

Illinois Mutual Aid Guide

This profile is intended as an annex to the various CARMA County Profiles produced recently. These frequencies are not usually listed in individual Profiles unless needed as part of a channel plan. These may or may not be used in your area, but should be monitored during any serious incident.

Police, Fire and other emergency services agencies in Illinois rely on a variety of Mutual Aid channels to coordinate activities. Large events rarely involve a single agency and usually require the assistance of multiple agencies. Most Mutual Aid radio traffic is “Intra-Discipline”, in that Police talk to police and Fire talks to fire. While this remains a serious issue there are plans to allow more inter-discipline communications using many of the frequencies listed here.

There are many Mutual Aid groups and associations in and around Illinois. The best known is MABAS, the Mutual Aid Box Alarm System. This was started in the northwest suburbs as a local group of fire departments to allow for orderly move-up of equipment to fires and other events, and has grown to become the basis for Mutual Aid statewide. The MABAS format has also been adopted by neighboring states and its premise is going national.

StarCom21

This is an 800 & 700 MHz statewide, digital trunked system employing CQPSK modulation within the APCO25 digital standards. It's being marketed as a leased radio system to every agency in the state. Motorola will own the infrastructure and administer the system, the State Police will hold the FCC Licenses, and individual agencies and users will own or lease the mobile and portable radios.

The Illinois Terrorism Task Force (ITTF) has arranged to offer a StarCom21 radio to each Law Enforcement agency and Fire District in the state to foster interoperability. These radios are capable of operations on several statewide talkgroups for drills and emergency situations.

See the CARMA StarCom21 profile as well as the several StarCom websites for frequency details. Several talkgroups on the StarCom21 system are dedicated to Mutual Aid purposes. “Statewide” talkgroups work on all towers while “Regional” talkgroups only work on local towers.

<http://www.radioreference.com/modules.php?name=RR&sid=2324> is the RadioReference.com site with the up-to-date frequency info.

Also see <http://groups.yahoo.com/group/STARCOM21> for a Yahoo Group dedicated to monitoring StarCom21.

Cook County InterOp System

Used to provide coordinated communications between Cook County, the local municipalities and other public safety agencies across all three radio bands used in the area. The 453 MHz. channels were retasked from the Cook County Highway Department and the 460 MHz. channels will be provided by the Chicago FD once they transition off of them. The VHF channels are from the old Sheriff's system.

<i>Ch</i>	<i>Output Freq (U)</i>	<i>PL In (U)</i>	<i>PL Out (U)</i>	<i>Output Freq (V)</i>	<i>Input Freq (V)</i>	<i>PL (V)</i>
1	453.9500	127.3	141.3	154.9950	153.7850	107.2
2	453.7500	127.3	156.7	155.6400	153.9350	107.2
3	460.6000	156.7	156.7	155.5950	153.9650	107.2
4	460.6250	156.7	156.7	155.5350	153.9950	107.2

Mutual Aid Box Alarm System (MABAS)

MABAS is an organization of most fire departments in Illinois, as well as departments in adjoining areas of neighboring states. MABAS provides for the orderly move up of fire and EMS resources as incidents escalate. Most operations are on 154.265, known as IFERN (Interagency Fire Emergency Radio Network). Fireground and tactical operations are on several frequencies that vary by area, but most are on 153.830.

MABAS has been adopted by the State of Illinois as the model for mutual aid operations statewide. It's structure and protocols have been adopted by neighboring states. Its principal ideas were adopted by NIPAS, which is the police mutual aid organization. This in turn was adopted by ILEAS, the statewide police mutual aid organization. In these days of Homeland Security, MABAS has been seen as an ideal model for the orderly utilization of resources.

MABAS is broken up into several Divisions that can consist of an area as small as several suburbs or a dozen rural counties. As MABAS expands to cover more of the Midwest some existing Divisions will separate into smaller units. MABAS has a Board of Directors that meets regularly and puts forth guidelines and protocols. Several working groups work on issues like radio communications and other important details.

