



# ARES COMMUNICATOR

## Information for Scott County Amateurs



May, 2013

Accurate, Reliable Emergency Communications for our Community

Volume 13, Number 5

### Boston Bombings

#### Radio Amateurs Provide Communication Support

As has happened many times in years past, over 200 Amateur Radio operators participated in communications for the Boston Marathon on Monday, April 15, 2013. Unlike prior challenging situations such as very warm weather for the runners or other weather-related challenges, this year's marathon will be remembered for the bombings that took place at the finish line. Despite this heinous act, professional first responders, medical volunteers from the American Red Cross that staffed the route, and Amateur Radio operators performed magnificently in the face of adversity.

"Within minutes, cell phone systems became overloaded and making phone calls and text messages was difficult. Amateur Radio operators performed communication duties under duress and performed admirably. No Amateur Radio volunteers were injured on the course in this terrible act," said Steve Schwarm, W3EVE, who is the Amateur Radio Course Communication Coordinator and associated with a consortium of clubs and groups known as Marathon Amateur Radio Communications (MARC).

"At the finish line net control, which was only 400 feet from the initial blast, we heard the explosion. I poked my head outside to confirm what I thought it was and saw the white smoke. We immediately knew what had happened and commenced a roll call of all ham operators and medical tents. State Police authorities initially ordered us to lock down and post a ham for security watch outside the net control trailer. Thankfully none of our people were hurt," said Paul Topolski, W1SEX, Amateur Radio Finish Line Coordinator.

Following the explosion and roll call, Topolski stated that they began pulling together updates and sent the information via the Massachusetts Emergency Management Agency (MEMA) Web-EOC software tool and provided updates via Amateur Radio.

**Boston Bombings** *cont'd on page 3*

The ARES COMMUNICATOR is published for the benefit of Amateur Radio Operators in Scott County and other interested individuals.  
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Reader submissions encouraged!

### Least Common Denominator

#### Accurate, Reliable Communications

The solution to mathematical operations with fractions often involves finding the least common denominator. The LCD streamlines what at first appears to be an impossible task. Young students either grasp the LCD concept and conquer the problem fractions or stumble around in frustrating confusion for many years.

The least common denominator is the magic that permits Scott ARES to best serve the served agency. When Murphy strikes, and he will, what does the ARES communicator have in the toolbox to get the message through?

The ARES LCD is the 'old fashioned' analog radiogram! This mode relies only upon the knowledge and experience of the communicator, a pencil, paper, and a transceiver.

Laptops don't mix well with a spilled coffee or extended operation beyond the battery capacity. Interfaces are often limited to specific transceivers without significant adjustment. Brain, pencil, paper, and mic overcome those problems. The other LCD we must recognize are the skills and abilities of the various ARES members. A group is as competent as the LCD among the members.

Beginning this month we will review the "analog radiogram" mode to strengthen our LCD.

BREAK - OVER

### ARES Activities

**Weekly Net Monday 7 PM 146.535 mhz (s)**

**Breakfast Saturday, May 11th**

**Digital Monday, May 13th**

#### ARES Nets

MN ARES Phone Net	6:00PM Sunday	Freq: 3.860 mhz
ARRL MN Phone Net	12:00p, 5:30p CST Daily	Freq: 3.860 mhz
ARRL MN CW Net	6:30p, 9:50p CST Daily	Freq: 3.568 mhz

#### NETS WITH OUR NEIGHBORS

North Dakota:	Daily 3.937 mhz	6:30pm
South Dakota:	Daily 3.860 mhz	6:00pm
Wisconsin:	Daily 3.985 mhz	5:30pm
Iowa:	Daily 3.970 mhz	12:30/5:30pm



**FIELD DAY 2013**  
Canterbury City Park  
13400 Inglewood Ave  
Savage, MN  
June 22-23 2013  
Park hours 7am - 10pm

*"You have not lived today until you have done something for someone who can never repay you"*

Ella Quince

## Scott County ARES Contacts

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W0NFE@arrl.net

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5722 West 141<sup>st</sup> Street  
Savage, MN 55378  
952-440-1878  
N0PI@arrl.net



## Test Your NIMS Knowledge

This month we will continue our review of ICS-700a: National Incident Management System (NIMS) An Introduction. Check your recall of the course material with this question.

