alert System**

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Subject:	Testing of the MABAS Alert System		
Functional Area:	Communications		
Category:	Procedure		

Approved :	MABAS Executive Board	Replaces Document Effective April 1, 2007	
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Purpose:

To provide a coordinated schedule for monthly testing of the MABAS Alerting System by each MABAS Division's primary and, if appropriate, back-up dispatch center.

Responsibility:

This procedure applies to all MABAS Division's primary and back-up dispatch centers.

Accountability:

Enforcement of this specific procedure rests initially with the Co-Chairs of the MABAS Telecommunications, Communications, and Dispatch Centers committee, then the MABAS CEO, followed by the MABAS President, 1st Vice President and 2nd Vice President.

Reporting Requirement:

There is no routine reporting requirement for this procedure.

Background:

MABAS Divisions have routinely tested their paging encoders and transmitters on various schedules. Due to the explosive growth of the MABAS system in both Illinois and Wisconsin, a revised schedule was needed and desired.

This procedure coordinates MABAS Alert System Testing in all states MABAS currently operates.

Procedure:

The MABAS Telecommunications, Communications and Dispatch Committee hereby establishes the following procedure:

1. Testing of the MABAS system will be done on a monthly basis by each Division. The alerting receivers will be tested either on a Monday, Tuesday, Wednesday, Thursday, or Friday of each month to determine that all receivers and tone encoders are working properly.
2. There will be a two-minute delay between each test to allow Departments to reset the receivers for the next test and to establish that the auto reset is functioning properly.
3. There is no need to acknowledge receipt of another MABAS Division's test over the IFERN Radio Frequency. When an actual emergency is active, or becomes active at the same time of a test, the test shall be discontinued.

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4. The test will be given as follows:

4.1 "(Department name) testing Division (Number) Mutual Aid Box Alarm Alerting Receivers, Test 1-2-3-4-5; 5-4-3-2-1 at (time); reset all receivers for the (name of department testing next) test, (Department Name) Clear, (Call sign)".

4.2 The last Department to test will announce "End of Test" at the end of their test.

EXAMPLE: "Tri-Com Dispatch testing Division XIII Mutual Aid Box Alarm Receivers, Test 1-2-3-4-5; 5-4-3-2-1 at 10:21 hrs; Tri-Com Dispatch Clear, KBW588, end of test."

5. The monthly test schedule can be found in Appendix 1.

Approved by the MABAS Executive Board on October 18, 2006.

**Mutual Aid Box Alarm System – Illinois
Communications – Testing the MABAS Alert System**

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**Appendix 1
Monthly Test Schedule**

The following Divisions will test on the **FIRST MONDAY** of each month:

Division 2	Quad-Com Dispatch	Main Dispatch	09:55 hrs
Division 2	Elgin F.D.	Back-up Dispatch	09:57 hrs
Division 4	CenCom E9-1-1	Main Dispatch	09:59 hrs
Division 4	Mundelein F.D.	Back-up Dispatch	10:01 hrs
Division 5	Crystal Lake FD	Main Dispatch	10:03 hrs
Division 5	McHenry Co. Sheriff's Dept.	Back-up Dispatch	10:05 hrs
Division 8	Rockford FD	Main Dispatch	10:07 hrs
Division 8	Loves Park FD	Back-up Dispatch	10:09 hrs
Division 9	Chicago Emergency Com.	Main Dispatch	10:11 hrs
Division 9		Back-up Dispatch	10:13 hrs
Division 11	West Suburban Com.	Main Dispatch	10:15 hrs
Division 11	Cicero	Back-up Dispatch	10:17 hrs
Division 14	Ken-Com Dispatch Ctr.	Main Dispatch	10:19 hrs
Division 14	Bristol Kendall Fire	Back-up Dispatch	10:21 hrs
Division 15	Wescom	Main Dispatch	10:23 hrs
Division 15	Joliet Police Dept.	Back-up Dispatch	10:25 hrs
Division 18	Ogle County Sheriff 911 Ctr.	Main Dispatch	10:27 hrs
Division 18	Rochelle PD	Back-up Dispatch	10:29 hrs
Division 20	NorComm	Main Dispatch	10:31 hrs
Division 20	Northlake FPD	Back-up Dispatch	10:33 hrs
Division 42	Tazewell Con. Com. Ctr.	Main Dispatch	10:35 hrs
Division 42	East Peoria Dispatch	Back-up Dispatch	10:37 hrs
Division 43	911 Centre Communications	Main Dispatch	10:39 hrs
Division 43	RICOMM	Back-up Dispatch	10:41 hrs
Division 44	Brown Co. 911	Main Dispatch	10:43 hrs
Division 44	Beardstown	Back-up Dispatch	10:45 hrs

The following Divisions will test on the **SECOND TUESDAY** of each month:

Division 22	Blue Island 911 Center	Main Dispatch	09:55 hrs
Division 22	Calumet Park PD	Back-up Dispatch	09:57 hrs
Division 24	Orland Central Dispatch	Main Dispatch	09:59 hrs
Division 24	Tinley Park Dispatch	Back-up Dispatch	10:01 hrs
Division 26	Cole Co. C-Com	Main Dispatch	10:03 hrs
Division 26		Back-up Dispatch	10:05 hrs