See the MABAS websites at <http://www.mabas.org/> and <http://www.mabasradio.org> for more information.

MABAS and Fireground Channels: PL's are as dictated by the MABAS board, many radios are not yet programmed for them. PL's were supposed to be used on these channels by January 2006. Monitors are advised to listen in CSQ mode until it is determined that all users are actually transmitting the assigned PL's. MABAS alerts are broadcast on IFERN (154.265) with Plectron codes 1082 Hz. (1.5 sec.) and 701.0 Hz. (3.5 sec.)

154.2650	210.7	IFERN	Interagency Fire Emergency Radio Network
153.8300	69.3	Red Fireground	(Main Fireground channel)
154.2800	74.4	White Fireground	(Still used as South Suburban Mutual Aid by some)
154.2950	85.4	Blue Fireground	
154.2725	94.8	Black Fireground	
154.2875	136.5	Gray Fireground	
153.8375	91.5	Gold Fireground	
154.3025	67.0	IFERN2	Alternate Mutual Aid Base/Mobile
150.7900		"Green Fireground"	(Proposed but never officially adopted, used in some areas.)
155.0550		IREACH	Illinois Radio Emergency Answering Channel, used at many incidents

MABAS Divisions: Each Division has a Headquarters dispatch point and may have a backup as well.

1	Cook (NW)	56	Montgomery Co.
2	Kane (North)	57	Bureau, Putnam County
3	Cook (N), Lake (SE)	58	Bond
4	Lake Co.	59	Crawford, Lawrence
5	McHenry Co.	60	Stark, Marshall
6	DeKalb Co.	61	Hancock
7	Kankakee Co.	62	Warren, Henderson
8	Boone, Winnebago	63	Clay County
9	City of Chicago	64	Shelby
10	DuPage (S), Cook (W)	65	Morgan, Scott
11	Cook (W)	66	Mason
12	DuPage	67	Pike, Calhoun, Scott
13	Kane (S)	101	Kenosha Co. (WI)
14	Kendall Co.	102	Racine Co. (WI)
15	Will (W), Grundy (E)	103	Walworth Co. (WI)
16	DuPage (SW)	104	Rock Co. (WI)
17	Stephenson Co.	105	Green Co. (WI)
18	Ogle Co.	106	Waukesha Co. (WI)
19	Cook (SW), Will (NE)	107	Milwaukee Co. (WI)
20	Cook (W)	108	Grant Co. (WI)
21	Cook (SW)	109	City of Milwaukee (WI)
22	Cook (SE)	110	Portage Co. (WI)
23	Livingston Co.	111	Washington Co. (WI)
24	Cook (S)	112	Brown Co. (WI)
25	LaSalle Co.	113	Sheboygan Co. (WI)
26	Douglas Co.	114	Oneida Co. (WI)
27	Will (NE), Cook (S)	115	Dane Co. (WI)
28	Champaign Co.	116	Wood Co. (WI)
29	Carroll Co.	117	Dunn, Pepin Co. (WI)
30	Whiteside Co.	118	Jefferson Co. (WI)
31	Knox Co.	119	Ozaukee Co. (WI)
32	St. Clair, Monroe, City of St. Louis	120	Fond du Lac Co. (WI)
33	Woodford Co.	121	Vilas Co. (WI)
34	Randolph Co.	122	Calumet Co. (WI)
35	Madison, Macoupin Co.	123	Winnebago Co. (WI)
36	Peoria Co.	124	Iowa Co. (WI)
37	Iroquois Co.	125	Lafayette Co. (WI)
38	Lee Co.	126	Eau Claire Co. (WI)
39	Henry Co.	127	Outagamie Co. (WI)
40	Vermilion Co.	128	Manitowic Co. (WI)
41	McLean, Ford, DeWitt Co.	129	Dodge Co. (WI)
42	Tazewell Co.	130	Marathon Co. (WI)
43	Rock Island Co.	131	Sauk Co. (WI)
44	Menard, Cass, Morgan, Scott, Schuyler area	132	Chippewa Co. (WI)
45	Jackson, Williamson, Johnson, Perry, White	133	Shawano Co. (WI)
46	Macon Co.	134	LaCrosse Co. (WI)
47	Bond, Fayette, Clinton. Union, Washington, area	135	Columbia Co. (WI)
48	Sangamon, Menard Co.	136	Juneau Co. (WI)
49	JoDaviess Co.	137	Oconto Co. (WI)
50	Christian Co.	201	St. Joseph Co. (IN)
51	Logan Co.	202	Putnam Co (IN)
52	Wabash Co.	203	LaPorte Co (IN)
53	Fulton Co.	204	Kosciusko Co (IN)
54	Effingham, Jasper, Richland, Fayette	205	Tippecanoe Co (IN)
55	McDonough Co.	301	Scott Co (IA)