1. Interoperability:

- A. Primarily involves creating automated systems that allow for the sharing of sensitive incident information.
- B. Is the ability of emergency management/response personnel to interact and work well together.
- C. Requires nongovernmental and private-sector organizations to purchase standardized communication equipment.
- D. Involves oversight by the Federal Communications Commission for assigning emergency frequencies.

Check next month's ARES Communicator for the solution

## April NIMS Knowledge Solution

Exercises should:

- Include multidisciplinary, multi-jurisdictional incidents.
- Include participation of private-sector and nongovernmental organizations.
- Cover aspects of preparedness plans, including activating mutual aid and assistance agreements.

D. Be based on the most catastrophic scenario that could affect the community.

BREAK - OVER



## NBEMS Current Versions

Now is a good time to check to your digital software to make sure you are running the newest versions. You can find the most recent versions posted at both: [www.w1hkj.com/download.html](http://www.w1hkj.com/download.html) and <http://www.scottares.org/NBEMS.htm>

Here are the most recent releases as of May 8, 2013.

Software	Version
Fldigi	3.21.71
Flwrap	1.3.4
Flmsg	1.1.30

The Monday evening training net is a great place to have your digi questions answered and problems solved! Join the Scott ARES group on 146.535 MHz simplex at 7:00pm on Monday evenings.

BREAK - OVER

## **Boston Bombings** - cont'd from page 1

Shortly after sending a few updates both Boston Police and Massachusetts State Police gave the order for the tent area to be evacuated. "In my mind, the course end of things is where a lot of work needed to happen as runners eventually needed to be stopped, congregated and transported to safety and staging areas," Topolski said. "At the finish line, our job was to check on the safety of our people, provide those initial updates and evacuate per police instructions. Three of our Amateur Radio operators redeployed to the Boston Marathon Course Net Control Center."

Across the course outside of the finish line after the bombings occurred, first aid stations were consolidated to larger first aid stations to pool runners for pickup and to keep runners warm as there were enhanced tents along the route where runners could be kept warm and hydrated. At the Heartbreak Hill first aid station, amateur operators had a complete base station setup, including a computer, and were prepared to handle health and welfare traffic as required. Several shelters were set up along the route at churches and schools, and Amateur Radio operators from secured first aid stations went to those shelters, providing communications in those areas until runners were moved out of their locations.

"My role at the request of Steve, W3EVE, as event organizer before the race was to shadow the course medical tent coordinator for the Red Cross, Kandi Finch," said Rob Macedo, KD1CY, who is also the Eastern Massachusetts ARES Section Emergency Coordinator. "It was a challenging position but all organizers on both the Amateur Radio side and Red Cross side said things went well in coordinating during normal race conditions and particularly after the bombings."

At course net control, which was away from the bombings, ham operators controlled their nets calmly and professionally while also expressing an appropriate level of urgency. Over a dozen amateurs at the net control center pooled together to announce messages and keep status of changes along the course route as required.

"Despite the total lack of warning in this situation, amateurs followed a creed I've long since preached since the 9/11 terrorist attacks and the mutual aid response to those attacks: 'blessed are the flexible for they will not get bent out of shape,'" said Steve Schwarm, W3EVE. "Amateurs on the course did what they had to do to assure their own safety and runner safety working with the Red Cross medical people. They did an outstanding job and I was told so by Red Cross organizers as well."

From an ARES perspective, a heightened state of awareness on the Boston Marathon event is typical, but within 15 minutes of the bombings, Eastern Massachusetts ARES Assistant Section Emergency Coordinator, Carl Aveni, N1FY, issued an ARES Stand-By and requested that amateurs give availability for the

cont'd col. 2

next 24 hours. Within minutes, 20 amateurs offered their availability.