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Division 28	METCAD	Main Dispatch	10:07 hrs
Division 28		Back-up Dispatch	10:09 hrs
Division 30	Twin-Com	Main Dispatch	10:11 hrs
Division 30	Whiteside Co. Sheriff	Back-up Dispatch	10:13 hrs
Division 32	St. Clair County CENCOM	Main Dispatch	10:15 hrs
Division 32	St. Clair County ESDA	Back-up Dispatch	10:17 hrs
Division 34	Sparta Police Dept.	Main Dispatch	10:19 hrs
Division 34	Randolph Co. Sheriff's Dept.	Back-up Dispatch	10:21 hrs
Division 36	Peoria E.C.C.	Main Dispatch	10:23 hrs
Division 36	Bartonville Village FD	Back-up Dispatch	10:25 hrs
Division 38	Lee County 911 Center	Main Dispatch	10:27 hrs
Division 38	Ogle County 911 Center	Back-up Dispatch	10:29 hrs
Division 40	Danville-Vermillion Co. Ctr.	Main Dispatch	10:31 hrs
Division 40		Back-up Dispatch	10:33 hrs
Division 45	Williamson Co. Sheriff	Main Dispatch	10:35 hrs
Division 45	Franklin Co. Central	Back-up Dispatch	10:37 hrs
Division 46	Decatur Police Dept.	Main Dispatch	10:39 hrs
Division 46		Back-up Dispatch	10:41 hrs
Division 47		Main Dispatch	10:43 hrs
Division 47		Back-up Dispatch	10:45 hrs
Division 201		Main Dispatch	10:47 hrs
Division 201		Back-up Dispatch	10:49 hrs
Division 202		Main Dispatch	10:51 hrs
Division 202		Back-up Dispatch	10:53 hrs
Division 203		Main Dispatch	10:55 hrs
Division 203		Back-up Dispatch	10:57 hrs
Division 204		Main Dispatch	10:59 hrs
Division 204		Back-up Dispatch	11:01 hrs
Division 205		Main Dispatch	11:03 hrs
Division 205		Back-up Dispatch	11:05 hrs

The following Divisions will test on the **THIRD WEDNESDAY** of each month:

Division 101	Kenosha Joint Services	Main Dispatch	09:55 hrs
Division 101	Salem Rescue Squad	Back-up Dispatch	09:57 hrs
Division 102	Racine Co. Sheriff Dept.	Main Dispatch	09:59 hrs
Division 102		Back-up Dispatch	10:01 hrs

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Division 103	Walworth Co. Sheriff's Dept.	Main Dispatch	10:03 hrs
Division 103	Delavan Police Dept.	Back-up Dispatch	10:05 hrs
Division 104	Rock County Comm.	Main Dispatch	10:07 hrs
Division 104		Back-up Dispatch	10:09 hrs
Division 105	Green Co. Sheriff's Dept.	Main Dispatch	10:11 hrs
Division 105	Monroe Police Dept.	Back-up Dispatch	10:13 hrs
Division 106	Waukesha Com. Center	Main Dispatch	10:15 hrs
Division 106		Back-up Dispatch	10:17 hrs
Division 107	Wauwatosa PD	Main Dispatch	10:19 hrs
Division 107	Oak Creek PD	Back-up Dispatch	10:21 hrs
Division 108		Main Dispatch	10:23 hrs
Division 108		Back-up Dispatch	10:25hrs
Division 109	City of Milwaukee 911 Ctr.	Main Dispatch	10:27 hrs
Division 109		Back-up Dispatch	10:29 hrs
Division 110		Main Dispatch	10:31 hrs
Division 110		Back-up Dispatch	10:33 hrs
Division 111		Main Dispatch	10:35 hrs
Division 111		Back-up Dispatch	10:37 hrs
Division 112		Main Dispatch	10:39 hrs
Division 112		Back-up Dispatch	10:41 hrs
Division 113		Main Dispatch	10:43 hrs
Division 113		Back-up Dispatch	10:45 hrs
Division 114		Main Dispatch	10:47 hrs
Division 114		Back-up Dispatch	10:49 hrs
Division 115		Main Dispatch	10:51 hrs
Division 115		Back-up Dispatch	10:53 hrs

The following Divisions will test on the **FOURTH THURSDAY** of each month:

Division 1	N.W. Central Dispatch	Main Dispatch	09:55 hrs
Division 1	RED Center	Back-up Dispatch	09:57 hrs
Division 3	RED Center	Main Dispatch	09:59 hrs
Division 3	N.W. Central Dispatch	Back-up Dispatch	10:01 hrs
Division 6	DeKalb County Sheriff	Main Dispatch	10:03 hrs
Division 6	DeKalb Police PSAP	Back-up Dispatch	10:05 hrs
Division 7	Kan-Comm	Main Dispatch	10:07 hrs
Division 7	Bourbonnais FPD #5	Back-up Dispatch	10:09 hrs
Division 10	Pleasantview FPD	Main Dispatch	10:11 hrs
Division 10	Tri-State FPD	Back-up Dispatch	10:13 hrs

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Division 12	DuComm	Main Dispatch	10:15 hrs
Division 12	DuPage OEM	Back-up Dispatch	10:17 hrs
Division 13	Tri-Com Central Dispatch	Main Dispatch	10:19 hrs
Division 13	Kane Co. Sheriff Comm.	Back-up Dispatch	10:21 hrs
Division 16	Naperville PD	Main Dispatch	10:23 hrs
Division 16		Back-up Dispatch	10:25 hrs
Division 17	Freeport PD	Main Dispatch	10:27 hrs
Division 17	Stephenson Co. Sheriff Dept.	Back-up Dispatch	10:29 hrs
Division 19	Orland Central Comm	Main Dispatch	10:31 hrs
Division 19	SW. Central Dispatch	Back-up Dispatch	10:33 hrs
Division 48	Sangamon Co. Dispatch Ctr.	Main Dispatch	10:35 hrs
Division 48		Back-up Dispatch	10:37 hrs
Division 49	Jo Daviess Co. Sheriff	Main Dispatch	10:39 hrs
Division 49	Scales Mound FD	Back-up Dispatch	10:41 hrs
Division 50	Christian Co. 911 Center	Main Dispatch	10:43 hrs
Division 50	Pana Police Department	Back-up Dispatch	10:45 hrs
Division 301		Main Dispatch	10:47 hrs
Division 301		Back-up Dispatch	10:49 hrs
Division 302		Main Dispatch	10:51 hrs
Division 302		Back-up Dispatch	10:53 hrs
Division 303		Main Dispatch	10:55 hrs
Division 303		Back-up Dispatch	10:57 hrs
Division 304		Main Dispatch	10:59 hrs
Division 304		Back-up Dispatch	11:01 hrs
Division 305		Main Dispatch	11:03 hrs
Division 305		Back-up Dispatch	11:05 hrs