Wisconsin Mutual Aid Frequencies. (“MARC”)

Wisconsin is starting to follow the MABAS plan started in Illinois. The Mutual Aid Radio Channels (MARC) will continue.

151.2800	136.5	“MARC 1”	Repeats 153.8450	
151.2800	136.5	“MARC 2”	Simplex	
154.0100	71.9	“MARC 3”	(Fireground)	(Fire)
154.1300	82.5	“MARC 4”	(Fireground)	(Fire)
156.0000	136.5	“WEM Car”	Wisconsin Emergency Management Car to Car	(EMA)
155.4750	156.7	“WISPERN”	Wisconsin State Patrol Emergency Radio Network	(Police)
155.3700	146.2	“Point”	Point to Point	(Police)
155.2800	D156	EMS Coordination Channel		(EMS)
854.9875	D125	MABAS Red 800		
856.2625	D125	MABAS White 800		
860.2625	D125	MABAS Blue		
851.4500	156.7	8TACRED	Fire/EMS	
851.9500	156.7	8TACWHITE	Fire/EMS	
852.4500	156.7	8TACBLUE	Fire/EMS	
852.9500	156.7	8TACGOLD	Law/DPW	
853.4500	156.7	8TACBLACK	Law/DPW	
853.9500	156.7	8TACGRAY	Law/DPW	

Medical Helicopters

There are several medical helicopter services in the state of Illinois. Most operations involving public safety agencies are going to be on the various Mutual Aid channels in this document. Listed here are the most common channels used. Medical helicopters in this area are usually operated by hospitals or medical corporations. Most are equipped with programmable radios that allow operations on almost any VHF or UHF public safety frequency as well as the VHF aero band. Preprogrammed in most radios will be most mutual aid and common dispatch channels, especially for areas that use the copters regularly.

155.0550	000.0	IREACH	Suggested for use at highway accidents and other situations
154.2650	210.7	IFERN	Still used for many incidents
155.4000		MERCI400	Suggested for use by agencies assigned to MERCI340
155.3400		MERCI340	Suggested for use by agencies assigned to MERCI400
150.7900	000.0	“FG-Green”	Used in Lake County
156.8000	000.0	Marine Channel 16	
151.2800	136.5	WI MARC	Mutual Aid Radio Channel, used in Wisconsin

Flight for Life is run by the Northern Illinois Medical Center (NIMC) and works the northern IL and southern WI area, with many operations into the Milwaukee area.

155.2200	77.0	Dispatch (McHenry and Milwaukee)
155.4000	77.0	NIMC base
463.1750	136.5	Used to contact NIMC, Mob on 468.1750 (Med-8)
463.1750	167.9	Milwaukee copter, Mob on 468.1750 (Med-8) (local use)
462.9750	167.9	Milwaukee copter, Mob on 467.9750 (Med-9) (Long Distance)
462.6125	79.7	FRS channel used in portables
129.2750	AM	Milwaukee Flight Following
123.0500	AM	Old Copter CTAF in Chicago area
123.0250	AM	New Copter CTAF in Chicago area

LifeStar currently uses the A-Beep Lockport LTR trunked system (ID 0-08-010) or 0-11-010, Home Channel 472.2625, on the Chicago system

University of Chicago Aeromedical Network (UCAN)

129.4750	AM	Air Operations
461.9000	88.5	Operations

AirMed 1 (Superior Ambulance Co.)

