

# Illinois Interoperability Field Operations Guide

**July 2018 Edition** 



rabilit	y	M va	a Keet	DOOR .
s Guid	THE RESERVE	CABILLE	MENDALA	MAL
ROCK RELING MERCOR	Putterior		ununco	-
THE STATE STATE	water and	NA.	BOSTON	******
- name	1000	mute.		
DE RECEION	Total			CALL TOTAL
Marian Marian	1000	DE WITE	ner .	
MONE CASE NA	-	SACON.	-	VOLAS STORY
2077	Owners	HO. SHELEY	-	un .
	economic .		0.99	District Colors
	1000	MANUEL BY	-	Market Common
		motor	SLW .	NOTES CHAR
87.048	-		ame	1
monog .	PERM	A PROPERTY OF	CONT. TOR.	-
		Photos, III		



#### **Common Responsibilities of All Deployed Responders**

- Be prepared to deploy have GO kit(s) ready
- Receive assignment DO NOT self-deploy
  - Reporting location, time and travel route
  - Description of type and severity of incident
  - Instructions for communication while enroute
  - Monitor incident status while enroute
- Start an ICS214 to document activities
- Upon arrival, check in at correct location
- Receive briefing from immediate supervisor
- Gather information on current incident status
  - Copy of IAP, face-to-face, ICS201
  - Document current situation if necessary
- Document significant activities on ICS214
- Maintain asset accountability
- Brief, assign and manage subordinates, if any
- Work safely ensure safety
- Participate in planning process if appropriate
- Keep systems operational verify!
- Brief replacement prior to shift change
- Demobilize as directed when and how

The *Illinois Interoperability Field Operations Guide* (*I*<sup>2</sup>*FOG*) is a collection of technical reference material to aid Illinois Communications Unit personnel in establishing communications solutions during emergency incidents and planned events. The ability of responders to communicate in real time is critical to establishing command and control at the scene of an incident.

The *I*<sup>2</sup>FOG condenses information from the *Illinois Tactical Interoperable Communications Plan (TICP)* and is consistent with the goals identified in the *Illinois Statewide Communications Interoperability Plan (SCIP)* and the vision statement of the U.S.

Department of Homeland Security (DHS), wherein emergency responders can communicate as needed, on demand, and as authorized at all levels of government. Document printed with US Homeland Security grant money.

This FOG contains nationwide and statewide interoperability channels that should be programmed into all public safety radios in the appropriate frequency band.

Thank you,

Joe Galvin Statewide Interoperability Coordinator (SWIC) Illinois Emergency Management Agency

IEMA Dispatch Center (24/7) 217-782-7860

Send corrections or suggestions to <a href="mailto:joe.qalvin@illinois.gov">joe.qalvin@illinois.gov</a>

Table of Contents ii

### **Contents**

INTEROPERABLE COMMUNICATIONS IN ILLINOIS	2
GENERAL RULES OF USE	2
NIMS / ICS / COML	
Tactical Call Signs / Common Terminology	
Plain Language (No 10-codes)	
Unit Identifier	
Calling Another Unit	
INTEROPERABLE SYSTEMS	
STARCOM21 Platform Overview	
Legacy Networks	
STARCOM21 Statewide Interoperability Template	
STARCOM21 Interoperable Talkgroups and Rules of	Use7
MAPS	9
ILLINOIS EMERGENCY MANAGEMENT AGENCY	9
LOCATIONS OF COMMS SUPPORT VEHICLES	11
ITECS REGIONAL BASE/REPEATER FREQUENCY ASSIGNMENTS	12
Illinois State Police Districts	
ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICTS	
COMMUNICATION UNIT	17
COMMUNICATION UNIT LEADER POSITION CHECKLIST	20
INCIDENT COMMAND SYSTEM PLANNING FORMS	
INCIDENT COMMINIAND STSTEIN FLAMMING FORMS	23

Table of Contents

	ICS 201 - Incident Briefing	23
	ICS 203 - Organization Assignment List	24
	ICS 204 - Field Assignment Form	24
	ICS 205 - Incident Radio Communications Plan	24
	ICS 206 - Medical Plan	25
	ICS 207 - Incident Organization Chart	25
	ICS 211 - Incident Check-In List	25
	ICS 213 - General Message	26
	ICS 214 - Unit Log	26
	ICS 217A - Communications Resource Availability	27
	ICS 309 - Communications Log	
	EMERGENCY SUPPORT FUNCTIONS (ESF)	28
IN	CIDENT PRIORITIZATION	29
	PRIORITIZATION AND SHARED USE OF INTEROPERABILITY ASSETS	29
ST	ATEWIDE INTEROPERABLE CHANNELS AND TALKGROU	PS32
	Illinois VHF Low Band	32
	Illinois VHF High Band	33
	Statewide Secure Shared Channels (Zone BY)	35
	Statewide STARCOM21 Talkgroups (Zones BA, BB, & B.	Z) 36
N	ATIONWIDE INTEROPERABLE CHANNELS	40
	Nationwide VHF Low Band	40
	Nationwide VHF Low Band Nationwide VHF High Band	

Table of Contents

Federal VHF LE Law Enforcement	45
Nationwide UHF	46
Federal UHF IR Incident Response	47
Federal UHF LE Law Enforcement	48
Nationwide 700 MHz (Zones BD-BG)	49
Nationwide 700 MHz Low Power (Zones BH–BI)	52
Nationwide 700 MHz Air-to-Ground (Zone BJ)	54
Nationwide 800 MHz (Zone BC)	56
AUXILIARY COMMUNICATIONS (AUXCOMM)	57
STATEWIDE AUXCOMM FREQUENCIES	58
INTEROPERABILITY ASSETS	59
INTEROPERABILITY REPEATERS	50
Best Practice Summary	
Requesting a Repeater	
UHF Fixed Base Interoperability Repeaters	
800 MHz Fixed Base Interoperability Repeaters	
Transportable Interoperability Repeaters	
Portable Interoperability Repeaters	
GATEWAYS	
Requesting a Gateway	
Fixed Gateways	
Transportable Gateways	71

Table of Contents v

MOBILE COMMUNICATIONS UNITS (VEHICLES/TRAILERS)	/8
GENERATORS	83
INTEROPERABILITY POINTS OF CONTACT	87
TICP/FOG	87
IEMA DISPATCH	
STATEWIDE COMMUNICATION CENTERS	88
COMMUNICATION POINTS OF CONTACT	90
GENERAL REFERENCE INFORMATION	92
STANDARD PHONETIC ALPHABET	92
PRIVACY TONES/CODES	93
CTCSS (PL) Tones	93
DCSS – Digital Coded Squelch System	94
NAC – Network Access Codes	96
GLOSSARY	97

Table of Contents

### **Interoperable Communications in Illinois**

#### GENERAL RULES OF USE

#### NIMS / ICS / COML

Use of ICS as a component of NIMS is the standard in Illinois. This includes the designation of a Communication Unit Leader (COML) when appropriate.

#### Tactical Call Signs / Common Terminology

The Incident Commander/designee shall establish tactical call signs used for the incident. It is the responsibility of all users to refer to facilities and staff by the proper tactical call signs.

#### Plain Language (No 10-codes)

All communications shall be in plain language. Radio codes, acronyms, and abbreviations should be avoided as they may cause confusion among agencies. The reason for a request for assistance or backup should be clearly stated.

#### Unit Identifier

The proper identifier for any asset is the agency name followed by identifier/resource type (i.e., ISP Car 2-15 or Elgin Fire Engine 3).

#### Calling Another Unit

A user should call another user using the — "called unit from calling unit" format (also known as the "hey you —it's me" format) using unit identifiers as shown above "ISP Car 2-15 from IEMA 3" Followed by: "IEMA 3 from ISP Car 2-15, go ahead"

#### **INTEROPERABLE SYSTEMS**

Interoperable communications in Illinois has a long and rich history. This section documents the statewide systems and channels in addition to the National Interoperable Pool (NIP) channels available for use within the State.

#### STARCOM21 Platform Overview

The Illinois Terrorism Taskforce (ITTF) approved STARCOM21 as an interoperable communications platform for <u>statewide</u> command, control, and support communications at major incidents and events, supporting established local, regional, and statewide communications systems.

STARCOM21 is used by many state, local, and private agencies for daily operability as well as for interoperability among disciplines and among jurisdictions.

#### Legacy Networks

There is a large presence of non-STARCOM21 interoperability resources that exists across the state that are used primarily for tactical operations

#### STARCOM21 Statewide Interoperability Template

		Zone				
		BA	BB	ВС	BD	BE
	1	IESMA*	RGN 2A	8CALL90D	7CAL50D	7MOB59D
	2	ILEAS	RGN 2B	8TAC91D	7TAC51D	<del>7MOB59DA</del>
	3	MABAS	RGN 3A	8TAC92D	7TAC52D	7LAW61D
	4	PUB HLTH	RGN 3B	8TAC93D	7TAC53D	7LAW62D
	5	IPWMAN	RGN 4A	8TAC94D	7TAC54D	7FIRE63D
(F)	6	INCIDNT1	RGN 4B	8CALL90	7TAC55D	7FIRE64D
Mode (Channel)	7	INCIDNT2	RGN 6A	8TAC91	7TAC56D	7MED65D
	8	INCIDNT3	RGN 6B	8TAC92	7GTAC57D	7MED66D
	9	INCIDNT4	RGN 7A	8TAC93	7CAL50	7MOB59
pol	10	INCIDNT5	RGN 7B	8TAC94	7TAC51	<del>7MOB59A</del>
Σ	11	NORTH A	RGN 8A		7TAC52	7LAW61
	12	NORTH B	RGN 8B		7TAC53	7LAW62
	13	CENTER A	RGN 9A		7TAC54	7FIRE63
	14	CENTER B	RGN 9B		7TAC55	7FIRE64
	15	SOUTH A	RGN 11A		7TAC56	7MED65
	16	SOUTH B	RGN 11B		7GTAC57	7MED66

<sup>\*</sup>IESMA is the statewide hailing/calling talkgroup monitored by IEMA

**NOTE**: Use of STARCOM21 Zone BA and BZ Statewide requires coordination through the state SWIC or COMC. Contact SWIC/COMC at IEMA 217.782.7860.

		Zone				
		BF	BG	ВН	BI	
	1	7CAL70D	7MOB79D	7FTAC1D	7MTAC9D	
	2	7TAC71D	7MOB79DA	7FTAC2D	7NTAC10D	
	3	7TAC72D	7LAW81D	7FTAC3D	7NTAC11D	
	4	7TAC73D	7LAW82D	7GTAC4D	7NTAC12D	
	5	7TAC74D	7FIRE83D	7GTAC5D	7MTAC9	
<u></u>	6	7TAC75D	7FIRE84D	7LTAC6D	7NTAC10	
Mode (Channel)	7	7TAC76D	7MED86D	7LTAC7D	7NTAC11	
hai	8	7GTAC77D	7MED87D	7LTAC8D	7NTAC12	
) a	9	7CAL70	7MOB79	7FTAC1		
po	10	7TAC71	7MOB79A	7FTAC2		
Σ	11	7TAC72	7LAW81	7FTAC3		
	12	7TAC73	7LAW82	7GTAC4		
	13	7TAC74	7FIRE83	7GTAC5		
	14	7TAC75	7FIRE84	7LTAC6		
	15	7TAC76	7MED86	7LTAC7		
	16	7GTAC77	7MED87	7LTAC8		

		Zone			
		BJ		SECURE BY	SECURE BZ
	1	7AG58D		7MOB59DE	SECURE 1
	2	7AG60D		7MOB79DE	SECURE 2
	3	7AG67D		7LAW81DE	SECURE 3
	4	7AG68D		7LAW82DE	SECURE 4
	5	7AG78D		7FIRE83DE	SECURE 5
(F	6	7AG80D		7FIRE84DE	SECURE 6
Mode (Channel)	7	7AG85D		7MED86DE	SECURE 7
hai	8	7AG88D		7MED87DE	SECURE 8
) e	9	7AG58		7MOB59E	SECLAW 1
po	10	7AG60		7MOB79E	SECLAW 2
Σ	11	7AG67		7LAW81E	SECFIR 1
	12	7AG68		7LAW82E	SECFIR 2
	13	7AG78		7FIRE83E	SECEMA 1
	14	7AG80		7FIRE84E	SECEMA 2
	15	7AG85		7MED86E	SECDOT 1
	16	7AG88	for Walt	7MED87E	SECDOT 2

Zone BJ- Air to Ground 700 MHz, Air to Ground communications use only. Max elevation is 1500'

SECURE ZONE BY and BZ are optional. Assignment of Talkgroups are coordinated through IEMA at 217.782.7860. All encryption will utilize AES256 protocol. Only use the current SIEC Mutual Aid AES 256 keys. No other keys allowed. Talkgroups are not to be programmed in to public safety communications centers except SECURE 1, SECURE 2, and SECURE 3 which can be used for fixed location communications

#### STARCOM21 Interoperable Talkgroups and Rules of Use

The following is a summary list of the STARCOM21 interoperable talkgroups in Zones BA-BB.

- IESMA talkgroup used to notify and dispatch state and local emergency management agencies as well as non-governmental organizations. *Note:* This talkgroup is also the designated all-agency statewide hailing channel. Monitored by IEMA 24-hour dispatch center
- ILEAS talkgroup used to notify and dispatch state and local law enforcement agencies.
- MABAS talkgroup used to notify and coordinate Fire, EMS, hazardous materials and technical rescue responses.
- Public Health talkgroup used to notify and dispatch state and local public health agencies and hospitals
- IPWMAN talkgroup used by the Illinois Public Works Mutual Aid Network.
- Incident 1 5 talkgroups (INCIDNT) used for command/control and as directed by SWIC/COMC for state level events. Call 217.782.7860
- Zone talkgroups used for interoperable communications within a given STARCOM21 Zone (NORTH A and B, CENTER A and B, SOUTH A and B) as directed by SWIC/COMC. Call 217.782.7860
- Region talkgroups (RGN) May be used for interoperable communications for emerging incidents and emergencies by any users within an IEMA region without seeking permission or as

- directed by SWIC/COMC. However, a courtesy notification is appreciated and assists with the overall Communications plan.
- Many EMAs monitor their Region B talkgroup, the state is promoting for use by the five National Weather Service (NWS) offices that forecast for all IL counties during times of imminent severe weather (i.e. - tornado, blizzard). The intent is for twoway communication within an impacted area, and conversely, the EMAs can report back to the NWS Office on property damage, hail size, tornado touchdowns, etc.
- The "B" talkgroup should be used first; the "A" talkgroup should be used only if a second talkgroup is necessary due to the nature of the incident or event.
- For preplanned events it is preferred that an Incident (INCIDNT
  1) or STARCOM21 Zone (North A, North B) is assigned. By doing
  this we free up interoperable resources such as the Regional
  Talkgroup for an evolving emergency
- SECURE ZONE BY and BZ are optional. Assignment of Talkgroups are coordinated through IEMA at 217.782.7860. All encryption will utilize AES256 protocol. Only use the current SIEC Mutual Aid AES 256 keys. No other keys allowed. Talkgroups are not to be programmed in to public safety communications centers except SECURE 1, SECURE 2, and SECURE 3 which can be used for fixed location communications

#### ILLINOIS EMERGENCY MANAGEMENT AGENCY



There are eight IEMA regions in Illinois. Each IEMA Region operates from a regional office and is overseen by an IEMA Regional Coordinator.