The following Divisions will test on the **FOURTH FRIDAY** of each month:

Division 21	Oak Lawn Central	Main Dispatch	09:55 hrs
Division 21	Pleasantview	Back-up Dispatch	09:57 hrs
Division 23	Livingston County Dispatch	Main Dispatch	09:59 hrs
Division 23	Streator PD	Back-up Dispatch	10:01 hrs
Division 25	City of Ottawa 9-1-1	Main Dispatch	10:03 hrs
Division 25	Marseilles 9-1-1 Center	Back-up Dispatch	10:05 hrs
Division 27	EastCom	Main Dispatch	10:07 hrs
Division 27	Will Co. Sheriff	Back-up Dispatch	10:09 hrs

**Mutual Aid Box Alarm System – Illinois
Communications – Testing the MABAS Alert System**

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Division 29	Carroll County 911 Center	Main Dispatch	10:11 hrs
Division 29		Back-up Dispatch	10:13 hrs
Division 31	Galesburg/Knox Co. E-911	Main Dispatch	10:15 hrs
Division 31	Warren Co/Monmouth PD	Back-up Dispatch	10:17 hrs
Division 33	WoodCom E 911	Main Dispatch	10:19 hrs
Division 33		Back-up Dispatch	10:21 hrs
Division 35	Edwardsville PD/Fire Ctr.	Main Dispatch	10:23 hrs
Division 35		Back-up Dispatch	10:25 hrs
Division 37	I-COM	Main Dispatch	10:27 hrs
Division 37		Back-up Dispatch	10:29 hrs
Division 39	Henry County	Main Dispatch	10:31 hrs
Division 39	Rock Island	Back-up Dispatch	10:33 hrs
Division 41	METCOM 911 Center	Main Dispatch	10:35 hrs
Division 41		Back-up Dispatch	10:37 hrs
Division 51	Logan Co. Dispatch	Main Dispatch	10:39 hrs
Division 51	Lincoln Rural FPD	Back-up Dispatch	10:41 hrs
Division 52	Mt. Carmel PD	Main Dispatch	10:43 hrs
Division 52	Mt. Carmel FD	Back-up Dispatch	10:45 hrs
Division 53	Canton PSAP	Main Dispatch	10:47 hrs
Division 53	Fulton Co. PSAP	Back-up Dispatch	10:49 hrs
Division 54	Effingham City Dispatch	Main Dispatch	10:51 hrs
Division 54	Effingham Co. Sheriff	Back-up Dispatch	10:53 hrs
Division 55	McDonough Co. 911	Main Dispatch	10:55 hrs
Division 55		Back-up Dispatch	10:57 hrs
Division 56		Main Dispatch	10:59 hrs
Division 56		Back-up Dispatch	11:01 hrs
Division 57	Bureau Co. Sheriff Dept.	Main Dispatch	11:03 hrs
Division 57	Spring Valley PD	Back-up Dispatch	11:05 hrs
Division 58		Main Dispatch	11:07 hrs
Division 58		Back-up Dispatch	11:09 hrs
Division 59		Main Dispatch	11:11 hrs
Division 59		Back-up Dispatch	11:13 hrs
Division 60		Main Dispatch	11:15 hrs
Division 60		Back-up Dispatch	11:17 hrs

Mutual Aid Box Alarm System – Illinois			
Communications – AUDIBLE WARNING AT EMERGENCY INCIDENT SCENES			
Index # C-01-05.01	Adopted: 10/18/2006	Revised:	Page 1 of 3



Subject:	Audible Warning at Emergency Incident Scenes		
Functional Area:	Communications		
Category:	Policy		
Approved :	MABAS Executive Board		

Purpose:

To provide guidance and direction to member departments and incident commanders with regards to audible warning signals for use at incident scenes to alert personnel of impending or imminent danger.

Responsibility:

This policy applies to all MABAS Divisions and member Departments.

Accountability:

Enforcement of this specific policy rests initially with the Co-Chairs of the MABAS Telecommunications, Communications, and Dispatch Centers committee, then the MABAS CEO, followed by the MABAS President, 1st Vice President and 2nd Vice President.

Reporting Requirement:

There is no routine reporting requirement for this policy.

Background:

Various procedures have been enacted by member departments and MABAS to alert personnel at emergency scenes of impending or imminent dangers including flashover, building collapse, downed power lines, missing firefighter, change from offensive to defensive operations and many other potentially dangerous events or situations. The need to coordinate audible warning sounds including the use of apparatus airhorns or audible tone encoders on command radios has become apparent. It is also recognized that an Incident Commander should also have the ability to emit an attention getting signal on fireground frequencies to warn firefighters of impending danger.

This policy does not address the use of MDC1200 or other automatic number identification protocols or the use of “emergency” buttons on mobile and portable radios.

This policy will provide uniform guidance for all MABAS member departments at both MABAS and non-MABAS incidents.

Policy:

The MABAS Telecommunications, Communications and Dispatch Committee hereby establishes the following policy:

Mutual Aid Box Alarm System – Illinois			
Communications – AUDIBLE WARNING AT EMERGENCY INCIDENT SCENES			
Index # C-01-05.01	Adopted: 10/18/2006	Revised:	Page 2 of 3

1. **AIR HORNS:** The Incident Commander shall order the airhorns to sound on one or more fire apparatus at an incident scene when necessary to immediately warn all personnel working at the incident of the need to immediately evacuate the building or hot zone. Examples of when airhorns should be sounded include, but not limited to, impending collapse, flashover, explosion, hazardous atmosphere, etc. Apparatus Operators shall sound the airhorns, using a sequence of airhorn blasts that shall not exceed 10 seconds in length followed by a 10 second period of silence, and it is done 3 times. (NFPA 1500, A.8.1.11)

2. **RADIO ALERT TONE:** When so equipped, the Incident Commander shall cause an audible alert tone of 1500 Hz to be transmitted for 3 to 5 seconds over all fireground frequencies in use. Examples for the use of the radio alerting tone include, but are not limited to:
 - 2.1 **EVACUATION:** Anytime during an incident when it is necessary to immediately evacuate a building, trench, confined space, hazardous area or other position when such evacuation is necessary to protect the safety of personnel working the incident.
 - 2.2 **DANGEROUS SITUATION:** Alerting personnel to an unusual condition or situation at the scene of an emergency that puts personnel at increased risk. These situations may include, but not be limited to, downed power line, unstable wall or structure, vicious animal, or other safety related situation or message.
 - 2.3 **PERSONNEL ACCOUNTABILITY REPORT:** To alert crews working an emergency incident of an impending Personnel Accountability Report.
 - 2.4 **EMERGENCY TRAFFIC:** To alert personnel to clear a fireground or other frequency due to a request to pass emergency traffic to the incident commander.