"In terms of having amateurs within ARES who cannot get directly involved in the marathon, we have a process where we have them monitor in case of a situation like what occurred on Monday. That process paid off and facilitated a rapid response to our request for possible additional support," said Aveni.

"Additional details and more input to this story are unfolding and will be updated as that information is pulled together," Macedo said.

—Thanks to Paul Topolski, W1SEX; Steve Schwarm, W3EVE, and Rob Macedo, KD1CY, for the information.

BREAK - OVER

## **Take a Dip in the General Pool**

Time to test your knowledge of the information covered by the General Class license exam. Each month we'll take a look at a selection from the question pool. Here is this month's sample:

1. When is it permissible to communicate with amateur stations in countries outside the areas administered by the Federal Communications Commission?
  - A. Only when the foreign country has a formal third party agreement filed with the FCC
  - B. When the contact is with amateurs in any country except those whose administrations have notified the ITU that they object to such communications
  - C. When the contact is with amateurs in any country as long as the communication is conducted in English
  - D. Only when the foreign country is a member of the International Amateur Radio Union
2. How is a directional antenna pointed when making a "long-path" contact with another station?
  - A. Toward the rising Sun
  - B. Along the gray line
  - C. 180 degrees from its short-path heading
  - D. Toward the north

*(Check next month's issue of the ARES Communicator for the answer.)*

## **April General Pool Answer**

1. What does the Q signal "QRV" mean?
  - D. I am ready to receive messages
2. What are the objectives of the Amateur Auxiliary?
  - B. To encourage amateur self regulation and compliance with the rules
3. What skills learned during "hidden transmitter hunts" are of help to the Amateur Auxiliary?
  - B. Direction finding used to locate stations violating FCC Rules.

BREAK - OVER

## Annual Armed Forces Day Crossband Communications Test

The Army, Air Force, Navy, Marine Corps, and Coast Guard are co- sponsoring the Annual Military/Amateur Radio communications tests in celebration of the 63rd anniversary of Armed Forces Day (AFD). Although the actual Armed Forces Day is celebrated on Saturday, May 18, 2013, the AFD military/amateur crossband communications test will be conducted 11 May 2013 to prevent conflict with the Dayton Hamvention (17-19 May 2013), which is the same weekend as the actual armed forces day.

The annual celebration features traditional military to amateur cross band communications SSB voice and Morse code tests. These tests give amateur radio operators and short wave listeners (SWL) an opportunity to demonstrate their individual technical skills, and to receive recognition from the appropriate military radio station for their proven expertise. QSL cards will be provided to those stations making contact with the military stations.

Military-to-amateur cross band SSB & CW test contacts. Military-to-amateur cross band operations will take place on the dates/times in Zulu (UTC), and frequencies listed below for each station. Voice contacts will include operations in single sideband voice (SSB). Some stations may not operate the entire period, depending on propagation and manning. Participating military stations will transmit on selected military mars frequencies and listen for amateur radio stations in the amateur bands indicated below. The military station operator will announce the specific amateur band frequency being monitored. Duration of each voice contact should be limited to 1-2 minutes. The following stations will be transmitting on mars frequencies listed below which are provided as "window/dial frequency" in Khz. Some stations will use CW to provide the opportunity to check in by Morse code.

### ARMY STATIONS:

STATION: AAZ (11 MAY 1400Z - 12 MAY 0300Z)

FREQ	MODE	BAND
4036.0 KHZ	USB	80M
6910.0 KHZ	USB	40M
14402.0 KHZ	USB	20M
18211.0 KHZ	USB	17M
13507.0 KHZ	CW	20M

LOCATION: FORT HUACHUCA, AZ  
ADDRESS: COMDER NETCOM/9TH SC (ARMY)  
ATTN: NETC-ATD (MARS STATION)  
BLDG 90549 JIM AVENUE  
FT. HUACHUCA, AZ 85613-7070