#### Region 2

1325 N Galena Ave Dixon, IL 61021-1009

Phone: 815-288-1455 Fax: 815-288-5650

#### Region 3

1639 Champlain St. Ottawa, IL 61350

Phone: 815-433-7161 Fax: 815-433-7165

#### Region 4

9511 W Harrison St. Des Plaines, IL 60016-1563

Phone: 847-294-4717 Fax: 847-294-4715

#### Region 6

2200 South Dirksen Parkway Springfield, IL 62703-4528 Phone: 217-782-0922

Fax: 217-558-4810

#### Region 7

2125 South First St Ste 309 Champaign, IL 61820

Phone: 217-278-3535 Fax: 217-352-1316

#### **Region 8**

10045 Bunkum Road Fairview Heights, IL 62208-1703

Phone: 618-394-2233 Fax: 618-394-2239

#### Region 9

112 W Sixth St Flora. IL 62839-1401

Phone: 618-662-4474 Fax: 618-662-4448

#### Region 11

Fax:

2309 W Main St., Ste 110 Marion, IL 62959-1196 Phone: 618-997-5847

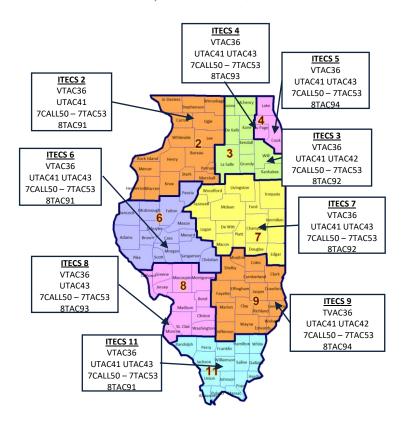
618-997-2642

#### LOCATIONS OF COMMS SUPPORT VEHICLES

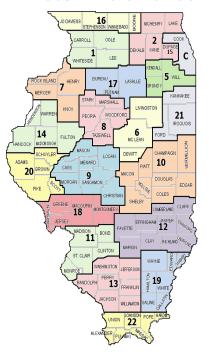
Strategic Technology Reserves: Asset Locations by IEMA Region



### ITECS REGIONAL BASE/REPEATER FREQUENCY ASSIGNMENTS



#### **ILLINOIS STATE POLICE DISTRICTS**



There are 21 State
Police districts in
Illinois, including the
Illinois State Toll
Highway Authority.
Each ISP District
operates from a district
headquarters.

# District 1 Sterling

Phone: 815-632-4010

#### District 2

Elgin.

Phone: 847-294-4400

# District Chicago Des Plaines

Phone: 847-294-4400

#### District 5

Joliet

Phone: 847-294-4400

### District 6 Pontiac

Phone: 815-844-1500

District 7

**Rock Island** 

Phone: 815-632-4010

District 8
Peoria

Phone: 309-383-2133

District 9
Springfield

Phone: 217-786-6677

District 10
Pesotum

Phone: 217-867-2050

District 11
Collinsville

Phone: 618-346-3610

District 12 Effingham

Phone: 217-342-7805

District 13 DuQuoin

Phone: 618-542-2171

District 14
Macomb

Phone: 309-833-4046

District 15 (Tollway)

**Downers Grove** 

Phone: 630-241-6800

District 16 Rockford

Phone: 815-632-4010

District 17

LaSalle

Phone: 815-632-4010

District 18

Phone: 618-324-4900

District 19

Carmi

Phone: 618-383-4606

District 20 Pittsfield

Phone: 217-786-6677

District 21
Ashkum

Phone: 815-698-2415

District 22

Ullin

Phone: 618-845-3740

#### ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICTS



There are 9 Department of Transportation districts in Illinois. Each IDOT District operates from a district headquarters.

#### Headquarters Springfield

Phone: 217-782-3937

### District 1 Schaumburg

Phone: 847-705-4228

# District 2

Phone: 815-284-2271

## District 3 Ottawa

Phone: 815-434-6131

# District 4 Peoria

Phone: 309-671-4487

#### **District 5**

**Paris** 

Phone: 217-465-4181

District 6
Springfield

Phone: 217-782-7314

District 7
Effingham

Phone: 217-342-3951

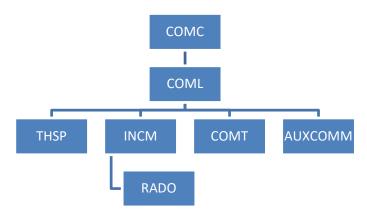
District 8
Collinsville

Phone: 618-346-3237

District 9
Carbondale

Phone: 618-549-2171

### **Communication Unit**



Communications Coordinator (COMC) — The COMC coordinates communications between and among dispatch centers and incident communication units within one or more affected areas. The COMC reviews incident communication plans to assure that communications channels/talkgroups are allocated and used effectively. Locally, the jurisdictional dispatch center supervisor or dispatcher will act as the COMC when necessary. Communications Coordinators may be located at the county, area, and state levels. While not structurally in the Communication Unit, the COMC is the liaison among multiple COMLs, dispatch centers, and other agencies for allocating critical/scarce resources and deconflicting communications plans.

For statewide activations the COMC is the Communications Officer sitting in the State Emergency Operations Center (SEOC).

**Communications Unit Leader (COML)** – Manages the technical and operational aspects of the Communications function during an incident or event. Develops Incident Command System (ICS) Form 205 Incident Radio Communications Plan and supervises the Communication Unit.

**Technical Specialist (THSP)** – Allows for the incorporation of personnel who may not be formally certified in any specific NIMS/ICS position. THSPs may include Local Agency Radio Technicians (as opposed to the COMT), Telephone Specialists, Gateway Specialists, Data/IT Specialists, and/or Cache Radio Specialists.

**Communications Technician (COMT)** – Deploys advanced equipment and keeps it operational throughout the incident/event.

Incident Communications Center Manager (INCM) — Supervises the operational aspects of the Incident Communications Center (ICC). During an incident, the ICC is established to handle incident-related communications in order to separate that traffic from the day-to-day activities of the dispatch center. The ICC is typically located near the Incident Command Post (ICP) in a fixed site or mobile communications center.

**Radio Operator (RADO)** –Performs Telecommunicator duties at the ICC and is responsible for documenting incoming radio and telephone messages. RADOs may also function as message runners

when necessary. Incident Dispatchers, Tactical Dispatchers, or Telecommunicator Emergency Response Taskforce (TERT) team members are used as RADOs.

Auxiliary Communications (AUXCOMM) – Auxiliary Emergency Communications (Aux Comm.) - Auxiliary Emergency Communications (also known as AEC or AUXCOMM) provides supplementary and backup communications utilizing the services of volunteer communicators. AEC operates as part of the Communications Unit. AEC draws its resources from the licensed Amateur Radio operators within the state and has the capability to provide both intrastate and interstate AEC mutual aid

#### **COMMUNICATION UNIT LEADER POSITION CHECKLIST**

Note that some tasks are one-time actions while others are ongoing or repeated during the incident. The term "Communication" may refer to radio systems, data/internet systems, or telephone systems.

- Obtain briefing from appropriate ICS staff member (your supervisor)
- Assess communications systems/frequencies in use document if not already done
- 3. Organize and staff Communications Unit as appropriate:
  - Assign Incident Communications Center Manager (INCM), if necessary
  - Order and assign adequate staff (COMTs, RADOs, THSPs)
  - Brief incoming staff on current activities, duties, responsibilities and procedures
- Establish safety procedures for personnel and ensure compliance
- 5. Participate in planning cycle meetings and briefings
- 6. Advise on communications capabilities/limitations
- Coordinate all communication systems use with local, area or state Communications Coordinator (COMC) as appropriate
- Develop/implement effective communications flow to/from the Incident Command Post (ICP)
- Assess ICP telephone needs / request additional lines if necessary
- Prepare and implement Incident Radio Communications Plan (ICS 205):
  - Obtain current organizational chart (ICS 203 or ICS 207)

- Determine most hazardous tactical activity; ensure adequate communications
- Make communications assignments for all other Operations Section elements
- Determine Command and General Staff communications needs
- Determine support (Logistics, Planning and Admin Sections) communications needs
- Establish specific procedures for use of all communications equipment
- 11. Ensure communications data on ICS 204 and ICS 206 is correct
- 12. Document cellular phones and pagers in Incident

Communications Plan (ICS 205T), if appropriate:

- Determine specific organizational elements to be assigned telephones
- Identify all facilities/locations needing telephone communications, identify/document phone numbers
- Determine which phones/numbers should be used by what personnel and for what purpose. Assign specific telephone numbers for incoming calls, and report these numbers to staff and off-site parties
- Do Not publicize OUTGOING phone lines
- Activate, serve as contact point, integrate and supervise auxiliary communications units (AUXCOMM)
- Ensure use of Communications Logs (ICS 309) or use your CAD for data entry of radio and telephone traffic
- 15. Determine need and availability of additional nets and systems:
  - Obtain copy of local Tactical Interoperable Communications Plan (TICP)

- Order resources as appropriate after approval by Section Chief
- Ensure that communications equipment operation is monitored continuously
- Document malfunctioning communications equipment, facilitate repair
- 18. Establish and maintain communications equipment accountability system
- 19. Provide technical information, as required, on:
  - Adequacy of communications system currently in use
  - Geographic limitation on communications equipment
  - Equipment capabilities
  - Amount and types of equipment available
  - Anticipated problems in the use of communications
- Estimate Communications Unit needs for expected operations; order relief personnel
- 21. Provide briefing to relief on current activities and unusual situations
- 22. Document all activity on Unit Log (ICS 214)

#### INCIDENT COMMAND SYSTEM PLANNING FORMS

This section contains descriptions of common ICS forms that are used in communications planning or have communications information on them that is provided by the COML.

The only form developed by the Communication Unit that is included in the Incident Action Plan (IAP) is the ICS 205, Incident Radio Communications Plan. The other forms are used to develop the ICS 205 and are kept within the Communications Unit for reference. ICS 204, Field Assignment Form(s) and ICS 206, Incident Medical Plan contain communication data and should be verified/validated by the COML before publication.

Illinois-specific ICS forms in Microsoft Excel format are available from the Illinois SWIC upon email request to SWIC@illinois.gov

FEMA has All-Hazards ICS forms at <a href="http://www.fema.gov/pdf/emergency/nims/ics">http://www.fema.gov/pdf/emergency/nims/ics</a> forms 2010.pdf

#### ICS 201 - Incident Briefing

Purpose: The Incident Briefing form provides the basic information regarding the incident situation and resources allocated to the incident.

Preparation: The briefing form is prepared by field command for presentation to the IMT along with a more detailed oral briefing.

#### ICS 203 - Organization Assignment List

Purpose: The Organization Assignment List provides ICS personnel with information on the units that are currently activated and the names of personnel staffing each position/unit. It is used to complete the ICS 207.

Preparation: The Resources Unit prepares and maintains this list under the direction of the Planning Section Chief.

#### ICS 204 - Field Assignment Form

Purpose: The Field Assignment form is used to inform Operations Section personnel of their incident assignments.

Preparation: The Field Assignment form is normally prepared under direction of the Planning Section Chief using guidance from the ICS 202, ICS 215, and the Operations Section Chief. Radio frequencies listed on the ICS 204 shall be coordinated and confirmed by the COMI.

#### ICS 205 - Incident Radio Communications Plan

Purpose: The Incident Radio Communications Plan provides, in one location, information on the assignments for all communications equipment for each operational period. Information from the ICS 205 on frequency assignments can be placed on the appropriate Field Assignment Form (ICS 204) and the Incident Medical Plan (ICS 206).

Preparation: The Incident Radio Communications Plan is prepared by the Communications Unit Leader.

#### ICS 206 - Medical Plan

Purpose: The Medical Plan provides information on incident medical aid stations, transportation services, hospitals, and emergency medical procedures.

Preparation: The Medical Plan is prepared by the Medical Unit Leader and reviewed by the Safety Officer. Radio frequency and telephone numbers listed on the ICS 206 shall be coordinated and confirmed by the COML.

#### ICS 207 - Incident Organization Chart

Purpose: The Incident Organization Chart provides information on the response organization and personnel staffing.

Preparation: The list is prepared and maintained by the Resource Unit under the direction of the Planning Section Chief.

Note: An organization chart may be completed any time the number of personnel assigned to the incident increases or decreases or a change in assignment occurs.

#### ICS 211 - Incident Check-In List

Purpose: Personnel and equipment arriving at the incident can check in at various incident locations. Check-in consists of reporting specific information, which is recorded on the form.

Preparation: The Check-In List is initiated at a number of incident locations including staging areas, base camps, helibases, and ICP.

Managers at these locations record the information and give it to the Resources Unit as soon as possible.

#### ICS 213 - General Message

The General Message form is used by

- Incident dispatchers to record incoming messages which cannot be orally transmitted to the intended recipients.
- EOC and other incident personnel to transmit messages via radio or telephone to the addressee.
- Incident personnel to send any message or notification which requires hard-copy delivery to other incident personnel.

Preparation: The General Message form may be initiated by incident dispatchers and any other personnel on an incident. Two copies should be sent and one copy retained by the person who initiates the message.

#### ICS 214 - Unit Log

Purpose: The Unit Log is used to record details of unit activity including specialized team activity (e.g., Strike Team). These Unit Logs can provide a basic reference from which to extract information for inclusion in an after-action report.

Preparation: A Unit Log is initiated and maintained by Command and General Staff members, field command, and Unit Leaders. Completed logs are forwarded to supervisors, who provide copies to the Documentation Unit. Each Team member should compete an ICS 214

#### ICS 217A - Communications Resource Availability

Purpose: The Communications Resource Availability Worksheet (ICS 217A) is a template that users may fill out prior to an incident. An agency's interoperable channels and/or talkgroups can be entered on the form, thereby enabling a COML to have the technical information readily available to complete an Incident Radio Communications Plan (ICS 205).

Preparation: The Communications Resource Availability Worksheet is prepared by a COMC or COML in an administrative setting prior to an incident. The ICS 217A provides a standardized template for the presentation of channels or talkgroups that might be considered for use by appropriate personnel during an incident. ICS 217A is duplicated and given to all appropriate Communications Unit personnel who are authorized to use the agency's resources during an incident. This may include COMLs, COMTs, THSPs, etc.

#### ICS 309 - Communications Log

Purpose: The Communications Log (ICS 309) is used to document radio traffic handled by the ICC. It includes the date and time of the radio traffic as well as the source and destination and a summary of the content of the radio traffic.

Preparation: The Communications Log is maintained by the RADO on an ongoing basis as radio traffic is handled.

### **EMERGENCY SUPPORT FUNCTIONS (ESF)**

ESF#	Function	ESF#	Function
1	Transportation	9	Search and Rescue
2	Communications	10	Oil and Hazardous Materials Response
3	Public Works and Engineering	11	Agriculture and Natural Resources
4	Firefighting	12	Energy
5	Emergency Management	13	Public Safety and Security
6	Mass Care, Housing and Human Services	14	Long Term Community Recovery
7	Resource Support	15	External Affairs
8	Public Health and Medical Services		

#### **Incident Prioritization**

# PRIORITIZATION AND SHARED USE OF INTEROPERABILITY ASSETS

In response to events or incidents which cross over agency responsibilities, there will potentially be competing demands and priorities for the use of interoperable communications assets.

An Incident Commander, in cooperation with assisting agencies, will have the authority to request the use of interoperability assets. The Incident Commander, Logistic Section Chief, or Communication Unit Leader (COML), when designated, will direct further coordination and delegation of the interoperable communications assets assigned to the event or incident in question.

Agencies should judiciously activate needed interoperable assets both to respond effectively to the event and/or incident and to minimize any negative impact on surrounding agencies or jurisdictions. Specifically, interoperable communications should be attempted with the following order of deployment in mind (subject to the involved agencies' disciplines/responsibilities and the nature of the event/incident).

 Leverage face-to-face communications wherever appropriate.
 For example, co-location of all command and general staff at the
 Incident Command Post (ICP) provides the best direct
 communications and reduces the demand on interoperability
 resources.