3. **RADIO ALERT TONE PROCEDURE:** When an Incident Commander determines that an emergency exists or a potential situation exists that adversely affects the safety of personnel working at the incident, and the Incident Commander has the capability to transmit a radio alert tone, the following process is hereby recommended:
 - 3.1 **FIREGROUND FREQUENCIES:** Starting with the primary tactical frequency (firefighters in greatest danger) the Incident Commander shall cause the Radio Alert Tone to be transmitted followed immediately by the phrase “ALL UNITS STAND BY FOR EMERGENCY TRAFFIC” followed immediately by a description of the emergency or situation.

For example, the Safety Officer determines that a structure has become unstable and the Incident Commander orders an evacuation of interior companies. The following transmission should be broadcast on each fireground channel in use at the incident:

Transmit Radio Alert Tone; announce “EMERGENCY TRAFFIC – ALL PERSONNEL EVACUATE THE BUILDING DUE TO IMPENDING COLLAPSE” (The alert tone and announcement should be repeated.)
 - 3.2 **IFERN/DISPATCH FREQUENCY:** The Incident Commander may elect to transmit the radio alert tone and emergency traffic message over IFERN, assuming a MABAS box alarm incident is in progress, or over the local dispatch channel. The format for transmission of emergency traffic over the IFERN or local dispatch channel should follow the same procedure as described in Section 4.3.1.

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Communications – AUDIBLE WARNING AT EMERGENCY INCIDENT SCENES			
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Conclusion:

This policy provides direction for the use of audible warning tones and airhorns at the scene of an emergency incident.

Approved by the MABAS Executive Board on the 18th day of October, 2006.

**Mutual Aid Box Alarm System – Illinois
Communications – TACTICAL FREQUENCY USE GUIDELINE**

Index # C-01-05-02	Adopted: 08/16/2004	Revised:	Page 1 of 3
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Subject:	Tactical Frequency Use Guideline
Functional Area:	Communications
Category:	Guideline
Approved :	MABAS Executive Board

Purpose:

To provide an operational guideline for member fire departments and their personnel for establishing an effective communications component for the Incident Action Plan at both routine and major emergency incidents.

Responsibility:

This recommended practice is applicable to all MABAS member agencies. This procedure is intended to comply with the operational concepts provided under and in support of the National Incident Management System (NIMS), the Unified Incident Command System (UCS) and Incident Command System (ICS) principles.

Accountability:

Enforcement of this specific policy rests initially with the Co-Chairs of the MABAS Telecommunications, Communications, and Dispatch Centers committee, then the MABAS CEO, followed by the MABAS President, 1st Vice President and 2nd Vice President.

Reporting Requirement:

There is no routine reporting requirement for this guideline.

Background:

The MABAS organization has grown significantly over the past few years in size, geographical service area and responsibility. The complex nature of the various incidents that member fire departments respond to has mandated the use of additional mutual aid dispatch, coordination and tactical operations radio channels to effectively manage these incidents. As a result, the MABAS Communications Committee has developed this recommended practice to assist local Incident Commanders with the task of implementing a communications plan at all emergency incidents and training evolutions.

Guideline:

The MABAS Telecommunications, Communications and Dispatch Committee hereby establishes the following guideline:

1. DEFINITIONS

Dispatch – Local frequency(ies) normally used for daily dispatch (base/mobile) of emergency calls.

IFERN – MABAS mutual aid dispatch and response frequency (base/mobile). (154.265 MHz)

IFERN2 – Alternate base/mobile mutual aid dispatch frequency (154.3025 MHz). (Reserved for future implementation and/or major incident coordination.)

Fireground – Low power tactical frequencies used for on-scene communications between the Incident Commander and units working the incident.

RED	153.830 MHz	GOLD	153.8375 MHz*
WHITE	154.280 MHz	BLACK	154.2725 MHz*
BLUE	154.295 MHz	GRAY	154.2875 MHz*

* Narrow-band Frequency

IREACH – Illinois Radio Emergency Assistance Channel (155.055 MHz). Used for interdisciplinary coordination.

MERCI – VHF ambulance to hospital frequencies. (155.280, 155.340 & 155.400 MHz)

2. Guideline

- 2.1 The following guideline may be used by a fire service Incident Commander to develop the communications component of an Incident Action Plan. The narrow-band frequencies listed herein (IFERN2, GOLD, BLACK & GRAY Firegrounds) may create operational difficulties due to interference with adjacent wide-band frequencies. Use of these frequencies may be limited until full migration to narrow-band operation is completed.
- 2.2 Please consider that it is extremely difficult for a single individual to effectively monitor more than 1 or 2 radio frequencies during an emergency incident. As the communications plan becomes more complex, the Incident Commander must rely on aides to assist with communications management at the Command Post.
- 2.3 Occasionally, a jurisdiction may respond to multiple simultaneous incidents, or neighboring jurisdictions may experience simultaneous emergencies. Use of a single fireground channel for both incidents may be counterproductive and cause unnecessary harmful interference. Incident Commanders at subsequent incidents should consider adjusting their communications plan and assign a different primary fireground channel to avoid operational difficulties.
- 2.4 The recommended frequency use matrix on the following page can be used as a quick reference sheet for the Incident Commander or other communications personnel within the Command Post.