STATION: AAC (11 MAY 1300Z - 12 MAY 0100Z)

FREQ	MODE	BAND
4012.0 KHZ	USB	80M
7360.0 KHZ	USB	40M
13963.5 KHZ	USB	20M
27778.5 KHZ	USB	10M

LOCATION: LEXINGTON, KY  
ADDRESS: HQ 3RD BDE, 95TH DIV (IT)  
MARS STATION  
BARROW ARMY RESERVE TRAINING CTR  
1051 RUSSELL CAVE PIKE  
LEXINGTON, KY 40505

STATION: ABH (11 MAY 1600Z - 12 MAY 2300Z)

FREQ	MODE	BAND
3347.0 KHZ	USB	80M
4438.5 KHZ	USB	80M
4789.5 KHZ	USB	80M
7357.0 KHZ	USB	40M
7718.5 KHZ	USB	40M
14438.5 KHZ	USB	20M
14487.0 KHZ	USB	20M
17592.5 KHZ	USB	17M
20976.0 KHZ	USB	15M

LOCATION: SCHOFIELD BARRACKS, HI  
COMMANDER, 396TH SIGNAL COMPANY  
30TH SIGNAL BATTALION, 96857

STATION: ADB (11 MAY 2200Z - 0100Z)

FREQ	MODE	BAND
14487.0 KHZ	USB	20M
20994.0 KHZ	USB	15M

LOCATION: CAMP FOSTER,  
OKINAWA (BLDG 462)  
MAILING ADDRESS: ATTN: NETC-SPS  
(OKINAWA ARMY MARS/HF STATION)  
78TH SIGNAL BN, 349TH SIGNAL CO UNIT 35152  
APO, AP 96376-5152

STATION: WAR (11 MAY 1200Z - 2400Z)

FREQ	MODE	BAND
4018.0 KHZ	USB/CW	80M
7311.0 KHZ	USB/CW	40M
14438.5 KHZ	USB/CW	20M
27991.0 KHZ	USB/CW	10M

LOCATION: PENTAGON, WASHINGTON, DC  
ADDRESS: PENTAGON AMATEUR RADIO CLUB  
ATTN: AFDCBT, PO BOX 2322  
ARLINGTON VA 22202

STATION: WUG-2B (11 MAY 1300Z - 12 MAY 0200Z)

FREQ	MODE	BAND
4030.0 KHZ	USB	80M
7421.0 KHZ	USB	40M
6823.0 KHZ	USB/CW	40M
14486.0 KHZ	USB	20M
14663.5 KHZ	USB/CW	20M
20973.5 KHZ	USB/CW	15M

LOCATION: MEMPHIS, TN  
ADDRESS: USACE MEMPHIS DISTRICT OFFICE  
ATTN: JIM POGUE  
PUBLIC AFFAIRS OFFICE ROOM B-202  
167 N. MAIN ST.  
MEMPHIS, TN 38103-1894

## Crossband Test - cont'd from page 4

### AIR FORCE STATIONS:

STATION: AIR (11 MAY 1200Z - 2400Z)

FREQ	MODE	BAND
4517.1 KHZ	USB	80M
6996.1 KHZ	USB	40M
13985.1 KHZ	USB	20M
20737.6 KHZ	USB	15M

LOCATION: JOINT BASE ANDREWS  
NAVAL AIR FACILITY WASHINGTON  
ADDRESS: 89 COMMS SQUADRON  
JOINT BASE ANDREWS, MD 20762

STATION: AIR-2 (11 MAY 1200Z TO 2400Z)

FREQ	MODE	BAND
4590.1 KHZ	USB	80M
7540.1 KHZ	USB	40M
13993.1 KHZ	USB	20M

LOCATION: HANCOCK FIELD AIR  
NATIONAL GUARD BASE  
ADDRESS: 174 FIGHTER WING  
6001 E. MOLLOY RD.  
SYRACUSE, NEW YORK 13211