- Employ local communications assets until those assets become taxed or inadequate based on the nature and/or scope of the incident.
- 3. Users of the STARCOM21 platform can utilize it to establish interoperable communications on common talkgroups.
- If response agencies operate on disparate systems, use shared or mutual aid channels to establish interoperable communications.
- If response agencies do not share systems or channels, use a gateway solution to establish interoperable communications.
- Where interoperable communications cannot otherwise be established between response agencies, use swap or cache radios to establish communications for responders.
- 7. Use non-public safety common carrier communications systems.
- 8. If no other method of interoperability can be established, relay communications through staff members (runners).

When the same resources are requested for two or more incidents, resource assignments should be based on the priority levels listed below (in decreasing priority; i.e. lower number indicates a higher priority).

- 1. Incidents where imminent danger exists to life or property
- Disasters, large scale incidents, or extreme emergencies requiring mutual aid or interagency communications

- 3. Incidents requiring the response of multiple agencies
- Pre-planned events requiring mutual aid or interagency communications
- 5. Incidents involving a single agency where supplemental communications are needed for agency use
- 6. Drills, tests, and exercises

In the event of multiple simultaneous incidents within the same priority level, the resources should be allocated with the following principles in mind.

- Incidents with the greatest level of exigency (e.g., greater threat to life or property, more immediate need, etc.) have priority over less exigent incidents.
- Agencies with single/limited interoperability options have priority use of those options over agencies with multiple interoperability options.
- When possible, agencies already using an interoperability asset during an incident or event should not be redirected to another resource.

# Statewide Interoperable Channels and Talkgroups

NOTE: All transmit and receive frequencies are listed as they would be programmed into portable, mobile or control point radios. Programming of repeaters MUST reverse the "receive" and "transmit" frequencies and tones shown in the tables below.

#### Illinois VHF Low Band

Statewide Shared Channels – VHF Low Band All channels are wideband					
FREQI RECEIVE	JENCY TRANSMIT	TONE	ELIGIBILITY/PRIMARY USE	NAME	
			Emergency Management	151.44.0	
45.2800	45.2800	103.5	Local Command and Control	IEMA-2	
45.3600	45.3600	103.5	Emergency Management	IEMA-3	
			NWS Weather Spotter Net	(WX-NET)	
45.4000	45.4000	103.5	Emergency Management Local Command and Control	IEMA-4	
45.4400	45.4400	103.5	Emergency Management Local Command and Control	IEMA-1	
45.5600	45.5600	103.5	Emergency Management Local Command and Control	LESERN	

Statewide Shared Channels – VHF High Band All channels are Narrowband					
FREQU	JENCY	TONE	ELIGIBILITY/PRIMARY USE	NAME	
RECEIVE	TRANSMIT	RX/TX	ELIGIBIETT //T KIIVIAKT 03E	IVAIVIL	
155.0550	155.0550	D156	Any Public Safety Eligible	IREACH	
155.0550	133.0330	D156	Inter-Agency	INLACTI	
155.0250	155.0250	123.0	EMA Agencies	ESMARN	
133.0230	133.0230	123.0	Emergency Management	LSIVIARIN	
155.9250	155.9250	CSQ	EMA Agencies	IEMA VHF 1	
133.9230	155.5250	CSQ	Emergency Management	ILIVIA VIII I	
155.4750	155.4750	CSQ	Law Enforcement Agencies	ISPERN***	
133.4730	133.4730	D156	Flash Messages /Inter-Agency	(same as VLAW31)	
155.3700	155.3700	CSQ	Law Enforcement Agencies	POINT	
155.5700	155.5700	CSQ	Station to Station	POINT	
155.4600	155.4600	CSQ	Law Enforcement Agencies	HF-4	
155.4000	155.4600	CSQ	Law Efficicement Agencies	ПГ-4	
154.2650	154.2650	CSQ*	Fire Agencies	IFERN***	
134.2030	134.2030	210.7	Mutual Aid Dispatch	(same as VFIRE22)	
		CSQ*	Fire Agencies	IFERN2***	
154.3025	154.3025	67.0	Alternate Mutual Aid Dispatch	(same as VFIRE26)	
153.8300	153.8300	CSQ*	Fire Agencies	REDFGND	
133.8300	155.8500	69.3	Fire Ground Ops	KEDI GND	
154.2800	154.2800	CSQ*	Fire Agencies	WHTFGND***	
134.2000	134.2000	74.4	Fire Ground Ops	(same as VFIRE21)	
154.2950	154.2950	CSQ*	Fire Agencies	BLUFGND***	
134.2930	134.2330	85.4	Fire Ground Ops	(same as VFIRE23)	

#### Statewide Shared Channels - VHF High Band All channels are Narrowband **FREQUENCY** TONE **ELIGIBILITY/PRIMARY USE** NAME RECEIVE TRANSMIT RX/TX 91.5 Fire Agencies 153.8375 153.8375 GLDFGND Fire Ground Ops 91.5 94.8 Fire Agencies BLKFGND\*\*\* 154.2725 154.2725 Fire Ground Ops 94.8 (same as VFIRE24) 136.5 Fire Agencies GRYFGND\*\*\* 154.2875 154.2875 136.5 Fire Ground Ops (same as VFIRE25) CSQ EMS Direct, Ambulance to MERCI160\*\*\* 155,1600 155.1600 Hospital operations EMS R4 (same as VSAR16) 210.7 **CSQ** EMS Direct. Ambulance to 155.2200 155.2200 MERCI220 210.7 Hospital Dispatch operations EMS Direct Hospital to CSQ Hospital communications and 155.2800 155.2800 MERCI280 210.7 AIR to Ground coordination CSQ MERCI340\* \*\*\* EMS Direct, Ambulance to 155.3400\*\* 155.3400 Hospital operations 210.7 (same as VMED28)

EMS Direct, Ambulance to

Hospital Ops EMS R9 & 10

CSQ

210.7

155,4000

155.4000

MFRCI400

<sup>\*</sup>In some regions of the state a PL code is used on both RX and TX. If you are not sure leave RX as CSO

<sup>\*\*155.3400</sup> has a PL of 210.7 for statewide mutual aid use. In addition, each receiving hospital has unique CTCSS tone for communications

<sup>\*\*\*</sup>ISPERN and certain Fireground channels has the same frequency as the National Interop Pool (NIP) channel but uses a different CTCSS tone

#### Statewide Secure Shared Channels (Zone BY)

	Statewide Encrypted Channels					
FREQU	JENCY	NAC	ELIGIBILITY	NAME		
RECEIVE	TRANSMIT	RX/TX	PRIMARY USE	IVAIVIE		
770.89375	770.89375	\$F7E	All Disciplines	7MOB59DE		
770.89373	800.89375	\$293	CKR 1401 Key ID SIEC1401	7MOB59E		
774.50625	774.50625	\$F7E	All Disciplines	7MOB79DE		
774.30023	804.50625	\$293	CKR 1401 Key ID SIEC1401	7MOB79E		
774.00625	774.00625	\$F7E	Law Only	7LAW81DE		
774.00625	804.00625	\$293	CKR 1402 Key ID SIEC1402	7LAW81E		
774 05 605	774.35625	\$F7E	Law Only CKR 1402 Key ID	7LAW82DE		
774.35625	804.35625	\$293	SIEC1402	7LAW82E		
773.50625	773.50625	\$F7E	Fire Only	7FIRE83DE		
773.30023	803.50625	\$293	CKR 1403 Key ID SIEC1403	7FIRE83E		
773.85625	773.85625	\$F7E	Fire Only	7FIRE84DE		
//3.85625	803.85625	\$293	CKR 1403 Key ID SIEC1403	7FIRE84E		
772 00625	773.00625	\$F7E	Fire/EMS Only	7MED86DE		
773.00625	803.00625	\$293	CKR 1403 Key ID SIEC1403	7MED86E		
773.35625	773.35625	\$F7E	Fire/EMS Only	7MED87DE		
//3.33025	803.35625	\$293	CKR 1403 Key ID SIEC1403	7MED87E		

These Channels are SECURE and are used on a voluntary basis. Please note that these channels are from the National Interoperable Pool and could have competing traffic on them. All encryption will utilize AES256 protocol. No other keys allowed. Not to be programmed in to public safety communications centers

State	Statewide Interoperable Talkgroups STARCOM21						
TALKGROUP	TG ID	Zone / Mode	SECURE	Authorized Users			
IESMA*	7678	BA Mode 1	N/A	All Disciplines Assigned by COMC or SWIC			
ILEAS*	7679	BA Mode 2	N/A	All Disciplines Assigned by COMC or SWIC			
MABAS*	767a	BA Mode 3	N/A	All Disciplines Assigned by COMC or SWIC			
Pub Hlth*	767b	BA Mode 4	N/A	All Disciplines Assigned by COMC or SWIC			
IPWMAN*	7683	BA Mode 5	N/A	All Disciplines Assigned by COMC or SWIC			
Incidnt1*	767c	BA Mode 6	N/A	All Disciplines Assigned by COMC or SWIC			
Incidnt2*	767d	BA Mode 7	N/A	All Disciplines Assigned by COMC or SWIC			
Incidnt3*	767e	BA Mode 8	N/A	All Disciplines Assigned by COMC or SWIC			
Incidnt4*	7684	BA Mode 9	N/A	All Disciplines Assigned by COMC or SWIC			
Incidnt5*	7685	BA Mode 10	N/A	All Disciplines Assigned by COMC or SWIC			
North A*	765c	BA Mode 11	N/A	All Disciplines Assigned by COMC or SWIC			
North B*	7686	BA Mode 12	N/A	All Disciplines Assigned by COMC or SWIC			
Center A*	765d	BA Mode 13	N/A	All Disciplines Assigned by COMC or SWIC			
Center B*	7687	BA Mode 14	N/A	All Disciplines Assigned by COMC or SWIC			

Statewide Interoperable Talkgroups STARCOM21					
TALKGROUP	TG ID	Zone / Mode	SECURE	Authorized Users	
South A*	765e	BA Mode 15	N/A	All Disciplines Assigned by COMC or SWIC	
South B*	7688	BA Mode 16	N/A	All Disciplines Assigned by COMC or SWIC	
RGN 2A**	765f	BB Mode 1	N/A	All Disciplines Used by Anyone in the Region	
RGN 2B**	7660	BB Mode 2	N/A	All Disciplines Used by Anyone in the Region	
RGN 3A**	7661	BB Mode 3	N/A	All Disciplines Used by Anyone in the Region	
RGN 3B**	7662	BB Mode 4	N/A	All Disciplines Used by Anyone in the Region	
RGN 4A**	7663	BB Mode 5	N/A	All Disciplines Used by Anyone in the Region	
RGN 4B**	7670	BB Mode 6	N/A	All Disciplines Used by Anyone in the Region	
RGN 6A**	7671	BB Mode 7	N/A	All Disciplines Used by Anyone in the Region	
RGN 6B**	7672	BB Mode 8	N/A	All Disciplines Used by Anyone in the Region	
RGN 7A**	7673	BB Mode 9	N/A	All Disciplines Used by Anyone in the Region	
RGN 7B**	7674	BB Mode 10	N/A	All Disciplines Used by Anyone in the Region	
RGN 8A**	7675	BB Mode 11	N/A	All Disciplines Used by Anyone in the Region	
RGN 8B**	7676	BB Mode 12	N/A	All Disciplines Used by Anyone in the Region	
RGN 9A**	767f	BB Mode 13	N/A	All Disciplines Used by Anyone in the Region	

Statewide Interoperable Talkgroups STARCOM21						
TALKGROUP	TG ID	Zone / Mode	SECURE	Authorized Users		
RGN 9B**	7680	BB Mode 14	N/A	All Disciplines Used by Anyone in the Region		
RGN 11A**	7681	BB Mode 15	N/A	All Disciplines Used by Anyone in the Region		
RGN 11B**	7682	BB Mode 16	N/A	All Disciplines Used by Anyone in the Region		
SECURE 1***	5961	BZ Mode 1	CKR 1401 ID SIEC1401	All Disciplines, including Dispatch Assigned by COMC or SWIC		
SECURE 2***	5962	BZ Mode 2	CKR 1401 ID SIEC1401	All Disciplines, including Dispatch Assigned by COMC or SWIC		
SECURE 3***	5963	BZ Mode 3	CKR 1401 ID SIEC1401	All Disciplines, including Dispatch Assigned by COMC or SWIC		
SECURE 4***	5964	BZ Mode 4	CKR 1401 ID SIEC1401	All Disciplines Assigned by COMC or SWIC		
SECURE 5***	5965	BZ Mode 5	CKR 1401 ID SIEC1401	All Disciplines Assigned by COMC or SWIC		
SECURE 6***	5966	BZ Mode 6	CKR 1401 ID SIEC1401	All Disciplines Assigned by COMC or SWIC		
SECURE 7***	5967	BZ Mode 7	CKR 1401 ID SIEC1401	All Disciplines Assigned by COMC or SWIC		
SECURE 8***	5968	BZ Mode 8	CKR 1401 ID SIEC1401	All Disciplines Assigned by COMC or SWIC		
SECLAW 1***	5969	BZ Mode 9	CKR 1402 ID LAW1402	Law Enforcement Agencies Assigned by COMC or SWIC		
SECLAW 2***	5970	BZ Mode 10	CKR 1402 ID LAW1402	Law Enforcement Agencies Assigned by COMC or SWIC		

Statewide Interoperable Talkgroups STARCOM21						
TALKGROUP	TG ID	Zone / Mode	SECURE	Authorized Users		
SECFIR 1***	5971	BZ Mode 11	CKR 1403 ID FIRE1403	Fire Department Agencies Assigned by COMC or SWIC		
SECFIR 2***	5972	BZ Mode 12	CKR 1403 ID FIRE1403	Fire Department Agencies Assigned by COMC or SWIC		
SECEMA 1***	5973	BZ Mode 13	CKR 1404 ID EMA1404	EMA focused, All Disciplines Assigned by COMC or SWIC		
SECEMA 2***	5974	BZ Mode 14	CKR 1404 ID EMA1404	EMA focused, All Disciplines Assigned by COMC or SWIC		
SECDOT 1***	5975	BZ Mode 15	CKR 1405 ID DOT1405	DOT focused, All Disciplines Assigned by COMC or SWIC		
SECDOT 2***	5976	BZ Mode 16	CKR 1405 ID DOT1405	DOT focused, All Disciplines Assigned by COMC or SWIC		

<sup>\*</sup>Assignment of ANY Interoperable Talkgroups (above) are coordinated through IEMA at 217.782.7860. All encryption will utilize AES256 protocol.

<sup>\*\*</sup>Region (RGN) talkgroups – May be used for interoperable communications by any users within an IEMA region without seeking permission or as directed by SWIC/COMC. Primary use will be for emerging incidents; planned events should schedule talkgroups with IEMA ahead of time. The "B" talkgroup should be used first; the "A" talkgroup should be used only if a second talkgroup is necessary due to the nature of the incident.

<sup>\*\*\*</sup> SECURE – Encrypted Talkgroups are optional. Only use the current SIEC Mutual Aid AES 256 keys. No other keys allowed. The above information will only allow you how to program the radio properly, to load and activate the encryption key individuals will need the key loaded from a State-trusted key holder. Talkgroups are not to be programmed in to public safety communications centers except SECURE 1, SECURE 2, and SECURE 3 which can be used for fixed location communications

## **Nationwide Interoperable Channels**

NOTE: All transmit and receive frequencies are listed as they would be programmed into portable, mobile or control point radios.