3 Frequency Guideline

See Appendix 1.

Conclusion:

The foregoing provides a uniform approach for MABAS members to develop the communications component of an Incident Action Plan. This is only an guideline and local conditions must be taken into consideration when implementing this procedure.

Approved by the MABAS Communications Committee on August 16, 2004.

Mutual Aid Box Alarm System – Illinois
Communications – USE OF IREACH FOR TOLLWAY RESPONSES

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Subject:	Use of IREACH for Tollway Responses
Functional Area:	Communications
Category:	Guideline
Approved :	MABAS Executive Board

Purpose:

To coordinate emergency response communications for incidents that occur on the Illinois State Toll Highway (Tollway) Authority.

Responsibility:

This guideline applies to all MABAS member agencies that may respond to incidents on the Illinois Tollway system.

This guideline is intended to comply with the operational concepts provided under and in support of the National Incident Management System (NIMS), the Unified Command System (UCS) and Incident Command System (ICS) principles.

Accountability:

Enforcement of this specific policy rests initially with the Co-Chairs of the MABAS Telecommunications, Communications, and Dispatch Centers committee, then the MABAS CEO, followed by the MABAS President, 1st Vice President and 2nd Vice President.

Reporting Requirement:

There is no routine reporting requirement for this guideline.

Background:

The Illinois fire service, in cooperation with the Illinois State Police and the Tollway Authority, desire to improve communications interoperability, command and control or emergency scenes on the Tollway System. Utilizing the inter-disciplinary, inter-jurisdictional coordination radio channel commonly known as IREACH (Illinois Radio Emergency Assistance Channel), responders from various disciplines can readily communicate unit-to-unit to locate incidents, coordinate resources, and improve public safety on the Tollway system.

Guideline:

The MABAS Telecommunications, Communications and Dispatch Committee hereby establishes the following guideline:

1. Member agencies are encouraged to review and/or acquire radio authorization from the Federal Communications Commission for the IREACH frequency (155.055 MHz)

Mutual Aid Box Alarm System – Illinois
Communications – USE OF IREACH FOR TOLLWAY RESPONSES

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2. Affected member agencies are encouraged to participate in incident management and coordination training as presented by the Illinois Fire Chiefs Association, Illinois State Police and the Tollway Authority.
3. Member agencies are encouraged to utilize IREACH to locate incidents on the Tollway System by communicating with Tollway staff and units of the Illinois State Police, coordinate necessary resources suited to specific incidents, and coordinate large-scale incidents requiring multiple response disciplines.

Conclusion:

The use of the IREACH frequency by fire, EMS, Illinois State Police, and response staff of the Illinois State Toll Highway Authority will greatly enhance the management of emergencies on the Tollway system in Illinois.

Approved by the MABAS Executive Board in July 2005.

Mutual Aid Box Alarm System – Illinois Communications – MEDICAL HELICOPTERS			
Index # C-01-05.04	Adopted: 10/16/2002	Revised:	Page 1 of 2
Subject:	Medical Helicopters		
Functional Area:	Communications		
Category:	Policy		
Approved :	MABAS Executive Board		



Purpose:

To recommend the use of MERCI or IREACH radio frequencies for medical helicopter landing zones.

Responsibility:

This policy applies to all MABAS member agencies. It is encouraged that all fire departments and related emergency response organizations throughout Illinois adopt the procedures set forth herein.

Accountability:

Enforcement of this specific policy rests initially with the Co-Chairs of the MABAS Telecommunications, Communications, and Dispatch Centers committee, then the MABAS CEO, followed by the MABAS President, 1st Vice President and 2nd Vice President.

Reporting Requirement:

There is no routine reporting requirement for this policy.

Background:

Fire Departments frequently request medical evacuation helicopters to the scenes of accidents and other emergencies. It has become the “norm” for these helicopters to use the IFERN (154.265 MHz) frequency for landing zone coordination with the requesting fire department.

Experience has shown that the use of IFERN by medical helicopters is less than desirable. Helicopters landing at scenes where MABAS Box Alarm incidents are in progress can disrupt necessary communications with the MABAS Division, other responding units, staging, etc. Likewise, other incident related radio traffic can interfere with safety related transmissions between the landing zone sector and the medical helicopter.

Radio communications from medical helicopters while in flight can cover great geographic areas due to their antenna height. Helicopters responding to an incident in one jurisdiction can cause, or receive, harmful interference to/from an in-progress MABAS box alarm in another jurisdiction.

Policy:

The MABAS Telecommunications, Communications and Dispatch Committee hereby establishes the following policy:

1. The use of IFERN (154.265 MHz) or RED, WHITE or BLUE fireground frequencies for medical evacuation helicopter landing zones is an inappropriate use of the frequency and is strongly discouraged.

**Mutual Aid Box Alarm System – Illinois
Communications – MEDICAL HELICOPTERS**

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2. The use of existing VHF-MERCI or IREACH frequencies is more appropriate for landing zone or ambulance to helicopter communications.
3. For areas that use MERCI 340 (155.340 MHz) as their primary ambulance to hospital frequency, MERCI 400 (155.400 MHz) for communications with medical helicopters should be considered. (Areas south of North Avenue in the Chicago metropolitan area.)
4. For areas that use MERCI 400 (155.400 MHz) as their primary ambulance to hospital frequency, MERCI 340 (155.340 MHz) for communications with medical helicopters should be the frequency of choice. (Areas north of North Avenue in the Chicago metropolitan area.)
5. Departments should consult with their EMS System to determine if the use of Tone Coded Squelch (PL) is desired to allow monitoring of landing zone activities by Medical Control.
6. Departments without EMS responsibilities, or departments where use of existing VHF-MERCI frequencies is undesirable for helicopter use, IREACH (155.055 MHz) should be the frequency of choice for landing zone communications.