		(DuPage Airport)
476.8625	110.9	

I-Tac, V-Tac & U-Tac:

There are Mutual Aid channels on the VHF, UHF and 800 bands, all use PL 156.7, although receive PL should not be used on the V-Call and U-Call channels. If used in Digital (APCO25) mode then Network Access Code (NAC) #293 may be used.

I-Tac and U-Tac channels use the regular 45 and 5 MHz repeater offsets and can be used in Simplex mode also. VHF channels are simplex only. The VHF and UHF are not yet in general use but the 800 MHz. ITAC channels are. VHF and UHF channels should be used in Narrowband only.

<u>ITAC Channels</u>		<u>V-Tac Channels:</u>		<u>U-TAC Channels:</u>	
I-Call	851.0125	V-Call	155.7525	U-Call	453.2125
I-TAC1	851.5125	V-Tac 1	151.1375	U-Tac 1	453.4625
I-TAC2	852.0125	V-Tac 2	154.4525	U-Tac 2	453.7125
I-TAC3	852.5125	V-Tac 3	158.7375	U-Tac 3	453.8625
I-TAC4	853.0125	V-Tac 4	159.4725		

Police, EMA & Local Government Aid Channels:

PL's on Mutual Aid channels are in the process of being added, many still transmit in CSQ mode now.

155.3700	156.7	Point to Point	Base stations only (Except Wisconsin)
155.4750	D156	ISPERN	Illinois State Police Emergency Radio Network
	67.0		PL used by ISP Base Stations to avoid patch interference
155.0550	D156	IREACH	Illinois Radio Emergency Answering Channel
155.0250	123.0	ESMARN	Emergency Service Mutual Aid Radio Network
045.4400	103.5	EMA	ESDA/EMA Statewide Channel
045.3600	103.5	IESRN	IL Emergency Services Radio Network
045.5600	103.5	EMA	ESDA/EMA
470.9625	192.8	APERN	Area Police Emergency Network (North Shore towns)

MERCI and MED Channels

PL's for MED, MERCI and Extender channels vary with the area involved. PL 210.7 is supposed to be present in all MERCI radios for Statewide use. Each hospital is assigned a PL for med units to contact it.

MERCI Channels not normally assigned in an area are encouraged to be used for medical helicopter operations. Otherwise IREACH (155.0550) should be used.

155.2800	MERCI280	Hospital emergency channel
155.3400	MERCI340	Ambulance-Hospital (South)
155.4000	MERCI400	Ambulance-Hospital (North)
155.4600		State Police Contact channel, pair with 155.3400, PL 225.7

463.0000 (468.0000)	MED 1	463.1250 (468.1250)	MED 6
463.0250 (468.0250)	MED 2	463.1500 (468.1500)	MED 7
463.0500 (468.0500)	MED 3	463.1750 (468.1750)	MED 8
463.0750 (468.0750)	MED 4	462.9500 (467.9500)	MED 9
463.1000 (468.1000)	MED 5	462.9750 (467.9750)	MED 10

Mobile Extender frequencies for MED channels:

458.0250	458.0750	458.1250	458.1750
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Combined Agency Response Team (CART) is a group of south suburban area fire departments sharing resources for Technical Rescues such as Confined Spaces and trench collapses.

155.1675	155.2725	155.2125	155.3025	465.5750
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North Regional Major Crimes Task Force (NORTAF) (See Norcom)

NORTAF, the North Regional Major Crimes Task Force investigates major crimes, such as homicides and kidnappings for and by it's members. Most communications for NORTAF are on cellular phones or the local channels of the agencies involved. Member agencies include the members of Norcom as well as Evanston and Wheeling.