#### Nationwide VHF Low Band

Nationwide VHF Low Band			and All channels are W	All channels are Wideband	
FREQI	FREQUENCY <b>T</b>		ELIGIBILITY	NAME	
RECEIVE	TRANSMIT	RX/TX	PRIMARY USE	IVAIVIL	
39.4600	39.4600	CSQ*	Law Enforcement	LLAW1D	
39.4600	45.8600	156.7	Law Emorcement	LLAW1	
39.4800	39.4800	CSQ*	Fire (Proposed)	LFIRE2D	
39.4800	45.8800	156.7		LFIRE2	
45.8600	45.8600	CSQ*	Law Enforcement	LLAW3D	
45.8600	39.4600	156.7	Law Emorcement	LLAW3	
	45.8800	CSQ*	Fire	LFIRE4D	
45.8800	39.4800	156.7	(Proposed)	LFIRE4	

\*CTCSS Tones – Default operation should be carrier squelch receive (CSQ), CTCSS Transmit. If the user can enable/disable without programming the radio, the indicated CTCSS tone also could be programmed for receive, and the user instructed how and when to enable/disable.

	Nationwide VHF High Band				
FREQU	JENCY	TONE	ELIGIBILITY		
RECEIVE	TRANSMIT	RX/TX	PRIMARY USE	NAME	
155.7525	155.7525	CSQ* 156.7	Any Public Safety Inter-Agency Calling	VCALL10	
151.1375	151.1375	CSQ* 156.7	Any Public Safety Inter-Agency Calling	VTAC11	
154.4525	154.4525	CSQ* 156.7	Any Public Safety Inter-Agency Calling	VTAC12	
158.7375	158.7375	CSQ* 156.7	Any Public Safety Inter-Agency Calling	VTAC13	
159.4725	159.4725	CSQ* 156.7	Any Public Safety Inter-Agency Calling	VTAC14	
154.2800	154.2800	CSQ* 156.7	Fire Mutual Aid	VFIRE21*** (same as WHTFGND)	
154.2650	154.2650	CSQ* 156.7	Fire Mutual Aid	VFIRE22 *** (same as IFERN)	
154.2950	154.2950	CSQ* 156.7	Fire Mutual Aid	VFIRE23 *** (same as BLUTFGND)	
154.2725	154.2725	CSQ* 156.7	Fire Mutual Aid	VFIRE24 *** (same as BLKFGND)	
154.2875	154.2875	CSQ* 156.7	Fire Mutual Aid	VFIRE25 *** (same as GRYFGND)	
154.3025	154.3025	CSQ* 156.7	Fire Mutual Aid	VFIRE26 *** (same as IFERN2)	
155.3400	155.3400	CSQ* 156.7	EMS Mutual Aid	VMED28 *** (same as MERCI 340)	
155.3475	155.3475	CSQ* 156.7	EMS Mutual Aid	VMED29	
155.4750	155.4750	CSQ* 156.7	Law Enforcement	VLAW31 *** (same as ISPERN)	

	Nationwide VHF High Band					
FREQU	JENCY	TONE ELIGIBILITY		NAME		
RECEIVE	TRANSMIT	RX/TX	PRIMARY USE	NAME		
155.4825	155.4825	CSQ* 156.7	Law Enforcement	VLAW32		
159.4725	151.1375	CSQ*	Any Public Safety	VTAC33		
155.4725	131.1373	136.5	Tactical Repeater	1		
158.7375	154.4525	CSQ*	Any Public Safety	VTAC34		
138.7373	134.4323	136.5	Tactical Repeater	1		
159.4725	158.7375	CSQ*	Any Public Safety	VTAC35		
159.4725	136.7373	136.5	Tactical Repeater	1, 2		
151.1375	159.4725	CSQ*	Any Public Safety	VTAC36 (preferred)		
131.13/3	159.4725	136.5	Tactical Repeater	1, 3		
154.4525	158.7375	CSQ*	Any Public Safety	VTAC37 (preferred)		
154.4525	158./5/5	136.5	Tactical Repeater	1, 3		
158.7375	159.4725	CSQ*	Any Public Safety	VTAC38		
130./3/3	139.4723	136.5	Tactical Repeater	1, 2, 3		
155.1600	155.1600	127.3	National Search and	VSAR16 ***		
133.1600	155.1600	127.3	Rescue Common	(same as MERCI160)		

Nationwide VHF High Band				
FREQUENCY		TONE ELIGIBILITY		
RECEIVE	TRANSMIT	RX/TX	PRIMARY USE	NAME

- \*CTCSS Tones Default operation should be carrier squelch receive (CSQ), CTCSS Transmit. If the user can enable/disable without programming the radio, the indicated CTCSS tone also could be programmed for receive, and the user instructed how and when to enable/disable.
- \*\* NOTE: Some of the National Interop Pool (NIP) channels has the same frequency as Illinois interoperable resources but uses a different CTCSS tone
- <sup>1</sup> To preserve Direct channel availability, designate a primary and secondary repeater pair. For example: If one transportable repeater is used, it should be on VTAC36 (VTAC11/VTAC14 paired). If a second is needed, it should be on VTAC37 (VTAC12/VTAC13 paired) with the understanding that there would remain no available Direct VTAC channels. VTAC11 and/or VTAC12 could be used for "talk-around" in either or both cases, at the risk of being interfered with by repeater users who can't hear the talk-around transmissions. Repeater use should have no priority over Direct use of the involved channel(s). It is strongly recommended that tactical repeaters be activated only when called for by a COML as documented on ICS 205 for an incident.

VTAC35/38 (VTAC13/VTAC14 paired) should be used as a repeater pair only in Puerto Rico and the US Virgin Islands where VTAC11 and VTAC12 are unavailable

<sup>&</sup>lt;sup>3</sup> VTAC36-38 are preferred; VTAC 33-35 only use when necessary

#### Federal VHF IR Incident Response

Federal VHF IR				
FREQI	FREQUENCY		ELIGIBILITY	NANAE
RECEIVE	TRANSMIT	RX/TX	PRIMARY USE	NAME
169.5375	164.7125	CSQ* 167.9	Incident Calling Repeater	NC 1
170.0125	165.2500	CSQ* 167.9	Incident Command Repeater	IR 1
170.4125	165.9625	CSQ* 167.9	Med Evac Control Repeater	IR 2
170.6875	166.5750	CSQ* 167.9	Logistics Control Repeater	IR 3
173.0375	167.3250	CSQ* 167.9	Interagency Convoy Repeater	IR 4
169.5375	169.5375	CSQ* 167.9	Incident Calling Direct	IR 5 Direct for NC 1
170.0125	170.0125	CSQ* 167.9	Incident Command Direct	IR 6 Direct for IR 1
170.4125	170.4125	CSQ* 167.9	Med Evac Control Direct	IR 7 Direct for IR 2
170.6875	170.6875	CSQ* 167.9	Logistics Control Direct	IR 8 Direct for IR 3
173.0375	173.0375	CSQ* 167.9	Interagency Convoy Direct	IR 9 Direct for IR 4

Federal IR channels are only to be used when working with Federal Agencies.

<sup>\*</sup>Default operation should be carrier squelch receive, CTCSS 167.9 transmit. If the user can enable/disable CTCSS without reprogramming the radio, the indicated CTCSS tone also could be programmed for receive, and the user instructed how and when to enable/disable.

#### Federal VHF LE Law Enforcement

Federal VHF LE					
FREQU	JENCY	TONE	ELIGIBILITY	NANAE	
RECEIVE	TRANSMIT	RX/TX PRIMARY USE		NAME	
167.0875	167.0875	CSQ* 167.9	Direct Calling Analog	LE A	
167.0875	162.0875	CSQ* 167.9	Tactical Repeater Analog	LE 1	
167.2500	162.2625	\$68F	Tactical Repeater Digital	LE 2	
167.7500	162.8375	\$68F	Tactical Repeater Digital	LE 3	
168.1125	163.2875	\$68F	Tactical Repeater Digital	LE 4	
168.4625	163.4250	\$68F	Tactical Repeater Digital	LE 5	
167.2500	167.2500	\$68F	Direct Tactical Digital	LE 6 Direct for LE 2	
167.7500	167.7500	\$68F	Direct Tactical Digital	LE 7 Direct for LE 3	
168.1125	168.1125	\$68F	Direct Tactical Digital	LE 8 Direct for LE 4	
168.4625	168.4625	\$68F	Direct Tactical Digital	LE 9 Direct for LE 5	

Federal LE channels are only to be used when working with Federal Agencies.
\*Default operation should be carrier squelch receive, CTCSS 167.9 transmit. If the user can enable/disable CTCSS without reprogramming the radio, the indicated CTCSS tone also could be programmed for receive, and the user instructed how and when to enable/disable.

#### Nationwide UHF

Nationwide UHF				
FREQU	FREQUENCY		ELIGIBILITY	NABAE
RECEIVE	TRANSMIT	RX/TX	PRIMARY USE	NAME
453.2125	453.2125	CSQ*	Any Public Safety	UCALL40D
455.2125	458.2125	156.7	Inter-Agency Calling	UCALL40
453,4625	453.4625	CSQ*	Any Public Safety	UTAC41D
455.4025	458.4625	156.7	Incident Coordination	UTAC41
453.7125	453.7125	CSQ*	Any Public Safety	UTAC42D
455./125	458.7125	156.7	Incident Coordination	UTAC42
453.8625	453.8625	CSQ*	Any Public Safety	UTAC43D
433.8023	458.8625	156.7	Incident Coordination	UTAC43

\*CTCSS Tones – Default operation should be carrier squelch receive (CSQ), CTCSS Transmit. If the user can enable/disable without programming the radio, the indicated CTCSS tone also could be programmed for receive, and the user instructed how and when to enable/disable.

#### Federal UHF IR Incident Response

Federal UHF IR					
FREQU	JENCY	TONE	ELIGIBILITY	NANAE	
RECEIVE	TRANSMIT	RX/TX	PRIMARY USE	NAME	
410.2375	419.2375	CSQ* 167.9	Repeater Incident Calling	NC 2	
410.4375	419.4375	CSQ* 167.9	Tactical Repeater Ad hoc assignment	IR 10	
410.6375	419.6375	CSQ* 167.9	Tactical Repeater Ad hoc assignment	IR 11	
410.8375	419.8375	CSQ* 167.9	Tactical Repeater SAR Incident Command	IR 12	
413.1875	413.1875	CSQ* 167.9	Direct Tactical Ad hoc assignment	IR13	
413.2125	413.2125	CSQ* 167.9	Direct Tactical Interagency Convoy	IR 14	
410.2375	410.2375	CSQ* 167.9	Direct Tactical Incident Calling	IR 15 Direct for NC 2	
410.4375	410.4375	CSQ* 167.9	Direct Tactical Ad hoc assignment	IR 16 Direct for IR 10	
410.6375	410.6375	CSQ* 167.9	Direct Tactical Ad hoc assignment	IR 17 Direct for IR 11	
410.8375	410.8375	CSQ* 167.9	Direct Tactical SAR Incident Command	IR 18 Direct for IR 12	

Federal IR channels are only to be used when working with Federal Agencies.
\*Default operation should be carrier squelch receive, CTCSS 167.9 transmit. If the user can enable/disable CTCSS without reprogramming the radio, the indicated CTCSS tone also could be programmed for receive, and the user instructed how and when to enable/disable.

#### Federal UHF LE Law Enforcement

Federal UHF LE					
FREQU	JENCY	TONE	ELIGIBILITY	NANAE	
RECEIVE	TRANSMIT	RX/TX	PRIMARY USE	NAME	
414.0375	414.0375	CSQ* 167.9	Direct Calling Analog	LE B	
409.9875	418.9875	CSQ* 167.9	Tactical Repeater Analog	LE 10	
410.1875	419.1875	\$68F	Tactical Repeater Digital	LE 11	
410.6125	419.6125	\$68F	Tactical Repeater Digital	LE 12	
414.0625	414.0625	\$68F	Direct Tactical Digital	LE 13	
414.3125	414.3125	\$68F	Direct Tactical Digital	LE 14	
414.3375	414.3375	\$68F	Direct Tactical Digital	LE 15 Direct for LE B	
409.9875	409.9875	CSQ* 167.9	Direct Tactical Analog	LE 16 Direct for LE 10	
410.1875	410.1875	\$68F	Direct Tactical Digital	LE 17 Direct for LE 11	
410.6125	410.6125	\$68F	Direct Tactical Digital	LE 18 Direct for LE 12	

Federal LE channels are only to be used when working with Federal Agencies.
\*Default operation should be carrier squelch receive, CTCSS 167.9 transmit. If the user can enable/disable CTCSS without reprogramming the radio, the indicated CTCSS tone also could be programmed for receive, and the user instructed how and when to enable/disable.

Nationwide Channels - 700 MHz P25 Digital, Narrowband				
FREQUENCY		NAC	ELIGIBILITY	NABAE
RECEIVE	TRANSMIT	RX/TX	PRIMARY USE	NAME
769.24375	769.24375	\$F7E	Any Public Safety	7CALL50D
769.24375	799.24375	\$293	Calling Channel	7CALL50
769.14375	769.14375	\$F7E	Any Dublic Cofety	7TAC51D
769.14373	799.14375	\$293	Any Public Safety	7TAC51
769.64375	769.64375	\$F7E	Any Dublic Cofoty	7TAC52D
709.04373	799.64375	\$293	Any Public Safety	7TAC52
770.14375	770.14375	\$F7E	Any Public Safety	7TAC53D
770.14373	800.14375	\$293	Ally Public Salety	7TAC53
770.64375	770.64375	\$F7E	Any Public Safety	7TAC54D
//0.043/3	800.64375	\$293	Ally Public Salety	7TAC54
769.74375	769.74375	\$F7E	Any Public Safety	7TAC55D
709.74373	799.74375	\$293	Ally Public Salety	7TAC55
770.24375	770.24375	\$F7E	Any Public Safety	7TAC56D
770.24373	800.24375	\$293	Ally Public Salety	7TAC56
770.99375	770.99375	\$F7E	Other Public Service	7GTAC57D
770.99373	800.99375	\$293	Other Fublic Service	7GTAC57
770.89375	770.89375	\$F7E	Mobile Repeater	7MOB59D
770.89373	800.89375	\$293	Mobile Repeater	7MOB59
770.39375	770.39375	\$F7E	Law Enforcement	7LAW61D
770.59575	800.39375	\$293	Law Emorcement	7LAW61
770.49375	770.49375	\$F7E	Law Enforcement	7LAW62D
770.49373	800.49375	\$293	Law Linorcement	7LAW62
769.89375	769.89375	\$F7E	Fire	7FIRE63D
/03.033/3	799.89375	\$293	гпе	7FIRE63
769.99375	769.99375	\$F7E	Fire	7FIRE64D
769.99375	799.99375	\$293	1116	7FIRE64

## Nationwide Channels - 700 MHz P25 Digital, Narrowband

FREQUENCY		NAC	ELIGIBILITY	NANAE
RECEIVE	TRANSMIT	RX/TX	PRIMARY USE	NAME
769.39375	769.39375	\$F7E	EMS	7MED65D
769.39375	799.39375	\$293	EIVIS	7MED65
769.49375	769.49375	\$F7E	EMS	7MED66D
709.49373	799.49375	\$293	EIVIS	7MED66
770.74375	770.74375	\$F7E	Mobile data	7DATA69D
770.74373	800.74375	\$293	Wiobile data	7DATA69
773.25625	773.25625	\$F7E	Any Public Safety	7CALL70D
773.23023	803.25625	\$293	Calling Channel	7CALL70
773.10625	773.10625	\$F7E	Any Public Safety	7TAC71D
773.10023	803.10625	\$293	Ally Public Salety	7TAC71
773.60625	773.60625	\$F7E	Any Public Safety	7TAC72D
773.00023	803.60625	\$293	Ally Public Salety	7TAC72
774.10625	774.10625	\$F7E	Any Public Safety	7TAC73D
774.10023	804.10625	\$293	Ally Fublic Salety	7TAC73
774.60625	774.60625	\$F7E	Any Public Safety	7TAC74D
774.00023	804.60625	\$293	Ally Fublic Salety	7TAC74
773.75625	773.75625	\$F7E	Any Public Safety	7TAC75D
773.73023	803.75625	\$293	Ally Fublic Salety	7TAC75
774.25625	774.25625	\$F7E	Any Public Safety	7TAC76D
774.23023	804.25625	\$293	Ally Public Salety	7TAC76
774.85625	774.85625	\$F7E	Other Public	7GTAC77D
774.63023	804.85625	\$293	Other Public	7GTAC77
774.50625	774.50625	\$F7E	Mobile Repeater	7MOB79D
774.30023	804.50625	\$293	Wiobile Repeated	7MOB79
774.00625	774.00625	\$F7E	Law Enforcement	7LAW81D
774.00023	804.00625	\$293	Law Linoicement	7LAW81

## Nationwide Channels - 700 MHz P25 Digital, Narrowband

FREQ	FREQUENCY		ELIGIBILITY	NAME
RECEIVE	TRANSMIT	RX/TX	PRIMARY USE	IVAIVIE
774.35625	774.35625	\$F7E	Law Enforcement	7LAW82D
774.33023	804.35625	\$293	Law Emorcement	7LAW82
773.50625	773.50625	\$F7E	Fire	7FIRE83D
//3.50625	803.50625	\$293	Fire	7FIRE83
773.85625	773.85625	\$F7E	Fire	7FIRE84D
773.63023	803.85625	\$293	riie	7FIRE84
773.00625	773.00625	\$F7E	EMS	7MED86D
773.00625	803.00625	\$293	EIVIS	7MED86
773.35625	773.35625	\$F7E	EMS	7MED87D
//3.33023	803.35625	\$293	EIVIS	7MED87
774.75625	774.75625	\$F7E	Mobile Data	7DATA89D
//4./5625	804.75625	\$293	ivionile Data	7DATA89
	22 3023	7_55		

#### Nationwide 700 MHz Low Power (Zones BH-BI)

The following channels are set aside for low power analog local use. FCC RPC Regions 13 and 54 have given these channels specific names that are structured in a similar fashion to the nationwide digital channels.