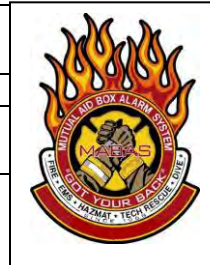
Conclusion:

Proper use of available radio frequencies can eliminate harmful interference between MABAS incidents and medical helicopters. Nothing in this statement is intended to discourage the use of other licensed frequencies not specified herein for use during helicopter landing zone situations.

Approved by the MABAS Executive Board on 10/16/2002.

**Mutual Aid Box Alarm System – Illinois
Communications – Radio Signatures for MABAS - IL**

Index # C-01-05-05	Adopted: 09/24/07	Revised:	Page 1 of 3
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Subject:	MABAS-IL Radio Signatures
Functional Area:	Communications
Category:	Procedure
Approved :	MABAS Telecommunications, Communications & Dispatch Committee

Purpose:

To establish radio signatures for MABAS elected officers, administrative and operational staff, US&R administration, decontamination vehicles, MABAS task forces and strike teams.

Responsibility:

This procedure applies to all MABAS elected officers, administrative and operational staff, US&R administration, decontamination vehicles, MABAS task forces and strike teams as well as RED Center, Orland Central, DuPage OEM dispatch centers while performing official duties related to MABAS.

Accountability:

Enforcement of this specific policy rests initially with the Co-Chairs of the MABAS Telecommunications, Communications, and Dispatch committee, then the MABAS CEO, followed by the MABAS President, 1st Vice President and 2nd Vice President.

Reporting Requirement:

There is no routine reporting requirement for this procedure.

Background:

MABAS-IL operates with various elected officers, administrative and operational staff as well as regional response teams and apparatus. These officials and teams will, from time-to-time, have need to communicate via radio to manage the business affairs of MABAS-IL as well as coordinate and effect emergency response to emergencies and disasters.

MABAS-IL holds an authorization from the Federal Communications Commission to operate radio transmitters on numerous public safety radio frequencies. In addition, MABAS owns and/or controls many radios that operate throughout Illinois on the State's Starcom21 trunked radio network.

Procedure:

The MABAS Telecommunications, Communications and Dispatch Committee hereby establishes the following procedure:

1. The MABAS Telecommunications, Communications and Dispatch Committee hereby establishes radio signatures for all MABAS-IL elected officers, administrative and operational staff, US&R administration, decontamination vehicles, MABAS task forces and strike teams. Specific radio signatures may be found in Appendix A.

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2. MABAS-IL owned and/or operated decontamination vehicles have been assigned to various MABAS-IL Divisions for housing and operations. Said decontamination vehicle's radio signature shall be the same as the MABAS Division Number where it is housed.

For example: MABAS Division 8 has been assigned a decontamination vehicle that is housed and operated by the Rockford Fire Department. Therefore, the radio signature assigned to this unit is DECON 8.

3. As part of the Illinois Statewide Mutual Aid Plan, MABAS may activate one or more fire service task forces (includes fire, hazardous materials and urban search & rescue) or strike teams (includes engines, trucks, squads, ambulances, tenders, hazardous materials, technical rescue, etc.) These resources, except for urban search & rescue are generally requested on a Division by Division basis. (Note: For definitions of Task Forces and Strike Teams, please refer to Policy C-01-12 MABAS Interdivisional Box Alarm Cards.)

Therefore, any task force or strike team requested through the Statewide Mutual Aid Response Flowplan, or through interdivisional request, will be assigned a radio signature equal to the MABAS Division Number.

For Example: A hazardous materials strike team from Division 4 will assume the radio signature of Haz-Mat Strike Team 4. An engine strike team from Division 19 will assume the radio signature of Engine Strike Team 19. A firefighting task force from Division 15 will assume the radio signature of Fire Task Force 15.

4. MABAS is the host entity for the Illinois Task Force 1 – Urban Search & Rescue Team (IL-TF1). Generally IL-TF1 operates on radio spectrum distinctly different than most other public safety agencies within Illinois. IL-TF1 also maintains its own policies and procedures for radio and other forms of communications within the US&R team.

However, from time to time, a select number of IL-TF1 members may be required to communicate with outside resources, including IEMA, RED Center, Orland Central and DuPage OEM dispatch centers, using widely used public safety frequencies. The radio signatures for IL-TF1 included within Appendix A are included for external communications to and from IL-TF1.

Conclusion:

This procedure provides direction for the use of radio signatures by MABAS elected officers, administrative and operational staff, US&R administration, decontamination vehicles, MABAS task forces and strike teams .

Approved by the MABAS-IL Telecommunications, Communications and Dispatch Committee on the 24th day of September, 2007.

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**Appendix A
MABAS-IL Radio Signatures**

MABAS Position	Radio Signature	Current Individual
President	MABAS 100	Chief Jay Reardon
1 st Vice President	MABAS 101	Chief Terry Lipinski
2 nd Vice President	MABAS 102	Chief Randy Justus
Comptroller	MABAS 103	Chief Paul Maplethorpe
CEO	MABAS 200	(not used)
Deputy CEO	MABAS 201	Chief Jerry Page
Plans Branch Chief	MABAS 202	Chief Bob Key
Finance Branch Chief	MABAS 203	Jill Bywater
Logistics Branch Chief	MABAS 204	(not used)
Ops Branch Chief – North	MABAS 205	Chief Dave Haywood
Ops Branch Chief – Central	MABAS 206	Chief John Stanko
Ops Branch Chief – South	MABAS 207	Chief Larry Jamrozek
MABAS Tahoe	MABAS Utility 1	
Decon Vehicles*	DECON + Division #	"DECON 8"
USAR Director	MABAS 300	(not used)
USAR Lead TFL	MABAS 301	Chief Boyle
Task Force Leaders**	USAR TFL1 & TFL2	Varies
Plans Managers**	USAR PLANS1 & PLANS2	Varies
Logistics Managers**	USAR LOGS1 & LOGS2	Varies
Communications Leader**	USAR COMM LEADER	Varies
Communications Spec**	USAR COMM1 & COMM2	Varies
Task Force Ops Center	DuPage County EOC	
Personnel Processing Cntr	USAR PPC	
Roll-Off 1	USAR Truck 1	
Roll-Off 2	USAR Truck 2	
Roll-Off 3	USAR Truck 3	
Roll-Off 4	USAR Truck 4	
Division Task Force***	(Type) Task Force (Div #)	"FIRE TASK FORCE 19"
Division Strike Team***	(Type) Strike Team (Div #)	"TRT STRIKE TEAM 16"

* Decon Units – Example: Decon Unit housed by Division 8 = DECON 8

**Radio Signatures for USAR positions during deployments and OREs while communicating with stations outside of the USAR organization.