Northern Illinois Police Alarm System (NIPAS) has a 4 pronged mission: First, it provides for an orderly move-up of police resources in a similar fashion to MABAS. "Car Plans" are used to determine which departments provide personnel to a specified incident just like MABAS Box Cards. Second, NIPAS provides a "Mobile Field Force" (MFF) used to provide trained officers for riot and crowd control as well as other situations. Thirdly, NIPAS provides a pool of special resources available to its members such as interpreters, surveillance equipment and other specialized items that individual departments may need occasionally and another department may have.

Most visible of the NIPAS operations is the Emergency Services Team (EST). EST is a highly trained SWAT type team that can provide hostage rescue and negotiation, entry units and marksmen.

Members in NIPAS include dozens of suburban police departments all over the Chicago area, mostly in the north, northwest and west suburbs. Communications for NIPAS operations, except for EST and MFF is provided by the local departments or handled by existing channels such as ISPERN (155.475) or IREACH (155.055).

Suburban Mutual Assistance Response Team is an association of ESDA/EMA units in the south suburbs that uses MABAS style alarm assignments. Most operations are on 155.025 (ESMARN) with a DPL code of 662.

5th District Tac Team (Evergreen Park Area)

477.1750 470.3250 476.4750 476.8250 477.9000

ALERTS has migrated to a "multi-frequency" reuse system. MDT's scan for the strongest signal and could use any of the following, eventually any 866-869 MHz. frequency should be changed to the 851-853 counterpart.

857.7375 858.4375 859.4375 859.4625 859.7375 866.3625 866.3875 866.4875
866.8625 866.9125 866.9875 867.3625 867.4375 867.8625 867.9625

I-WIN is the Illinois Wireless Information Network. It operates using encrypted data protocols on dedicated frequencies from cellular telephone tower sites using CDMA and EV-DO protocols. The I-WIN system is capable of transferring small files, including images. It's compatible with remote fingerprint scanning and bar code reader technologies and can be easily interfaced with GPS receivers to provide automatic vehicle location data. Most departments using I-WIN aren't yet exploiting all of its capabilities.

Old Low Band Mutual Aid Channels: Several frequencies once used for Mutual Aid are no longer in use:

045.8800 Old Low Band Fire Mutual Aid Channel (Some use remains in WI)
045.8600 Old Low Band Police Mutual Aid Channel (Some use remains in WI)
039.4600 Old Low Band Point to Point (Rarely if ever used anymore downstate)
039.5000 Old Low Band Sheriff's Net (Occasionally still used downstate)

Non-Public Safety operations:

Some private organizations provide support to official emergency providers at fire scenes, disaster assistance etc.:

462.1000 79.7 5-11 Fire Club

ARRL Wilderness Protocol Channels:

The Amateur Radio Relay League (ARRL) has set up a system where ham operators trapped in the wilderness will call on specified frequencies on the hour, using "Long Tone Zero" (LiTZ) which means 10 seconds of the DTMF code 0 as an alert tone. Emergency calls would be made on the nationwide Simplex calling channels in the VHF/UHF bands.

052.5250 146.5200 446.0000 223.5000 1294.5000

700 MHz. Low Power Frequencies: (All PL 156.7)

<i>CH</i>	<i>RX Freq</i>	<i>TX Freq</i>	<i>Ch</i>	<i>TX Freq</i>	<i>Name</i>
1	769.00625	799.00635	2	769.00625 (Simplex)	7FTAC1
3	769.01875	799.01875	4	769.01875 (Simplex)	7LTAC6
5	769.03125	799.03125	6	769.03125 (Simplex)	7GTAC4
7	769.04375	799.04375	8	769.04375 (Simplex)	7FTAC3
9	769.05625	799.05635	10	769.05625 (Simplex)	7NTAC10
11	769.06875	799.06875	12	769.06875 (Simplex)	7NTAC11
949	774.93125	804.93125	950	774.93125 (Simplex)	7FTAC2
951	774.94375	804.94375	952	774.94375 (Simplex)	7LTAC7
953	774.95625	804.95625	954	774.95625 (Simplex)	7GTAC5
955	774.96875	804.96875	956	774.96875 (Simplex)	7MTAC9
957	774.98125	804.98125	958	774.98125 (Simplex)	7LTAC8
959	774.99375	804.99375	960	774.99375 (Simplex)	7NTAC12

700 MHz. Itinerant and Mutual Aid Channels:

Several frequencies have been reserved for itinerant and mutual aid use in the new 700 MHz. band. Since this region of spectrum is evolving these could change.