Nationwide Channels - 700 MHz Low Power All channels are Low Power, Analog, Narrowband					
	JENCY	TONE			
RECEIVE	<b>TRANSMIT</b>	RX/TX	ELIGIBILITY/PRIMARY USE	NAME	
769.00625	769.00625	CSQ*	Fire Service	7FTAC1D	
769.00625	799.00625	156.7	Low Power Analog	7FTAC1	
774.93125	774.93125	CSQ*	Fire Service	7FTAC2D	
774.93125	804.93125	156.7	Low Power Analog	7FTAC2	
769.04375	769.04375	CSQ*	Fire Service	7FTAC3D	
709.04373	799.04375	156.7	Low Power Analog	7FTAC3	
769.03125	769.03125	CSQ*	General Public Service	7GTAC4D	
769.03125	799.03125	156.7	Low Power Analog	7GTAC4	
774.95625	774.95625	CSQ*	General Public Service	7GTAC5D	
774.93023	804.95625	156.7	Low Power Analog	7GTAC5	
769.01875	769.01875	CSQ*	Law Enforcement	7LTAC6D	
709.01875	799.01875	156.7	Low Power Analog	7LTAC6	
774.94375	774.94375	CSQ*	Law Enforcement	7LTAC7D	
774.94373	804.94375	156.7	Low Power Analog	7LTAC7	
774.98125	774.98125	CSQ*	Law Enforcement	7LTAC8D	
//4.98125	804.98125	156.7	Low Power Analog	7LTAC8	
774.06075	774.96875	CSQ*	EMS	7MTAC9D	
774.96875	804.96875	156.7	Low Power Analog	7MTAC9	

Nationwide Channels - 700 MHz Low Power All channels are Low Power, Analog, Narrowband					
FREQU	JENCY	TONE ELIGIBILITY/PRIMARY USE		NAME	
RECEIVE	TRANSMIT	RX/TX	ELIGIBILITY/PRIMARY USE	IVAIVIE	
760 05635	769.05625	CSQ*	General Public Service	7NTAC10D	
769.05625	799.05625	156.7	Low Power Analog	7NTAC10	
769.06875	769.06875	CSQ*	General Public Service	7NTAC11D	
709.00875	799.06875	156.7	Low Power Analog	7NTAC11	
774 00275	774.99375	CSQ*	General Public Service	7NTAC12D	
774.99375	804.99375	156.7	Low Power Analog	7NTAC12	

\*CTCSS Tones – Default operation should be carrier squelch receive (CSQ), CTCSS Transmit. If the user can enable/disable without programming the radio, the indicated CTCSS tone also could be programmed for receive, and the user instructed how and when to enable/disable.

#### Nationwide 700 MHz Air-to-Ground (Zone BJ)

The following channels are set aside for air-to-ground use. FCC RPC Regions 13 and 54 have given these channels specific names that are structured in a similar fashion to the nationwide digital channels. States are responsible for the administration of these channels.

Nationwide Channels - 700 MHz Low Power				
	All cha	nnels a	re Digital, Narrowband	
FREQU	JENCY	TONE	ELIGIBILITY/PRIMARY USE	NAME
RECEIVE	TRANSMIT	RX/TX	EEIGIBIETT/T KIIVIAKT 03E	IVAIVIL
769.13125	769.13125	\$F7E	Air - Ground	7AG58D
709.13123	799.13125	\$293	All - Glouliu	7AG58
769.63125	769.63125	\$F7E	Air - Ground	7AG60D
709.03125	799.63125	\$293	Alf - Ground	7AG60
770.13125	770.13125	\$F7E	Air - Ground	7AG67D
//0.13125	800.13125	\$293	Alf - Ground	7AG67
770.63125	770.63125	\$F7E	Air - Ground	7AG68D
//0.03125	800.63125	\$293	Alf - Ground	7AG68
773.11875	773.11875	\$F7E	Air - Ground	7AG78D
//3.110/3	803.11875	\$293	Ali - Ground	7AG78
773.61875	773.61875	\$F7E	Air - Ground	7AG80D
//3.018/3	803.61875	\$293	Alf - Ground	7AG80
774.11875	774.11875	\$F7E	Air - Ground	7AG85D
//4.118/5	804.11875	\$293	Aii - Ground	7AG85
774.61875	774.61875	\$F7E	Air – Ground	7AG88D
//4.018/5	804.61875	\$293	Landing Zone*	7AG88*

## Nationwide Channels - 700 MHz Low Power All channels are Digital, Narrowband

FREQUENCY TONE
RECEIVE TRANSMIT RX/TX

ELIGIBILITY/PRIMARY USE

**NAME** 

\* 7AG88D is recommended for Landing Zone use.

TX NAC: \$293 (659 10). RX NAC \$F7E (3966 10). These channels are reserved for air-ground communications to be used by low-altitude aircraft and ground based stations: See FCC rule 90.531(7). (i) Airborne use of these channels is limited to aircraft flying at or below 457 meters (1500 feet) above ground level. (ii) Aircraft are limited to 2 watts effective radiated power (ERP) when transmitting while airborne on these channels. (iii) Aircraft may transmit on either the mobile or base transmit side of the channel pair. (iv)

#### Nationwide 800 MHz (Zone BC)

Nationwide Channels – 800 MHz Wideband					
	JENCY	TONE	ELIGIBILITY	NAME	
RECEIVE	TRANSMIT	RX/TX	PRIMARY USE		
851.0125	851.0125	CSQ*	Any Public Safety	8CALL90D	
851.0125	806.0125	156.7	Calling Channel	8CALL90	
851.5125	851.5125	CSQ*	Any Public Safety	8TAC91D	
851.5125	806.5125	156.7		8TAC91	
852.0125	852.0125	CSQ*		8TAC92D	
852.0125	807.0125	156.7	Any Public Safety	8TAC92	
852.5125	852.5125	CSQ*	Any Public Safety	8TAC93	
852.5125	807.5125	156.7	Arry Public Safety	8TAC93D	
052.0125	853.0125	CSQ*	Amy Dublic Cofety	8TAC94D	
853.0125	808.0125	156.7	Any Public Safety	8TAC94	

<sup>\*</sup>CTCSS Tones – Default operation should be carrier squelch receive (CSQ), CTCSS Transmit. If the user can enable/disable without programming the radio, the indicated CTCSS tone also could be programmed for receive, and the user instructed how and when to enable/disable.

## **Auxiliary Communications (AUXCOMM)**

AUXCOMM is a volunteer organization of licensed amateur radio operators registered with the county or local emergency management organization to provide auxiliary emergency communications on behalf of local, state or federal government. Each local AUXCOMM group is administered by a local government agency responsible for disaster services.

## **AMATEUR RADIO EMERGENCY SERVICE (ARES)**

A program of the American Radio Relay League (ARRL). ARES consists of amateur radio operators who volunteer to provide emergency communications when needed. ARES groups are generally structured at the county level and often closely aligned with emergency management agencies.

## RADIO AMATEUR CIVIL EMERGENCY SERVICE (RACES)

Although the FCC is responsible for the creation and regulation of RACES, Federal Emergency Management Administration (FEMA) is responsible for operations. As part of that plan, counties are encouraged to develop a local AUXCOMM program that would include a RACES component in accordance with the state plan. RACES may be only activated by the President of the United States. The activation will be in accordance with an approved civil defense communications plan, per FCC Rules.

## **STATEWIDE AUXCOMM FREQUENCIES**

Band	RX Freq.	TX Freq.	Mode	Notes
80m	3.9050	3.9050	LSB	Primary
40m	7.2300	7.2300	LSB	Secondary
2m	145.6100	145.6100	WBFM Packet	IDEN 1200 baud
2m	146.5200	146.5200	WBFM	IL2A Nationwide Calling
2m	147.5250	147.5250	WBFM	IL2B
2m	147.5700	147.5700	WBFM	IL2C
70cm	446.0000	446.0000	WBFM	ILUHFA Nationwide Calling
70cm	446.4000	446.4000	WBFM	ILUHFB
70cm	446.7000	446.7000	WBFM	ILUHFC

Note: Operations on amateur radio frequencies requires an appropriately licensed amateur radio operator. Refer to FCC Rules, Part 97, or, the American Radio Relay League for more detailed information

## **Interoperability Assets**

#### INTEROPERABILITY REPEATERS

Some jurisdictions have deployed radio repeaters that provide interoperable communications allowing efficient coordination of first responders during an incident or planned event. These repeaters may be in fixed positions using permanent towers; or they may be transportable, allowing for deployment at or near the incident scene.

Proper operation of repeater stations is necessary for the efficient use of the interoperability channels, especially in minimizing and eliminating potential interference.

#### **Best Practice Summary**

- Only the minimum number of calling channel repeaters should be in "Repeater ON" mode across the region.
- Repeaters on the tactical frequencies should always be in "Repeater OFF" mode, unless they are actually in use.
- Agencies should periodically check their repeaters to make sure they are in "Repeater OFF" mode to prevent interference to other agencies.
- Having multiple repeaters active on the same frequency in the same area causes the mobile and portable radio users to hear interference from multiple repeaters.
- Dispatch centers using direct repeater control normally cannot hear other active repeaters on their consoles unless they also have a monitor radio on that channel. They will hear the input

- channel from any mobile, portable, or control stations from any agency within range of their repeaters.
- Calling Channels Many agencies monitor the calling channels for their area on their own repeaters. Tactical Channels are used for incident communications.
- All tactical repeaters will be set to "Repeater Off", or equivalent, unless needed for an incident or event in that area.
- If possible, configure tactical repeaters to default to "Repeater OFF" in the event of a power cycle or other disruption.
- In general, the tactical channel repeater that is closest to the incident and provides the minimum effective coverage area for the incident should be used. This allows greater reuse of frequencies for multiple incidents across the region.

<u>Requesting a Repeater</u> - The incident COML/COMC or their designee determines when a situation exists that requires the use of a repeater and notifies the appropriate dispatch center. The COML or COMC determines what repeater are available for use, identifies a specific repeater, activates that repeater, and coordinates the repeater deployment with the requesting agency Incident Commander or their designee.

## **UHF Fixed Base Interoperability Repeaters**

	UHF Fixed Base Interoperability Repeaters			
R G N	Agency 24 Hrs. Phone	Location	Channels	Simul. Channels
4	Chicago OEMC 312-746-9241	Chicago Patches to VHF & UHF	UCALL40, UTAC41, UTAC42, UTAC43	1
4	Chicago OEMC 312-746-9241	Chicago Patches to VHF & UHF	UCALL40, UTAC41, UTAC42, UTAC43	1
4	Illinois Tollway 630-241-6800	Western Springs I-294/55th St.	UCALL40, UTAC41, UTAC42, UTAC43	1
4	Illinois Tollway 630-241-6800	Markham I-294/I-80	UCALL40, UTAC41, UTAC42, UTAC43	1
4	Illinois Tollway 630-241-6800	Libertyville I-94/IL137	UCALL40, UTAC41, UTAC42, UTAC43	1
4	Illinois Tollway 630-241-6800	Addison I-355/Army Trail Rd.	UCALL40, UTAC41, UTAC42, UTAC43	1
3	Grundy County 911 Center 815-942-0336	Morris IL47/IL113	UCALL40, UTAC41, UTAC42, UTAC43	1

## 800 MHz Fixed Base Interoperability Repeaters

800 MHz Fixed Interoperability Repeaters				
R G N	Agency 24 Hrs Phone	Location	Bands/Repeaters	Simul. Ch
2	Illinois Tollway	Belvidere	8CALL90,	2
_	630-271-7586	I-90/US20	8TAC91, 92, 93, 94	_
2	ISP D7 Moline	EAST MOLINE.	8CALL90	2
	815.632.4010	800 Hillcrest	8TAC91	2
2	Illinois Tollway	Rochelle	8CALL90,	2
	630-271-7586	I-88/I-39	8TAC91, 92, 93, 94	2
3	Illinois Tollway	Aurora	8CALL90,	2
3	630-271-7586	I-88/IL25	8TAC91, 92, 93, 94	2
3	ISP D21 Ashkum	Bradley	8CALL90, 8TAC92	2
3	815.844.1500	500 Kinzie Ave.	6CALL90, 61AC92	2
3	Elgin PD	Elgin	8CALL90, 8TAC91	2
3	847-289-2700	120 S State St,		2
3	Grundy Co. SO	Morris	8CALL90,	3
3	815-942-0336	IL47/IL113	8TAC91, 92,	
3	Grundy Co SO	Morris	8CALL90,	5
3	815-942-0336	IL47/IL113	8TAC91, 92, 93, 94	5
4	NW Central.	Arlington Heights	8CALL90,	5
4	847-398-1130	1975 East Davis St.	8TAC91, 92, 93, 94	,
4	Chicago OEMC	Chicago	8CALL90,	1
4	312-746-9241	Patches to VHF & UHF	8TAC91, 92, 93, 94	1

800 MHz Fixed Interoperability Repeaters				
R G N	Agency 24 Hrs Phone	Location	Bands/Repeaters	Simul. Ch
4	Chicago OEMC 312-746-9241	Chicago  Patches to VHF & UHF	8CALL90, 8TAC91, 92,93, 94	1
4	Cook County SO 847-294-4733	Chicago 26 <sup>th</sup> /California	8TAC91	1
4	Illinois Tollway 630-271-7586	Deerfield I-294/ I-94	8CALL90, 8TAC91, 92, 93, 94	2
4	Illinois Tollway 630-271-7586	Elgin I-90/IL25	8CALL90, 8TAC91, 92, 93, 94	2
4	Illinois Tollway 630-271-7586	Gurnee I-94/IL132	8CALL90, 8TAC91, 92, 93, 94	2
4	Cook County SO 847-294-4733	Hoffman Estates IL58/Barrington	8TAC92	1
4	Illinois Tollway 630-271-7586	Lemont I-355/127 <sup>th</sup> St.	8CALL90, 8TAC91, 92, 93, 94	2
4	Lake County SO 847-549-5200	Libertyville 1303 N. Milwaukee	8CALL90, 8TAC91, 92, 93, 94	5
4	Illinois Tollway 630-271-7586	Lisle I-355/I-88	8TAC91, 94	2
4	Will County SO 815-727-8575	Lemont I-355/127th St.	8CALL90, 8TAC91, 92, 94	4
4	Illinois Tollway 630-271-7586	Markham I-294/I-80	8CALL90, 8TAC91, 92, 93, 94	2