***Radio Signatures for MABAS Divisions deployed as either an Interdivisional or Statewide Deployment asset.

(Div #) = Division Number

(Type) = Resource Type

Task Forces = FIRE, HAZ-MAT, USAR

Strike Teams = Engine, Tender, Truck, Squad, Ambulance, Haz-Mat, TRT, Dive, Wildland, etc.



Subject:	Technicians Guidelines
Functional Area:	Communications
Category:	Guideline
Approved :	MABAS Executive Board

Purpose:

To provide a source for radio technicians, both independent radio shops and in-house radio programmers, so that mobile and portable radios will contain proper features to adequately function within the guidelines of the various MABAS Radio Advocacy Statements and MABAS Policies.

Responsibility:

This information can be utilized by all fire departments and their respective radio technicians.

Accountability:

Enforcement of this specific guideline rests initially with the Co-Chairs of the MABAS Telecommunications, Communications, and Dispatch Centers committee, then the MABAS CEO, followed by the MABAS President, 1st Vice President and 2nd Vice President. Ultimately, however, ultimate authority regarding the enforcement of radio operations and licensing rests with the Federal Communications Commission (FCC).

Reporting Requirement:

There is no routine reporting requirement for this guideline.

Background:

The MABAS Radio Committee has fielded questions from radio shops and fire agencies which are looking for guidance on programming features, channel designators, and other radio parameters that are necessary to attain interoperability with all MABAS agencies.

Guideline:

The MABAS Telecommunications, Communications and Dispatch Committee hereby establishes the following guideline:

1. CHANNEL SPECIFICATIONS AND NOMENCLATURE:

CTCSS is found only on the transmitter of the radio for portables and mobiles on wideband frequencies. If a command van is used, or a base-station is used for regional reception, CTCSS for the receiver may be considered for those radios found in communications vans or base stations only to reduce interference.

**Mutual Aid Box Alarm System – Illinois
Communications – TECHNICIANS GUIDELINES FOR CONFIGURING FIRE RADIOS**

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Freq: TX/RX	CTCSS Tone	Name	Suggested Display or Abbreviation
154.2650	210.7 (M2) (Note 3)	Interagency Fire Emergency Radio Network	IFERN
154.3025 (N)	67.0 (XZ) (Note 4)	Interagency Fire Emergency Radio Network 2	IFERN2
153.8300	69.3 (WZ) (Note 3)	RED Fireground	FG-RED
154.2800	74.4 (WA) (Note 3)	WHITE Fireground	FG-WHITE
154.2950	85.4 (YA) (Note 3)	BLUE Fireground	FG-BLUE
153.8375 (N)	91.5 (ZZ) (Note 4)	GOLD Fireground	FG-GOLD
154.2725 (N)	94.8 (ZA) (Note 4)	BLACK Fireground	FG-BLACK
154.2875 (N)	136.5 (4Z) (Note 4)	GRAY Fireground	FG-GRAY

- Note 1: The radio's LCD display may also contain channel number as space allows, i.e. "4 IFERN".
- Note 2: (N) Means Narrow-Band Only. Not all radios are capable for Narrow-Band based on age and FCC Type Acceptance.
- Note 3: Until the FCC makes a final decision on narrow-band, MABAS recommends that "transmit only" CTCSS be implemented on portables and mobiles for the wideband channels.
- Note 4: MABAS recommends that "full TX/RX" CTCSS be implemented on portables and mobiles for the narrowband channels.

2. CHANNELIZATION:

The MABAS Radio Committee **has not adopted a standardized channel layout** for radios, however, it is noted that many agencies are standardizing with the following format **AS AN EXAMPLE ONLY**. This is NOT to be considered a "MABAS Standard" but simply an example of how many fire agencies have programmed their radios.

- The normal VHF dispatch channel (non-MABAS listed channel) should be found at Channel 1 so that the gloved operator in the field can rotate the channel selector fully counter-clockwise to find the normal fire dispatch channel for routine local (non-MABAS) dispatch.
- The RED Fireground frequency should be found at the last channel, usually Channel 16, so that rotating the channel selector fully clockwise will find the most commonly used Fireground channel. Subsequent "clicks" counterclockwise will allow the operator to quickly switch to White and Blue, etc. if alternate Fireground channels are used.

EXAMPLE CHANNEL LAYOUT:

Position	Channel Name	Position	Channel Name
F1	Primary VHF Dispatch Frequency	F9	Other VHF Frequency
F2	IFERN	F10	Other VHF Frequency
F3	Other VHF Frequency	F11	GRAY Fireground
F4	Other VHF Frequency	F12	BLACK Fireground
F5	Other VHF Frequency	F13	GOLD Fireground
F6	Other VHF Frequency	F14	BLUE Fireground
F7	Other VHF Frequency	F15	WHITE Fireground
F8	Other VHF Frequency	F16	RED Fireground

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3. SCAN FEATURES:

The MABAS Communications Committee has fielded questions on popular scan configurations in programmable mobile and portable radios. Configurations should include:

- 3.1 Scan List:** A list of channels should be limited to tactical channels or essential channels for the command function. Scan lists should be limited to IFERN, Fireground channels, and main dispatch channel. This is a local decision based on local policy, however, lower-priority channels or seldom used channels should probably not be included in a scan list when in a tactical mode.
- 3.2 Deletion of “talk-back” scan:** This feature moves the transmit frequency to the channel where last activity occurred. In this scan mode, the operator may actually transmit on an undesired channel because the radio sensed activity on a non-primary channel
- 3.3 Use of “Priority Scan”:** Radios should be configured so that the scanner’s priority follows the selected channel. Regardless of how many channels are in a given scan list, priority is given to the channel that is selected by the channel selector. Activity on the selected channel will be given priority over activity on any other channel in the scan list.