STATION: AGA4AR (11 MAY 1400Z TO 2400Z)

FREQ	MODE	BAND
3299.0 KHZ	USB	80M
7457.0 KHZ	USB	40M
13498.0 KHZ	USB	20M

LOCATION: ARNOLD AIR FORCE BASE  
ADDRESS: 100 KINDEL DRIVE  
A101B / AF MARS  
ARNOLD AFB, TENNESSEE 37389

STATION: AFS5SB (11 MAY 1600Z TO 2300Z)

FREQ	MODE	BAND
3308.0 KHZ	USB/DIG	80M
4517.0 KHZ	USB/DIG	80M
7305.0 KHZ	USB/DIG	40M

DIGITAL MODE TO BE ANNOUNCED  
BY THE OPERATOR OR RSID

LOCATION: BELLEVILLE, IL.  
ADDRESS: 261 CABALLEROS BLVD  
BELLEVILLE, IL 62221

STATION: AFS9AZ (1300Z TO 0400Z)

FREQ	MODE	BAND
7302 KHZ	USB	40M
14411 KHZ	USB	20M
20740 KHZ	USB	15M

LOCATION: PAPAGO MILITARY RES,  
PHOENIX, AZ AND INDIVIDUAL  
ARIZONA AF MARS STATIONS ON A  
ROTATIONAL BASIS STATEWIDE.  
ADDRESS: AFF9AZ  
5427 E BROADWAY AVE,  
APACHE JUNCTION, AZ 85119-9307.

### NAVY/MARINE CORPS STATIONS:

STATION: NBL (11 MAY 1200Z - 12 MAY 0400Z)

NAVMARCORMARS RADIO STATION,  
GROTON, CT

FREQ	MODE	BAND
4041.5 KHZ	LSB	80M
7371.5 KHZ	LSB	40M
14391.5 KHZ	USB	20M
20623.5 KHZ	USB	15M

STATION: NMC1 (11 MAY 1400Z - 12 MAY 0030Z)

USCG COAST GUARD ISLAND, ALAMEDA, CA

FREQ	MODE	BAND
7542.0 KHZ	LSB	40M
15740.5 KHZ	USB	20M
22924.5 KHZ	USB	15M

ADDRESS: ATTN: MR. ERIC SIMMONS  
USCG DIST ELEVEN (DT), COAST GUARD ISLAND,  
BLDG 50-7 ALAMEDA, CA 94501-5100

STATION: NMN (11 MAY 1400Z - 12 MAY 0030Z)

US COAST GUARD CAMSLANT, PORTSOMUTH VA

FREQ	MODE	BAND
7528.6 KHZ	LSB	40M
14459.5 KHZ	USB	20M
19221.5 KHZ	USB	17M

ADDRESS: ATTN: OS3 CATTELL  
COMMANDING OFFICER, USCG CAMSLANT  
4720 DOUGLAS A. MUNRO ROAD,  
CHESAPEAKE, VA 23322

STATION: NNN0ASF (11 MAY 1200Z - 12 MAY 0400Z)

NAVMARCORMARS RADIO STATION, NNN0ASF

FREQ	MODE	BAND
4014.0 KHZ	LSB	80M
7394.5 KHZ	LSB	40M 1200-2359Z, 0200-0400Z
7394.5 KHZ	PSK31	40M 0000-0200Z
13974.0 KHZ	USB	20M 1200-1800Z, 2000-0400Z
13974.0 KHZ	PSK31	20M 1800-2000Z
20997.0 KHZ	USB	15M

ADDRESS: NAVMARCORMARS RADIO  
STATION NNN0ASF KEN KNOX, 109 W  
ELIJAH ST, EASTON MO 64443

STATION: NNN0CQQ (11 MAY 1500Z - 12 MAY 0400Z)