800 MHz Fixed Interoperability Repeaters				
R G N	Agency 24 Hrs Phone	Location	Bands/Repeaters	Simul. Ch
4	Cook County SO 847-294-4733	Palos Park Ashland Sauk Trail	8TAC93	1
4	Cook County SO 847-294-4733	Steger McCarthy/Wolf.	8TAC94	1
4	Illinois Tollway 630-271-7586	Western Springs I-294/55th St.	8CALL90, 8TAC91, 92, 93, 94	2
6	ISP D9 Acad 217.786.6677	Springfield 3700 Lake Shore.	8CALL90 8TAC91, 8TAC92	3
6	ISP D9 Spfld 217.786.6677	Taylorville - IDOC Route 29	8CALL90 8TAC92	2
6	ISP D8 Peoria 815.844.1500	Peoria 6035 N Knoxville	8CALL90, 8TAC92	2
7	ISP D6 Pontiac 815-844-1500	Waterson Dorm Normal	8CALL90, 8TAC92	2
7	TAZCOM 309-346-4141	Pekin 1130 Cook	8CALL90, 8TAC91, 92, 93, 94	5
8	St Clair County 618-825-2051	Bellville 3001 Save Rd	8CALL90, 8TAC91	2
M 0	St Louis Police 314-231-1212	St Louis 1200 Clark	8CALL90 8TAC91, 92, 93, 94	5
9	ISP D12 Mason 618.542.2171	Mason 4320 N 950 <sup>th</sup> St.	8CALL90, 8TAC92	2

## <u>Transportable Interoperability Repeaters</u>

Transportable Interoperability Repeaters			
Agency 24 Hrs Phone	Location	Bands/Repeaters	Simul. Channels
IEMA 217-782-7860	Champaign ITECS 7	VTAC36 (1) UTAC41, UTAC43 (2) 8TAC92 (1)	1 for each repeater
IEMA 217-782-7860	Chicago ITECS 5	VTAC36 (1) UTAC41, UTAC43 (2) 8TAC94	1 for each repeater
IEMA 217-782-7860	Crawford Co. ITECS 9	VTAC36 (1) UTAC41, UTAC42 (2) 8TAC94 (1)	1 for each repeater
IEMA 217-782-7860	DuPage Co. ITECS 4	VTAC36 (1) UTAC41, UTAC43 (1) 8TAC93 (1)	1 for each repeater
IEMA 217-782-7860	Springfield IEMA SOW	8TAC94 (1)	1
ISP 217-786-6677	Springfield ISP Center SOW	8TAC92 (1)	1
ISP 815-632-4010	Sterling ISP North SOW	8TAC91 (1)	1
ISP 618.542-2171	Du Quoin ISP South SOW	8TAC93 (1)	1
IEMA 217-782-7860	Jacksonville ITECS 6	VTAC36 (1) UTAC41, UTAC43 (2) 8TAC91 (1)	1 for each repeater

Transportable Interoperability Repeaters			
Agency 24 Hrs Phone	Location	Bands/Repeaters	Simul. Channels
IEMA 217-782-7860	Monroe Co. ITECS 8	VTAC36 (1) UTAC43 (1) 8TAC93 (1)	1 for each repeater
IEMA 217-782-7860	Will Co. ITECS 3	VTAC36 (1) UTAC41, UTAC42 (2) 8TAC92 (1)	1 for each repeater
IEMA 217-782-7860	Williamson Co. ITECS 11	VTAC36 (1) UTAC41, UTAC43 (2) 8TAC91 (1)	1 for each repeater
IEMA 217-782-7860	Ogle Co. ITECS 2	VTAC36 (1) UTAC41 (1) 8TAC91 (1)	1 for each repeater

#### Portable Interoperability Repeaters

P	ortable Interope	erability Repeaters	
Agency 24 Hrs Phone	Location	Bands/Repeaters	Simul. Channels
IEMA	Champaign ITECS 7	700 MHz (1)	1
217-782-7860		7CALL50, 7TAC51, 52, 53+	
IEMA 217-782-7860	Chicago ITECS 5	700 MHz (1) 7CALL50, 7TAC51, 52, 53+	1
IEMA	Crawford Co.	700 MHz (1)	
217-782-7860	ITECS 9	7CALL50, 7TAC51, 52, 53+	1
IEMA	DuPage Co.	700 MHz (1)	1
217-782-7860	ITECS 4	7CALL50, 7TAC51, 52, 53+	1
IEMA	Jacksonville	700 MHz (1)	1
217-782-7860	ITECS 6	7CALL50, 7TAC51, 52, 53+	1
IEMA	Monroe Co.	700 MHz (1)	1
217-782-7860	ITECS 8	7CALL50, 7TAC51, 52, 53+	1
IEMA	Will Co.	700 MHz (1)	1
217-782-7860	ITECS 3	7CALL50, 7TAC51, 52, 53+	_
IEMA	Williamson Co.	700 MHz (1)	1
217-782-7860	ITECS 11	7CALL50, 7TAC51, 52, 53+	_
IEMA	Ogle Co.	700 MHz (1)	1
217-782-7860	ITECS 2	7CALL50, 7TAC51, 52, 53+	_
MABAS	Wheeling	VHF High (3)*	1 for each
847-724-5700	233 W Hintz	VTAC36	repeater
MABAS	Wheeling	UHF Range One (1)*	1
847-724-5700	233 W Hintz	USAR Channels	1
MABAS	Wheeling	UHF Range Two (3)*	1 for each
847-724-5700	233 W Hintz	UCALL40, UTAC41, 42, 43	repeater
MABAS	Wheeling	UHF T Band (3)*	1 for each
847-724-5700	233 W Hintz	No Chnls programmed	repeater

Portable Interoperability Repeaters				
Agency 24 Hrs Phone	24 Hrs Phone Location Bands/Repeaters		Simul. Channels	
MABAS	Wheeling	700 MHz (3)*	1 for each	
847-724-5700	233 W Hintz	7CALL50, 7TAC51, 52, 53	repeater	
MABAS	Wheeling	800 MHz (3)*	1 for each	
847-724-5700	233 W Hintz	8TAC91, 92, 94	repeater	
Grundy County	Morris	VTAC 37	1 repeater	
911 Center	1320 Union St	UCALL40, UTAC41,42,43	for each	
815-942-0336	1320 0111011 30	8CALL90, 8TAC91,92,93,94	band	

<sup>+</sup> All repeaters will have most of the 700 MHz NIP channels already programmed in. At a minimum the units will have 7CALL50 through 7TAC53.

<sup>\*</sup>All repeaters can be reprogrammed by MABAS Communications personnel

#### **GATEWAYS**

#### Gateway / Cross-Band Device Operation

Gateways interconnect channels of different systems (whether on different bands, channels, or modes), allowing first responders to use their existing radios and channels to communicate with users outside their agency or radio system. Use of designated interoperability channels is preferred over the use of any agency's primary operational channels or talkgroups.

A Communications Unit Leader (COML) or Incident Commander (IC) must be aware that multiple gateway activations in support of an incident can result in interference. Interference issues are best resolved by the technical support personnel assigned to the gateways.

Whenever possible, patches of one talkgroup to another talkgroup on the same system or platform should be accomplished at the console level to minimize channel loading.

Requesting a Gateway - The incident COML/COMC or their designee determines when a situation exists that requires the use of a radio gateway and notifies the appropriate dispatch center. The COML or COMC determines what gateways are available for use, identifies a specific gateway, activates that gateway, and coordinates the gateway deployment with the requesting agency Incident Commander or their designee.

#### Fixed Gateways

Fixed Gateways					
AGENCY 24 HR PHONE	NAME LOCATION	GATEWAY			
IDOT IDOT Consoles may be able to provide a console Patch. Consult Dispatch Center Contact info on Pages 89-89	Statewide	Motorola MCC 7500			
IEMA IEMA Consoles may be able to provide a console Patch. Consult Dispatch Center Contact info on Pages 88-89	Springfield	Motorola MCC7500			
ISP ISP Consoles may be able to provide a console Patch. Consult Dispatch Center Contact info on Pages 88-89	Statewide	Motorola MCC7500			
Tollway  Tollway Consoles may be able to provide a console Patch. Consult Dispatch Center  Contact info on Pages 88-89	Tollway	Motorola MCC7500			

#### Transportable Gateways

1	Transportable Gateways				
AGENCY	NAME	# NETS/	GATEWAY		
24 HR PHONE	LOCATION	PORTS			
ISSP 217-524-0200	ISSP ICRI Springfield	2/5	C/AT-ICRI		
IEMA 217-782-7860	IEMA ICRI Springfield	2/5	C/AT-ICRI		
IEMA	ITECS 2	7 / 12	Raytheon		
217-782-7860	Ogle Co		ACU-1000		
IEMA	ITECS 3	7 / 12	Raytheon		
217-782-7860	Will Co.		ACU-1000		
IEMA	ITECS 4	7 / 12	Raytheon		
217-782-7860	DuPage Co.		ACU-1000		
IEMA	ITECS 5	7 / 12	Raytheon		
217-782-7860	Chicago		ACU-1000		
IEMA	ITECS 6	7 / 12	Raytheon		
217-782-7860	Jacksonville		ACU-1000		
IEMA	ITECS 7	7 / 12	Raytheon		
217-782-7860	Champaign		ACU-1000		
IEMA	ITECS 8	7 / 12	Raytheon		
217-782-7860	Monroe Co.		ACU-1000		
IEMA	ITECS 9	7 / 12	Raytheon		
217-782-7860	Crawford Co.		ACU-1000		
IEMA	ITECS 11	7 / 12	Raytheon		
217-782-7860	Williamson Co.		ACU-1000		

#### RADIO CACHES

Cache radios refer to maintaining a cache of standby radios that can be deployed to support incidents (spare radio(s) used as operational replacement for day-to-day use are NOT cache radios). Cache radios allow all responders to use common, compatible equipment during an incident.

Requesting a Cache - The incident COML/COMC or their designee determines when a situation exists that requires the use of a radio cache and notifies the appropriate dispatch center. The COML or COMC determines what radio caches are available for use, identifies a specific cache, activates that cache, and coordinates the cache deployment with the requesting agency Incident Commander or their designee.

Radio Cache Equipment Summary					
AGENCY 24 HR PHONE	NAME MAKE BAND LOCATION MODEL		QTY		
IEMA	VHF HT1250	Motorola	VHF	65	
217-782-7860	Springfield	HT1250			
IEMA	STARCOM21	Motorola	7/800	180	
217-782-7860	Springfield	XTS5000	STARCOM21	180	
IEMA	REG 2 STARCOM21	Motorola	7/800	(	
815-288-1455	Dixon	XTS5000	STARCOM21	6	
IEMA	REG 3 STARCOM21	Motorola	7/800	26	
815-433-7161	Ottawa	XTS5000	STARCOM21	36	
IEMA	REG 4 STARCOM21	Motorola	7/800	6	
847-294-4717	Des Plaines	XTS5000	STARCOM21	О	

	Radio Cache Equipment Summary				
AGENCY 24 HR PHONE	NAME LOCATION	MAKE MODEL	BAND	QTY	
IEMA 217-782-0922	REG 6 STARCOM21 Springfield	Motorola XTS5000	7/800 STARCOM21	6	
IEMA 217-352-2461	REG 7 STARCOM21 Motorola 7/800 Champaign XTS5000 STARCOM21		6		
IEMA 618-394-2233	REG 8 STARCOM21 Fairview Heights	REG 8 STARCOM21 Motorola 7/800		6	
IEMA 618-662-4474	REG 9 STARCOM21 Motorola 7/800 Flora XTS5000 STARCOM21		6		
IEMA 618-997-5847	REG 11 STARCOM21 Motorola 7/800 Marion XTS5000 STARCOM21		6		
IEMA 217-782-7860	ILEAS XTS North Motorola 7/800 Wheeling XTS5000 STARCOM21		24		
IEMA 217-782-7860	ILEAS XTS Center Urbana	Motorola XTS5000	7/800 STARCOM21	24	
IEMA 217-782-7860	ILEAS XTS South Wood River	Motorola XTS5000	7/800 STARCOM21	24	
IEMA 217-782-7860	ILEAS APX Cache Urbana	Motorola APX7000	rola V/7/8/SC21		
IEMA 217-782-7860	ILEAS VHF Cache Urbana	EF Johnson 5100	VHF	48	
IEMA 217-782-7860	ILEAS UHF Cache Urbana	LIHE		48	
IEMA 217-782-7860	ILEAS 800 Conv. Cache Urbana	EF Johnson 5100	800	22	

Radio Cache Equipment Summary				
AGENCY 24 HR PHONE	NAME LOCATION	MAKE MODEL	BAND	QTY
ISP Radio Lab Law Enfc. Only 217-782-5035	ISP Radio Lab Springfield	Motorola XTS5000	7/800 STARCOM21	50
ISP Dist. 1 Law Enfc. Only 815-632-4010	Dist. 1 STARCOM21 Sterling	Motorola XTS5000	7/800 STARCOM21	25
ISP Dist. 13 Law Enfc. Only 618-542-2171	Dist. 13 STARCOM21 DuQuoin	Motorola XTS5000	7/800 STARCOM21	25
IEMA 217-782-7860	ITECS 2 Oregon, Ogle SO	EF Johnson 5100 Harris Unity	VHF UHF 800 conv V/U/7/8 w/ SC21	24 24 11 40
IEMA 217-782-7860	ITECS 3 Joliet Will Co. EMA	EF Johnson 5100 Harris Unity	VHF UHF 800 conv V/U/7/8 w/ SC21	24 24 11 40
IEMA 217-782-7860	ITECS 4 Wheaton DuPage OHSEM	EF Johnson 5100 Harris Unity	VHF UHF 800 conv V/U/7/8 w/ SC21	24 24 11 40
IEMA 217-782-7860	ITECS 5 Chicago OEMC	EF Johnson 5100 Harris Unity	VHF UHF 800 conv V/U/7/8 w/ SC21	24 24 11 40
IEMA 217.782.7860	ITECS 6 Jacksonville EMA	Harris Unity	V/U/7/8 w/ SC21	40

	Radio Cache Equipment Summary				
AGENCY 24 HR PHONE	NAME LOCATION	MAKE MODEL	BAND	QTY	
IEMA 217.782.7860	ITECS 7 Champaign FD	EF Johnson 5100 Harris Unity	VHF UHF 800 conv V/U/7/8 w/ SC21	24 24 11 40	
IEMA 217.782.7860	ITECS 8 Waterloo Monroe Co EMA	EF Johnson 5100 Harris Unity	VHF UHF 800 conv V/U/7/8 w/ SC21	24 24 11 40	
IEMA 217.782.7860	ITECS 9 Robinson Crawford Co	EF Johnson 5100 Harris Unity	VHF UHF 800 conv V/U/7/8 w/ SC21	24 24 11 40	
IEMA 217.782.7860	ITECS 11 City of Marion	Harris Unity	V/U/7/8 w/ SC21	40	
MABAS MRC 217.782.7860	IPWMAN SC21 N Wauconda	Motorola APX7000	V/7/8/SC21 Dual Band	18	
Champaign FD 217.782.7860	IPWMAN SC21 C Champaign	Motorola APX7000	V/7/8/SC21 Dual Band	18	
City of Marion 217-782-7860	IPWMAN SC21 S Marion	Motorola APX7000	V/7/8/SC21 Dual Band	18	
MABAS 847-724-5700	Lake Co Cache 2 Round Lake Fire	Motorola APX7000	V/7/8/SC21 Dual Band	12	
MABAS 847-724-5700	UCP 13 Cache 3 Wauconda FD	Motorola APX7000	V/7/8/SC21 Dual Band	12	
MABAS 847-724-5700	UCP 13 Cache 4 Wauconda	Motorola APX7000	V/7/8/SC21 Dual Band	12	