4. CHANNEL GUIDE:

Because most popular radios are multi-channel, it is recommended that a channel guide be available to the operators. A laminated card, label, or engraved plate should be available on the front of the radio case, or on the radio’s holster. Mobile radios should have a similar channel guide in plain view near the radio.

Mobile and portable radios with alpha-numeric displays may not require any type of placard, card, or label unless special instructions are desired.

5. PORTABLE RADIO SPEAKER MICROPHONE & PUBLIC-SAFETY MICROPHONE:

There are many options for speaker-microphones and accessories. Recommendations:

- 5.1 Speaker Mic:** Speaker microphones (coiled cord with microphone containing a push-to-talk switch, and speaker), when used, still allows the portable-radio antenna to be away from the operator’s body, per manufacturer’s guidelines.
- 5.2 Public-Safety Mic:** Public-safety microphones (straight or nearly straight cord with speaker, microphone, push-to-talk switch, and remote antenna). The installation must strictly adhere to manufacturers guidelines and must remain unmodified. The mic-mounted remote antenna must remain in place since the portable-mounted antenna is automatically disconnected once the public-safety microphone is attached to the radio. The proper band antenna needs to be used. Even though a UHF antenna may be shorter and “more convenient”, it does not perform properly on a VHF radio. It can cause damage to the radio, and it will degrade performance.

6. MOBILE RADIO ANTENNAS:

- 6.1 Glass-mounted Antennas:** There are various manufacturers who make on-the-glass antennas for VHF. Many do not perform to public-safety-grade standards. This leads to poor reception, decreased transmit power, interference to other mobile radios, poor ground, and other problems. These antennas, if used at all, should be used with a high degree of caution.
- 6.2 Mounting Positions of Permanent Antennas:** Antennas mounted on the body of a vehicle should be as high as possible, and as centered as possible for best performance.

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- 6.3 Mobiles that require more than one radio antenna should consider antenna spacing based on 1/8-wavelength null. This helps to reduce in-band and cross-band interference between radios.

5.4 MOBILE RADIO POWER SETTINGS:

- 5.1 It is recommended that mobile radios be programmed or adjusted with power setting not to exceed 10 watts on all Fireground channels. High power settings (over 25W) could be used on IFERN, IFERN2, or as needed for authorized frequencies other than the identified Fireground frequencies.
- 5.2 It is recognized that some legacy mobile radios only have one power setting, often at 100 Watts. As mobile radios are replaced, MABAS encourages compliance with the low-power guidelines for fireground channels.
- 5.3 Power should be programmed or adjusted using good engineering practices with trained personnel using professional-grade test equipment such as dummy loads, service monitors and watt meters.

Conclusion:

This guideline should be useful for radio technicians, or those who are competent in the use of radio programming software, in properly setting up mobile and portable radios to ensure MABAS interoperability. It is hoped that technicians can use this guideline to counsel the users so that optimal radio performance is achieved.

Approved by the MABAS Executive Board on August 5, 2004.

**Mutual Aid Box Alarm System – Illinois
Communications – TRANSMIT POWER LIMITATIONS**

Index # C-01-06.03

Adopted: 10/16/2002

Revised:

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Subject: Transmit Power Limitation
Functional Area: Communications
Category: Policy

Approved : MABAS Executive Board

Purpose:

To encourage all MABAS members and other Fire Departments to limit radio transmit power on fireground operations frequencies.

Responsibility:

This policy applies to all MABAS member agencies. It is encouraged that all fire departments and related emergency response organizations throughout Illinois adopt the procedures set forth herein.

Accountability:

Proper operation of radio equipment within the authority of FCC radio licenses is the responsibility of every fire department and, therefore, compliance with this guideline ultimately rests with each Fire Chief. Enforcement of radio rules is the responsibility of the Federal Communications Commission (FCC). Enforcement of this specific guideline as it relates to MABAS rests initially with the Co-Chairs of the MABAS Telecommunications, Communications, and Dispatch Centers committee, then the MABAS CEO, followed by the MABAS President, 1st Vice President and 2nd Vice President.

Reporting Requirement:

There is no routine reporting requirement for this policy.

Background:

Many fire department mobile radios have the ability to transmit at radio frequency power levels up to 110 watts. High transmit power levels may be desirable or necessary for communications with dispatch, hospitals or other mobile units at great distances. These higher power levels are not generally necessary for operations at fireground and other emergency incident scenes that cover very small geographic areas. In fact, for example, base station or high power mobile operations could cause harmful interference to low power portable radios operating on the interior of a working structure fire.

Use of lower power levels on fireground frequencies also allows the reuse of those frequencies at incidents in neighboring jurisdictions without causing harmful interference.

Many newer radios have the ability to program various output power levels by frequency or mode. Fire departments have also installed secondary low power "fireground" radios into staff and command vehicles for use on fireground frequencies at emergency scenes.

Policy:

The MABAS Telecommunications, Communications and Dispatch Committee hereby establishes the following policy:

1. Operations on fireground frequencies should be limited to ten (10) watts.

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2. The use of base radios, including low power portable radios utilizing fixed (base station) antennas is strongly discouraged.
3. Fire departments are encouraged to inventory their mobile radio equipment and, if possible, modify these units for low power operation on all fireground radio frequencies.

Conclusion:

The elimination of high power transmissions and transmissions from fixed antenna sites on fireground frequencies will improve the safety of operations at fires and other emergencies. Low power fireground transmissions will also facilitate the reuse of fireground frequencies at multiple incidents without unnecessary interference.

Approved by the MABAS Executive Board on 10/16/2002.