EX-USS MIDWAY MUSEUM SHIP MARS STATION

FREQ	MODE	BAND
4003.0 KHZ	LSB	80M
7351.5 KHZ	LSB	40M
14463.5 KHZ	USB	20M
20936.0 KHZ	USB	15M

ADDRESS: JOSE GARZA, NNN0XBQ  
9789 PASEO MONTRIL, SAN DIEGO CA 92129-3910

## Crossband Test - cont'd from page 5

STATION: NPD(11 MAY 1200Z - 12 MAY 0400Z)

NAVMARCORMARS RADIO STATION,  
NSA MILLINGTON TN

FREQ	MODE	BAND
4456.5 KHZ	LSB	80M
7476.5 KHZ	LSB	40M
14483.5 KHZ	USB	20M
20578.5 KHZ	USB	15M

ADDRESS: A. H. HILLIARD, W4GMM  
4237 BACON ST, MEMPHIS, TN 38128

STATION: NUW (11 MAY 1500Z - 12 MAY 0400Z)

NAVMARCORMARS RADIO STATION,  
NAS WHIDBEY ISLAND, WA

FREQ	MODE	BAND
4044.0 KHZ	LSB	80M
7381.5 KHZ	LSB	40M
13528.5 KHZ	USB	20M
20952.5 KHZ	USB	15M

ADDRESS: NAVMARCORMARS  
RADIO STATION NUW MR. DIGGER O'DELL,  
260 W. PIONEER FSC BLDG.  
NAS WHIDBEY ISLAND, WA 98277

STATION: NWKJ (11 MAY 1200Z - 12 MAY 0400Z)

FREQ	MODE	BAND
4010.0 KHZ	LSB	80M
7348.0 KHZ	LSB	40M
14467.0 KHZ	USB	20M
21758.5 KHZ	USB	15M

ADDRESS: EX-USS YORKTOWN (CV-10)  
PATRIOT'S POINT MARITIME MUSEUM, SC  
C/O FRED HAMBRECHT/NNN0GBS  
129 INDIAN TRACE COURT, GILBERT, SC 29054

STATION: NWVC (11 MAY 1200Z - 12 MAY 0400Z)

FREQ	MODE	BAND
4041.5 KHZ	LSB/CW	80M
7389.0 KHZ	LSB/CW	40M
13826.0 KHZ	USB/CW	20M
20678.5 KHZ	USB/CW	15M

ADDRESS: USS LST 325  
840 LST DRIVE, EVANSVILLE, IN 47713

## Secy of Defense Message Test via Digital Modes

The secretary of defense message will be transmitted via digital modes including RTTY, pactor, amtor, PSK-31, MFSK and MT63 from the stations listed below, including frequencies, mode, and date/time in Zulu (UTC). All frequencies are listed "window/dial frequency" sound cards modes will use standard factory settings (note: not all stations may necessarily operate on all the frequencies listed, depending on propagation and available equipment.)

ARMY BROADCAST STATIONS:

STATION: AAZ (FT HUACHUCA, AZ)

FREQ	MODE	DATE/TIME
6910.0 KHZ	USB, RTTY	12 MAY/0110Z
	MT63	12 MAY/0120Z
14402.0 KHZ	USB, RTTY	12 MAY/0130Z
	MT63	12 MAY/0140Z

STATION: WAR (WASHINGTON, DC)

FREQ	MODE	DATE/TIME
6986.5 KHZ	USB, OLIVIA	11 MAY/1700Z AND 2300Z
	MT63	11 MAY/1715Z AND 2315Z
14438.5 KHZ	USB, PACTOR FEC	11 MAY/1730Z
	RTTY	11 MAY/1745Z
4018.0 KHZ	USB, PACTOR FEC	11 MAY/2330Z
	RTTY	11 MAY/2345Z

STATION: AAC

FREQ	MODE	DATE/TIME
4036.0 KHZ	USB, MT63	11 MAY/0030Z
7357.0 KHZ	USB, RTTY	12 MAY/0100Z

NAVY/MARINE CORPS BROADCAST STATIONS:

STATION: NBL (GROTON CT)