764.05625 764.06875 775.99375 794.05625 794.06875 805.99375

Homeland Defense, Federal Aid and Terrorism Response

In the wake of the September 11th terrorist attacks new agencies have been formed within the auspices of the Illinois Emergency Management Agency (IEMA), including the Illinois Terrorism Task Force, the Statewide Terrorism Information Center and other organizations. MABAS has also become heavily involved in response planning, including statewide and even inter-state level responses to major incidents. Local, County, State and federal agencies are heavily involved at every level. Four groups of frequency plans have been developed by the federal government to provide interoperability between federal agencies, and between federal and other agencies:

Law Enforcement Response Plans:

Frequencies 167.0875 MHz and 414.0375 MHz are designated as National Calling Channels for initial contact. Initial contact communications will be established using analog FM emission (11KF3E). Frequencies will be identified in mobile and portable radios as follows with CTCSS frequency 167.9 Hz and/or Network Access Code (NAC) \$68F:

VHF PLAN			UHF PLAN		
ID	Mobile TX	Mobile RX	ID	Mobile TX	Mobile RX
Calling	167.0875	167.0875 (Simplex)	Calling	414.0375	414.0375 (Simplex)
Inop 1	162.0875	167.0875	Inop 1	418.9875	409.9875
Inop 2	162.2625	167.2500	Inop 2	419.1875	410.1875
Inop 3	162.8375	167.7500	Inop 3	419.6125	410.6125
Inop 4	163.2875	168.1125	Inop 4	414.0625	414.0625 (Simplex)
Inop 5	163.4250	168.4625	Inop 5	414.3125	414.3125 (Simplex)
Inop 6	167.2500	167.2500 (Simplex)	Inop 6	414.3375	414.3375 (Simplex)
Inop 7	167.7500	167.7500 (Simplex)	Inop 7	409.9875	409.9875 (Simplex)
Inop 8	168.1125	168.1125 (Simplex)	Inop 8	410.1875	410.1875 (Simplex)
Inop 9	168.4625	168.4625 (Simplex)	Inop 9	410.6125	410.6125 (Simplex)

Incident Response Plans:

Frequencies 169.5375 MHz, paired with 164.7125 MHz, and 410.2375 MHz, paired with 419.2375 MHz, are designated as the calling channels for initial contact and will be identified in the radio. Initial contact will be established using analog FM emission. CTCSS will not be used on the calling channels to ensure access by stations from outside the normal area of operation. As required PL's may be used on operations channels.

VHF PLAN			UHF PLAN		
ID	Mobile TX	Mobile RX	ID	Mobile TX	Mobile RX
Calling	164.7125	169.5375	Calling	419.2375	410.2375
VHF 1	165.2500	170.0125	UHF 1	419.4375	410.4375
VHF 2	165.9625	170.4125	UHF 2	419.6375	410.6375
VHF 3	166.5750	170.6875	UHF 3	419.8375	410.8375
VHF 4	167.3250	173.0375	UHF 4	413.1875	413.1875
VHF 5	169.5375	169.5375	UHF 5	413.2125	413.2125
VHF 6	170.0125	170.0125	UHF 6	410.2375	410.2375
VHF 7	170.4125	170.4125	UHF 7	410.4375	410.4375
VHF 8	170.6875	170.6875	UHF 8	410.6375	410.6375
VHF 9	173.0375	173.0375	UHF 9	410.8375	410.8375

FEMA (Federal Emergency Management Agency)

FEMA works with local officials during large scale emergencies like tornadoes or attacks.