Radio Cache Equipment Summary				
AGENCY 24 HR PHONE	NAME LOCATION	MAKE MODEL	BAND	QTY
MABAS 847-724-5700	MABAS Cache 5 MRC Wheeling	Motorola APX7000	V/7/8/SC21 Dual Band	12
MABAS 847-724-5700	MABAS Cache 6 MRC Wheeling	Motorola V/7/8/SC21 APX7000 Dual Band		12
MABAS 847-724-5700	MABAS Cache 7 MRC Wheeling	Motorola APX7000	V/7/8/SC21 Dual Band	12
MABAS 847-724-5700	MABAS Cache 8 MRC Wheeling	Motorola APX7000	-,-,-,	
MABAS 847-724-5700	MABAS Cache 9 MRC Wheeling	Thales Liberty	V/U/7/8/ SC21 Tri Band	48
OSFM 217-782-7860	OSFM SC21 Springfield	Motorola XTS5000	7/800 STARCOM21	12
Illinois Tollway 630-241-6800	Tollway 800 Downers Grove	Motorola HT1000	800 MHz Conventional	75
IEMA 217-782-7860	UCP 1 Quincy	Motorola XTS1500	700/800 SC21	12
IEMA 217-782-7860	UCP 2 Princeton	Motorola XTS1500	700/800 SC21	12
IEMA 217-782-7860	UCP 3 Wheaton	Motorola XTS1500	700/800 SC21	12
IEMA 217-782-7860	UCP 4 Galesburg	Motorola XTS1500	700/800 SC21	12
IEMA 217-782-7860	UCP 5 Galena	Motorola XTS1500	Motorola 700/800 SC21	
IEMA 217-782-7860	UCP 6 Yorkville	Motorola XTS1500	700/800 SC21	12

Radio Cache Equipment Summary					
AGENCY 24 HR PHONE	NAME LOCATION	MAKE MODEL	BAND	QTY	
IEMA 217-782-7860	UCP 7 Edwardsville	Motorola XTS1500	700/800 SC21	12	
IEMA 217-782-7860	UCP 8 Bloomington	Motorola XTS1500	700/800 SC21	12	
IEMA 217-782-7860	UCP 9 Rock Island	Motorola XTS1500	700/800 SC21	12	
IEMA 217-782-7860	UCP 10 Tremont	Motorola XTS1500	700/800 SC21	12	
IEMA 217-782-7860	UCP 11 Mt. Vernon	Motorola XTS1500	700/800 SC21	12	
IEMA 217-782-7860	UCP 12 DuQuoin	Motorola XTS1500	700/800 SC21	12	
IEMA 217-782-7860	UCP 13 Wauconda	Motorola XTS1500	700/800 SC21	12	

## **MOBILE COMMUNICATIONS UNITS (VEHICLES/TRAILERS)**

A Mobile Communications Units Center (MCU) refers to any vehicular asset that can be deployed to provide or supplement communications

	Illinois Mobile Communications Units					
AGENCY 24HR PHONE	UNIT ID LOCATION	SPECIAL EQUIPMENT	FEMA TYPE	GATEWAY	САСНЕ	
IDOT DIST 2 217-782-2937	DIST. 2 MEOC Dixon	VHF Low, VHF High, UHF, SC21, 1 RADO Pos.	IV	Yes	No	
IDOT DIST 3 217-782-2937	DIST. 3 MEOC Ottawa	VHF Low, VHF High, UHF, SC21, Marine, Air. 22' Mast, 1RADO Pos.	IV	Yes	No	
IDOT DIST 4 217-782-2937	DIST. 4 MEOC Peoria	VHF Low, VHF High, UHF, SC21, 1 RADO Pos.	IV	Yes	No	
IDOT DIST 5 217-782-2937	DIST. 5 MEOC Paris	VHF Low, VHF High, UHF, SC21, Marine, Air. 22' Mast, 1RADO Pos.	IV	Yes	No	
IDOT DIST 6 217-782-2937	DIST. 6 MEOC Springfield	VHF Low, VHF High, UHF, SC21, 1RADO Pos.	IV	Yes	No	
IDOT DIST 7 217-782-2937	DIST. 7 MEOC Effingham	VHF Low, VHF High, UHF, SC21, Marine, Air. 22' Mast, 1RADO Pos.	IV	Yes	No	
IDOT DIST 3 217-782-2937	DIST. 3 MICC Ottawa	VHF Low, VHF High, SC21, Marine. 22' Mast, 2 RADO Pos., Seats 4	IV	No	No	
IEMA 217-782-7860	Field Command 1	6 line PBX, VHF Low, VHF High, UHF, and SC21. 42' Mast, 1 RADO pos., seats 15	П	No	No	
IEMA 217-782-7860	Field Command 2	6 line PBX, VHF Low, VHF High, UHF, and SC21. 42' Mast, 1 RADO pos., seats 15	П	No	No	

	Illinois Mobile Communications Units					
AGENCY 24HR PHONE	UNIT ID LOCATION	SPECIAL EQUIPMENT	FEMA TYPE	GATEWAY	САСНЕ	
IEMA 217-782-7860	IEMA SOW Springfield	80' Mast, SC21 Site on wheels 800 MHz repeater (8TAC94)	N/A	No	No	
IEMA 217-782-7860	IEMA UAC Springfield	PBX, VHF Low, VHF High, UHF, SC21. 2 RADO Pos., seats 20,	ı	No	No	
EM-COM 217-732-4311	EMAT Trailer 1 McLean Co	1 VHF Low, 1-VHF, 1-UHF, 1-SC21, Radios, 40' Mast, 2 RADO Pos, Cellular Data and Voice	Ш	No	No	
EM-COM 217-732-4311	EMAT Trailer 2 Franklin Co	1 VHF Low, 1-VHF, 1-UHF, 1-SC21, Radios, 40' Mast, 2 RADO Pos, Cellular Data and Voice	Ш	No	No	
EM-COM 217-732-4311	EMAT Trailer 3 McHenry Co	1 VHF Low, 1-VHF, 1-UHF, 1-SC21, Radios, 2 RADO Pos, Cellular Data and Voice		No	No	
EM-COM 217-732-4311	EMAT Trailer 4 Logan Co	1 VHF Low, 1-VHF, 1-UHF, 1-SC21, Radios, 2 RADO Pos, Cellular Data and Voice		No	No	
ILEAS 847-590-3500	Command Trailer 2 Urbana	Law Enforcement Only VHF and STARCOM21 Radio	N/A	No	No	
ILEAS 847-590-3500	Command Trailer 3 Bellville	Law Enforcement Only VHF and STARCOM21 Radio	N/A	No	No	
ILEAS 847-590-3500	Comms Support Veh. Urbana	Statewide Communications Coordination and Support	N/A	No	Yes	
ISP 815-632-4010	North SOW Sterling	80' Mast, SC21 Site on wheels 800 MHz repeater (8TAC91)	N/A	No	No	

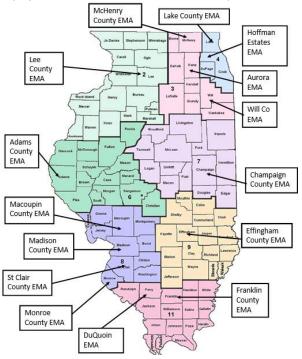
Illinois Mobile Communications Units						
AGENCY 24HR PHONE	UNIT ID LOCATION	SPECIAL EQUIPMENT	FEMA TYPE	GATEWAY	САСНЕ	
ISP 217-786-6677	Central SOW Springfield	80' Mast, SC21 Site on wheels 800 MHz repeater (8TAC92)	N/A	No	No	
ISP 618-542-2171	South SOW DuQuoin	80' Mast, SC21 Site on wheels 800 MHz repeater (8TAC93)	N/A	No	No	
IEMA 217-782-7860	ITECS 2 Oregon Ogle Co SO	Satellite, Data, VOIP, 2-VHF, 1-UHF, 1-700 Rptr, 1-800 Base/Rptr HF, VHF Low, VHF High, UHF, SC21, 50' Mast		Yes	Yes	
IEMA 217-782-7860	ITECS 3 Joliet Will Co EMA	Satellite, Data, VOIP, 2-VHF, 2-UHF, 1-700 Rptr, 1-800 Base/Rptr HF, VHF Low, VHF High, UHF, SC21, 50' Mast,		Yes	Yes	
IEMA 217-782-7860	ITECS 4 Wheaton DuPage EM	Satellite, Data, VOIP, 2-VHF, 2-UHF, 1-700 Rptr, 1-800 Base/Rptr HF, VHF Low, VHF High, UHF, SC21, 50' Mast,		Yes	Yes	
IEMA 217-782-7860	ITECS 5 Chicago OEMC	Satellite, Data, VOIP, 2-VHF, 2-UHF, 1-700 Rptr, 1-800 Base/Rptr HF, VHF Low, VHF High, UHF, SC21, 50' Mast,	IV	Yes	Yes	
IEMA 217-782-7860	ITECS 6 Jacksonville EMA	Satellite, Data, VOIP, 2-VHF, 2-UHF, 1-700 Rptr, 1-800 Base/Rptr HF, VHF Low, VHF High, UHF, SC21, 50' Mast,		Yes	Yes	
IEMA 217-782-7860	ITECS 7 Champaign FD	Satellite, Data, VOIP, 2-VHF, 2-UHF, 1-700 Rptr, 1-800 Base/Rptr HF, VHF Low, VHF High, UHF, SC21, 50' Mast,	IV	Yes	Yes	
IEMA 217-782-7860	ITECS 8 Waterloo Monroe Co	Satellite, Data, VOIP, 2-VHF, 2-UHF, 1-700 Rptr, 1-800 Base/Rptr HF, VHF Low, VHF High, UHF, SC21, 50' Mast,	IV	Yes	Yes	

Illinois Mobile Communications Units						
AGENCY 24HR PHONE	UNIT ID LOCATION	SPECIAL EQUIPMENT	FEMA TYPE	GATEWAY	САСНЕ	
IEMA 217-782-7860	ITECS 9 Robinson Crawford EM	Satellite, Data, VOIP, 2-VHF, 2-UHF, 1-700 Rptr, 1-800 Base/Rptr HF, VHF Low, VHF High, UHF, SC21, 50' Mast,	IV	Yes	Yes	
IEMA 217-782-7860	ITECS 11 Marion	Satellite, Data, VOIP, 2-VHF, 2-UHF, 1-700 Rptr, 1-800 Base/Rptr HF, VHF Low, VHF High, UHF, SC21, 50' Mast,	IV	Yes	Yes	
IEMA 217-782-7860	UCP 1 Quincy Adams Co EM	VHF Low, VHF High, UHF, SC21, 25' Mast, 4 RADO Pos, seats 12, satellite 1 MB up 3MB Down, PBX Network	П	No	No	
IEMA 217-782-7860	UCP 2 Princeton Bureau SO	VHF Low, VHF High, UHF, SC21, 25' Mast, 4 RADO Pos, seats 12, satellite 1 MB up 3MB Down, PBX Network		No	No	
IEMA 217-782-7860	UCP 3 Wheaton DuPage SO	VHF Low, VHF High, UHF, SC21, 25' Mast, 4 RADO Pos, seats 12, satellite 1 MB up 3MB Down, PBX Network		No	No	
IEMA 217-782-7860	UCP 4 Galesburg PD	VHF Low, VHF High, UHF, SC21, 25' Mast, 4 RADO Pos, seats 12, satellite 1 MB up 3MB Down, PBX Network	П	No	No	
IEMA 217-782-7860	UCP 5 Galena Jo Daviess Co	VHF Low, VHF High, UHF, SC21, 25' Mast, 4 RADO Pos, seats 12, satellite 1 MB up 3MB Down, PBX Network		No	No	
IEMA 217-782-7860	UCP 6 Yorkville Kendall SO	VHF Low, VHF High, UHF, SC21, 25' Mast, 4 RADO Pos, seats 12, satellite 1 MB up 3MB Down, PBX Network	П	No	No	
IEMA 217-782-7860	UCP 7 Edwardsville Madison EMA	VHF Low, VHF High, UHF, SC21, 25' Mast, 4 RADO Pos, seats 12, satellite 1 MB up 3MB Down, PBX Network	П	No	No	

Illinois Mobile Communications Units						
AGENCY 24HR PHONE			FEMA TYPE	GATEWAY	САСНЕ	
IEMA 217-782-7860	UCP 8 Bloomington McLean Co	VHF Low, VHF High, UHF, SC21, 25' Mast, 4 RADO Pos, seats 12, satellite 1 MB up 3MB Down, PBX Network	П	No	No	
IEMA 217-782-7860	UCP 9 Rock Island SO	VHF Low, VHF High, UHF, SC21, 25' Mast, 4 RADO Pos, seats 12, satellite 1 MB up 3MB Down, PBX Network	=	No	No	
IEMA 217-782-7860	UCP 10 Tremont Tazewell Co	VHF Low, VHF High, UHF, SC21, 25' Mast, 4 RADO Pos, seats 12, satellite 1 MB up 3MB Down, PBX Network		No	No	
IEMA 217-782-7860	UCP 11 Mt. Vernon Jefferson Co	VHF Low, VHF High, UHF, SC21, 25' Mast, 4 RADO Pos, seats 12, satellite 1 MB up 3MB Down, PBX Network		No	No	
IEMA 217-782-7860	UCP 12 DuQuoin ESDA	VHF Low, VHF High, UHF, SC21, 25' Mast, 4 RADO Pos, seats 12, satellite 1 MB up 3MB Down, PBX Network	=	No	No	
IEMA 217-782-7860	UCP 13 Wauconda FD	VHF Low, VHF High, UHF, SC21, 25' Mast, 4 RADO Pos, seats 12, satellite 1 MB up 3MB Down, PBX Network	Ш	No	Yes	
Cook Co 312.603-8185	UCP 14 Evergreen Park	VHF Low, VHF High, UHF, SC21, 25' Mast, 4 RADO Pos, seats 12, satellite 1 MB up 3MB Down, PBX Network		No	Yes	
Cook Co 312.603-8185	UCP 15 Evergreen Park	VHF Low, VHF High, UHF, SC21, 25' Mast, 4 RADO Pos, seats 12, satellite 1 MB up 3MB Down, PBX Network	=	No	Yes	
Cook Co 312.603-8185	UCP 16 Evergreen Park	VHF Low, VHF High, UHF, SC21, 25' Mast, 4 RADO Pos, seats 12, satellite 1 MB up 3MB Down, PBX Network	П	No	Yes	

#### **GENERATORS**

The following Host Agencies have transportable generator units for deployment to an incident (See Table after map for details):



	Generator Summary					
DISPATCH	AGENCY LOCATION	QTY	MAKE MODEL	kVA		
EM-COM 217-732-4311	Adams Co EMA 101 North 54th Quincy	1 4	CK Power CKT 303 DM CKT 603 DM  Kohler/Felling 100REOZT	30 60		
EM-COM 217-732-4311	Aurora EMA 1100 Mitchell Road Aurora	1 4	CK Power CKT 303 DM CKT 603 DM	30 60		
EM-COM 217-732-4311	Champaign Co. EMA 1701 East Main Urbana	1 4	CK Power CKT 303 DM CKT 603 DM  Kohler/Felling 100REOZT	30 60		
EM-COM 217-732-4311	DuQuoin EMA U.S. Highway 51 S DuQuoin	1 5	CK Power CKT 303 DM CKT 603 DM	30 60		
EM-COM 217-732-4311	Effingham Co EMA 311 Miracle Ave. Effingham	5	CK Power CKT 603 DM Baldor TS 100	100		
EM-COM 217-732-4311	Franklin Co EMA 13613 Oddfellow Ln Benton	1 5	CK Power CKT 303 DM CKT 603 DM	30 60		
EM-COM 217-732-4311	Hoffman Estes EMA 1900 Hassel Road Hoffman Estates	1 4	CK Power CKT 303 DM CKT 603 DM	30 60		