138.5750	118.8	FEMA Chicago Office (Channel A5)	Repeats 141.950
140.9250	118.8	FEMA Chicago Office (Channel C5)	Simplex

UHF FEMA Urban Search & Rescue Nets:

408.5125	409.4875	410.4875	410.5125	413.2125
416.0375	416.8125	416.9375	417.5875	417.6625

VHF FEMA Nets and Channel Assignments (All use PL 118.8)

“A” Bank (Repeaters)			“B” Bank (T/A)		“C” Bank (Simplex)	
Output	Input	Name	Frequency	Name	Frequency	Name
140.0250	143.0000	A1	140.0250	B1	140.9000	C1
139.8250	143.0000	A2	139.8250	B2	142.9250	C2
139.9500	143.2500	A3	139.9500	B3	142.9250	C3
139.4500	142.4250	A4	139.4500	B4	142.4000	C4
138.5750	141.9500	A5	138.5750	B5	140.9250	C5
139.9500	142.9750	A6	139.9500	B6	143.6250	C6
140.0250	143.0000	A7	140.0250	B7	140.9000	C7
138.5750	141.9500	A8	138.5750	B8	140.9250	C8
139.8250	143.0000	A9	139.8250	B9	142.3750	C9
139.9500	141.2500	A10	139.9500	B10	142.3750	C10
138.2250	141.8750	A11	138.2250	B11	141.7250	C11

Local area air defense is performed by the Air National Guard and coordinated by NORAD’s Northeast Air Defense System at Rome, New York, through a vast system of remote communications sites. Coordination employs UHF military aircraft frequencies in the 225.000 to 399.975 MHz band in AM Mode. Frequencies used to date include:

225.8000	237.1500	252.9000	263.0000	282.4750	303.1000
313.6000	328.0000	355.2000	369.9000	228.9000	238.5000
260.9000	273.6000	282.6000	311.0000	320.6000	335.9500
364.2000	370.9000	235.9000	243.0000	261.2000	282.4250
303.0000	311.2000	321.0000	346.2500	364.8000	388.9050

FEMA HF Disaster Net (With Channel Numbers):

2.3200 F01	6.0490 F16	11.9940 F31	14.9080 F46	21.9190 F61
2.3600 F02	6.1060 F17	12.0090 F32	15.4640 F47	22.9830 F62
2.3770 F03	6.1080 F18	12.1290 F33	15.5090 F48	23.0280 F63
2.4450 F04	6.1510 F19	12.2160 F34	15.5320 F49	23.3900 F64
2.6580 F05	6.1760 F20	12.2190 F35	15.7080 F50	23.4510 F65
3.3410 F06	6.8090 F21	13.4460 F36	16.2010 F51	23.5500 F66
3.3790 F07	7.3480 F22	13.6330 F37	16.4300 F52	23.8140 F67
3.3880 F08	7.4280 F23	13.7440 F38	17.5190 F53	24.0080 F68
4.6030 F09	9.4620 F24	13.7800 F39	17.6490 F54	24.2820 F69
4.7800 F10	10.1940 F25	13.7830 F40	18.7440 F55	24.5260 F70
5.2110 F11	10.1940 F27	14.4500 F41	19.7570 F56	24.8190 F71
5.3780 F12	10.4930 F26	14.7760 F42	19.9690 F57	
5.4020 F13	11.7210 F28	14.8360 F43	20.0270 F58	
5.8210 F14	11.8010 F29	14.8850 F44	20.0630 F59	
5.9610 F15	11.9570 F30	14.8990 F45	21.8660 F60	

Change Log:

Date	Initials	Items/Page Nr of changed items:
11-20-11	rc	Updated StarCom21, MABAS and medical helicopters
09-16-12	rc	Updated MA PL Tones, add Cook InterOp, 700
10-09-12	rc	Update ITAC