Generator Summary					
AGENCY LOCATION	QTY	MAKE MODEL	kVA		
Lake County EMA 650 W. Winchester	1 3	CK Power CKT 303 DM CKT 603 DM	30 60		
Libertyville	1	Kohler/Felling 100REOZT	100		
EM-COM Macoupin Co EMA 19252 N. Route 4		CK Power CKT 303 DM CKT 603 DM	30 60		
Carlinville	1	Kohler/Felling 100REOZT	100		
	2 1	Baldor TS45 TS45 w/ Light Tower	45 45		
Madison County Wood River	5	Blue Star JD60-01	60		
	1	Cummins	100		
McHenry Co EMA 2200 N. Seminary	3	CK Power CKT 603 DM	60		
Woodstock	1	Baldor TS 100	100		
Manage Court	4	Blue Star JD60-01	60		
Monroe County Waterloo	1	Baldor TS60	60		
	AGENCY LOCATION  Lake County EMA 650 W. Winchester Libertyville  Macoupin Co EMA 19252 N. Route 4 Carlinville  Madison County Wood River  McHenry Co EMA 2200 N. Seminary Woodstock	AGENCY LOCATION  Lake County EMA 650 W. Winchester Libertyville  1  Macoupin Co EMA 19252 N. Route 4 Carlinville  1  Madison County Wood River  5  1  McHenry Co EMA 2200 N. Seminary Woodstock 1  Monroe County	AGENCY LOCATION  Lake County EMA 650 W. Winchester Libertyville  Macoupin Co EMA 19252 N. Route 4 Carlinville  Madison County Wood River  Machenry Co EMA 2200 N. Seminary Woodstock  Moder  Make Moder  CK Power CKT 303 DM Kohler/Felling 1 00REOZT CK Power CKT 303 DM Kohler/Felling 1 100REOZT  Baldor TS45 TS45 w/ Light Tower  CK Power CK T 603 DM  CKT 603 DM  CKT 603 DM  Blue Star JD60-01  Baldor TS 100  Blue Star JD60-01  Baldor TS 100  Baldor  Baldor		

Generator Summary					
DISPATCH	AGENCY LOCATION	OTY		kVA	
EM-COM 217-732-4311	Lee Co EMA 309 S Dixon Ave Dixon	1 4	CK Power CKT 303 DM CKT 603 DM	30 60	
Belleville 911 618-825-2051	St Clair County EMA Mascoutah	5	Baldor TS60	60	
EM-COM 217-732-4311	Will Co EMA 302 N Chicago Joliet	1 4	CK Power CKT 303 DM CKT 603 DM	30 60	
Contact Local MABAS Division -or- RED Center 847-724-5700	in each MABAS Division statewide	70+	Light Tower with four 1500 watt MH lights and 20 kVA Generator	20	

## **Interoperability Points of Contact**

#### TICP/FOG

Pri	ima	rv	P	0	С

Name: Illinois Emergency Management Agency

POC Name: Joe Galvin

Title: Statewide Interoperability Coordinator (SWIC)

Address: 2200 South Dirksen Parkway Springfield, Illinois 62703

Phone: 312-8114-0912 (Work) 217-782-7860 (24/7)

217-622-3278 (Cell)

Email: <u>Joe.Galvin@illinois.gov</u>

SWIC@illinois.gov

#### IEMA DISPATCH

IEMA Dispatch Center (24/7) 217-782-7860

## **STATEWIDE COMMUNICATION CENTERS**

Agency	Division	Dispatch Location	Phone
IEMA	HQ	Springfield	217-782-7860
IDOC	Ops	Springfield	217-558-2200
Tollway	All	Downers Grove	630-241-6800
ISP	Dist. 1	Sterling	815-632-4010
ISP	Dist. 2	Des Plaines	847-294-4400
ISP	Chicago	Des Plaines	847-294-4400
ISP	Dist. 5	Des Plaines	847-294-4400
ISP	Dist. 6	Pontiac	815-844-1500
ISP	Dist. 7	Sterling	815-632-4010
ISP	Dist. 8	Pontiac	815-844-1500
ISP	Dist. 9	Springfield	217-786-6677
ISP	Dist. 10	Pontiac	815-844-1500
ISP	Dist. 11	Collinsville	618-346-3610
ISP	Dist. 12	DuQuoin	618-542-2171
ISP	Dist. 13	DuQuoin	618-542-2171
ISP	Dist. 14	Springfield	217-786-6677
ISP	Dist. 15	Downers Grove	630-241-6800
ISP	Dist. 16	Sterling	815-632-4010
ISP	Dist. 17	Sterling	815-632-4010
ISP	Dist. 18	Collinsville	618-346-3610
ISP	Dist. 19	DuQuoin	618-542-2171
ISP	Dist. 20	Springfield	217-786-6677

Agency	Division	Dispatch Location	Phone
ISP	Dist. 21	Pontiac	815-844-1500
ISP	Dist. 22	DuQuoin	618-542-2171
IDOT	Dist. 1	Schaumburg	847-705-4602
IDOT	Dist. 2	Dixon	815-284-5401
IDOT	Dist. 3	Ottawa	815-434-8431
IDOT	Dist. 4	Peoria	309-671-4487
IDOT	Dist. 5	Paris	217-466-7294
IDOT	Dist. 6	Springfield	217-782-7316
IDOT	Dist. 7	Effingham	217-342-8272
IDOT	Dist. 8	Collinsville	618-346-3237
IDOT	Dist. 9	Carbondale	815-549-2171
IDNR	Region 1	Sterling	815-625-2968
IDNR	Region 2	Bartlett	847-608-3100
IDNR	Region 3	Clinton	217-935-6860
IDNR	Region 4	Alton	618-462-1181
IDNR	Region 5	Benton	618-435-8138
ISSP	Statewide	Springfield	217-524-0200

## **COMMUNICATION POINTS OF CONTACT**

AGENCY	NAME	PHONE EMAIL		
FEMA Region V	Alan Choutka	312-408-4418 alan.choutka@fema.dhs.gov		
IDNR	Lt Jay Danner	217-720-7155 Jay.Danner@Illinois.gov		
IDOC	Frank Hughes	217-558-2200 X6310 FRANK.HUGHES@doc.illinois.gov		
IDOT	Stephen Jackson	217-558-3056 Stephen.Jackson@illinois.gov		
IEMA	Joe Galvin SWIC	217-622.3278 Joe.galvin@illinois.gov		
IESMA	Jim Pitchford	217-248-3548 ema@macoupincountyil.gov		
ILEAS	Russ Gentry	217-328-3800 rlgentry@ileas.org		
ILEAS Dispatch NWCD	Primary Secondary	847-555-1212 309-333-3654		
Illinois TERT	Jeanine Krull	708-552-6039 jkrull@ecom911.net		
ING	Lt Col Don West	217-761-1719 donald.d.west@us.army.mil		
ISP	Lambert Fleck	217-524-3542 Lambert.Fleck@isp.state.il.us		
Toll Highway	Craig Lundt	630.241.6800 x6404 clundt@getipass.com		
MABAS	Chief Paul Maplethorpe	847-546-6001 maplethorpe@mabas-il.org		

AGENCY	NAME	PHONE EMAIL		
MABAS Dispatch	James Clausen	847-498-5860		
RED Center	Janies Gladsen	jclausen@redcenter.org		
AUXCOMM	Bill Springer	630.386.6038		
AOACOIVIIVI	biii Springer	waspringer@ileas.org		
Region 13 / APCO	Chris Kindlosnira	815-405-0998		
Region 13 / APCO	Citis Kiliulespire	ckspire@grundy911.org		
Region 54 / APCO	Billy Cartor	312-497-6802		
Region 54 / APCO	Billy Carter	Billy.carter@illinois.gov		

## **General Reference Information**

#### STANDARD PHONETIC ALPHABET

The phonetic alphabet (shown below) is a standard international procedure for transmission of difficult to pronounce words or place names. The excess use of the phonetic alphabet wastes time on radio networks. Clarification of words can very often be made using plain English spelling without the need to resort to phonetic spelling.

Α	Alfa	Н	Hotel	0	Oscar	٧	Victor
В	Bravo	ı	India	Р	Papa	W	Whiskey
С	Charlie	J	Juliet	Q	Quebec	Х	X-ray
D	Delta	Κ	Kilo	R	Romeo	Υ	Yankee
Ε	Echo	L	Lima	S	Sierra	Z	Zulu
F	Foxtrot	М	Mike	Т	Tango		
G	Golf	N	November	U	Uniform		

# **PRIVACY TONES/CODES**

## CTCSS (PL) Tones

CTCSS (Continuous Tone Coded Squelch System) TONES & CODES				
Freq. (Hz)	Motorola <u>PL ™</u>	Freq. <u>(Hz)</u>	Motorola <u>PL™</u>	
67.0	XZ	136.5	4Z	
69.3 or 69.4	WZ	141.3	4A	
71.9	XA	146.2	4B	
74.4	WA	151.4	5Z	
77.0	ХВ	156.7	5A	
79.7	WB	162.2	5B	
82.5	YZ	167.9	6Z	
85.4	YA	173.8	6A	
88.5	YB	179.9	6B	
91.5	ZZ	186.2	7Z	
94.8	ZA	192.8	7A	
97.4	ZB	203.5	M1	
100.0	1Z	206.5	8Z	
103.5	1A	210.7	M2	
107.2	1B	218.1	M3	
110.9	2Z	225.7	M4	
114.8	2A	229.1	9Z	
118.8	2B	233.6	M5	

CTCSS (Continuous Tone Coded Squelch System) TONES & CODES			
Freq. <u>(Hz)</u>	Motorola <u>PL ™</u>	Freq. <u>(Hz)</u>	Motorola <u>PL™</u>
123.0	3Z	241.8	M6
127.3	3A	250.3	M7
131.8	3B	254.1	0Z

## DCSS - Digital Coded Squelch System

DCSS (Digital Coded Squelch System) CODES							
NORMAL	INVERTED	NORMAL	INVERTED	NORMAL	INVERTED	NORMAL	INVERTED
023	047	155	731	325	526	516	432
025	244	156	265	331	465	523	246
026	464	162	503	332	455	526	325
031	627	165	251	343	532	532	343
036	172	172	036	346	612	546	132
043	445	174	074	351	243	565	703
047	023	205	263	364	131	606	631
051	032	212	356	365	125	612	346
053	452	223	134	371	734	624	632
054	413	225	122	411	226	627	031
065	271	226	411	412	143	631	606
071	306	243	351	413	054	632	624
072	245	244	025	423	315	654	743

DCSS (Digital Coded Squelch System) CODES							
NORMAL	INVERTED	NORMAL	INVERTED	NORMAL	INVERTED	NORMAL	INVERTED
073	506	245	072	431	723	662	466
074	174	246	523	432	516	664	311
114	712	251	165	445	043	703	565
115	152	252	462	446	255	712	114
116	754	255	446	452	053	723	431
122	225	261	732	454	266	731	155
125	365	263	205	455	332	732	261
131	364	265	156	462	252	734	371
132	546	266	454	464	026	743	654
134	223	271	065	465	331	754	116
143	412	274	145	466	662		
145	274	306	071	503	162		
152	115	311	664	506	073		
032	051	315	423				

## NAC - Network Access Codes

NAC – NETWORK ACCESS CODES				
\$293	Default NAC – National			
\$68	Default NAC – Federal LE			
\$F7E	Receiver will un-squelch with any incoming NAC			
\$F7F	A repeater receiver set for this NAC will allow all incoming signals and the repeater transmitter will retransmit the received NAC.			
TGID – TALKGROUP ID				
\$0001	Default			
\$0000	No one, talkgroup with no users - used for individual call			
\$FFFF	Talkgroup which includes everyone			
UNIT ID				
\$00000	No one – never associated with a radio unit			
\$000001-\$98767F	For general use			
\$989680-\$FFFFE	For talkgroup use or other special purposes			
\$FFFFF	Designates everyone – used when implementing a group call with a TGID3			

## **G**LOSSARY

Acronym	Definition
CASM	Communication Assets Survey and Mapping
COMC	Communications Coordinator
COML	Communications Unit Leader
COMT	Communications Technician
ICS	Incident Command System
IL TERT	Illinois Telecommunications Emergency Response Taskforce
INCM	Incident Communications Center Manager
ITECS	Illinois Transportable Emergency Communications System
MCC	Mobile Communication Center
MHz	Megahertz
NIP	National Interoperabe Pool
NIMS	National Incident Management System
RADO	Radio Operator
SCIP	Statewide Communications Interoperability Plan
SEOC	State Emergency Operation Center
SIEC	Statewide Interoperability Executive Committee
SOP	Standard Operating Procedure
SOW	Site On Wheels (STARCOM21)
STR	Strategic Technolog Reserves

Acronym	Definition
SWIC	Statewide Interoperability Coordinator
THSP	Technical Specialist
TICP	Tactical Interoperable Communications Plan
TST	Technology Support Teams
UAC	Unified Area Command vehicle
UCP	Unified Command Post (vehicle)

# General Rules of Use for Communications Equipment or Channels

- Shall only be used for official business or emergency communications.
- Shall be consistent with Federal Communications Commission (FCC) or National Telecommunications and Information Administration (NTIA) Rules.
- Use during a Type 3, 2, or 1 incident shall be authorized by the COML of the incident.
- Verify that the interoperability channel is clear before transmitting to avoid interfering with the communications of another user.
- Rules and Guidelines of interoperable channels (i.e., ISPERN, IREACH, IFERN, etc.) will be followed when using those channels
- Only users actively participating in the incident or authorized by a COML or COMC should monitor or transmit on a given talkgroup.
- Scanning across multiple channels is to be avoided when using interoperable communications.
- ALL voice radio communications are to be brief and concise.
- No obscene, indecent, or profane language shall be used on any channel.
- No use of nicknames, slang, or Citizens Band (CB) type handles shall be used on any interoperable channels.
- The appropriate authority shall immediately deal with unauthorized use of channels or equipment.
- Specific rules of use for specialized equipment must be known and followed when that equipment is put in use.
- Encryption shall not be used at any time on any state or national interoperability channels or talkgroups (with the exception of the new encrypted zones as part of the Interoperable Template (BY & BZ).
- Ground to Air Communications shall be coordinated with the COMC/COML. Airborne use of interoperable channels shall receive prior authorization from COMC/COML.

#### **Interoperable Communications "Watch Out" Situations**

- Inadequate or no communication with crew members or supervisor.
- Users unfamiliar with radio system(s) or assigned radio functionality.
- Organizations in the system do not use the same vocabulary.
- Multiple conversations on the same talkgroup or channel.
- Unable to communicate critical information due to radio congestion.
- High level of background noise (i.e. wind, generators, and power tools).
- Working in the deep interior of a building, parking garage, or underground.
- A single Communications Unit Leader has not been designated.
- Instructions and assignments for Comm Unit are not clear.
- Inadequate number of tactical channels available or assigned.
- Incident is using radio frequencies in more than one radio band.
- Multiple agencies performing radio programming at the incident.
- Different radio bands being used via console or gateway patches. Gateways must be monitored for problems such as "stuck keys", intermodulation, etc.
- Multiple mobile gateways available at the incident.
- Mobile gateway devices being used in a strategic (wide-area) rather than tactical (local) environment.
- Dispatch to dispatch channel patching.