FREQ	MODE	DATE/TIME
7370.0 KHZ	RTTY	11 MAY/2340Z
	AMTOR FEC	12 MAY/0010Z
	MT63	12 MAY/0040Z
14393.0 KHZ	RTTY	11 MAY/2340Z
	AMTOR FEC	12 MAY/0010Z
	MT63	12 MAY/0040Z

STATION: NNN0ASF (EASTON, MO)

FREQ	MODE	DATE/TIME
7393.0 KHZ	RTTY	11 MAY/2340Z
	AMTOR FEC	12 MAY/0010Z
	MT63	12 MAY/0040Z
13975.5 KHZ	RTTY	11 MAY/2340Z
	AMTOR FEC	12 MAY/0010Z
	MT63	12 MAY/0040Z

STATION: NNN0CQQ (SAN DIEGO CA)

FREQ	MODE	DATE/TIME
7350.0 KHZ	RTTY	12 MAY/0240Z
	AMTOR FEC	12 MAY/0310Z
	MT63	12 MAY/0340Z
14465.0 KHZ	RTTY	12 MAY/0240Z
	AMTOR FEC	12 MAY/0310Z
	MT63	12 MAY/0340Z

## Sec Defense Message - cont'd from page 6

STATION: NUW (WHIDBEY ISLAND WA)

FREQ	MODE	DATE/TIME
7380.0 KHZ	RTTY	12 MAY/0240Z
	AMTOR FEC	12 MAY/0310Z
	MT63	12 MAY/0340Z
13530.0 KHZ	RTTY	12 MAY/0240Z
	AMTOR FEC	12 MAY/0310Z
	MT63	12 MAY/0340Z

STATION: NWKJ (PATRIOTS POINT MARITIME MUSEUM SC)

FREQ	MODE	DATE/TIME
7346.5 KHZ	RTTY	12 MAY/0240Z
	AMTOR FEC	12 MAY/0310Z
	MT63	12 MAY/0340Z
14468.5 KHZ	RTTY	12 MAY/0240Z
	AMTOR FEC	12 MAY/0310Z
	MT63	12 MAY/0340Z

### Submission of Sec of Defense Test Message Entries.

Transcripts of the RTTY, pactor, amtor, PSK-31, MFSK and MT63 receiving test should be submitted "as received". No attempt should be made to correct possible transmission errors. Provide time, frequency and call sign of the military station copied, including: name, call sign, and address (including zip code) of individual submitting the entry. Ensure this information is placed on the paper containing the test message. Each year a large number of acceptable entries are received with insufficient information, or necessary information was not attached to the transcriptions and was separated, thereby precluding issuance of a certificate. Entries must be sent to the appropriate military address as follows:

AIR FORCE BROADCAST STATIONS

STATION: AIR-2 (HANCOCK FIELD AIR NATIONAL GUARD BASE)

FREQ	MODE	DATE/TIME
7831.1 KHZ	RTTY	12 MAY/1930Z
	MT63	12 MAY/2030Z
	MFSK	12 MAY/2100Z
14877.1 KHZ	RTTY	12 MAY/2130Z
	MT63	12 MAY/2230Z
	MFSK	12 MAY/2300Z

### AAZ/WAR/AAC SEND ENTRIES TO:

Armed Forces Day Celebration  
COMMANDER NETCOM/9TH ASC  
ATTN: NETC-ATD (MARS STATION)  
BLDG 90549 JIM AVENUE  
FORT HUACHUCA, AZ 85613-7070

### NBL, NNN0ASF, NNN0CQQ, NUW OR NWKJ SEND ENTRIES TO:

Armed Forces Day Celebration  
CHIEF, NAVY-MARINE CORPS MARS  
CHEATHAM ANNEX BLDG 117  
108 SANDA AVE  
WILLIAMSBURG, VA 23185-5830

### AIR2 SEND ENTRIES TO:

Armed Forces Day Celebration  
38 CYRS/CHIEF, AF MARS  
203W LOSEY ST, RM 1200  
SCOTT AFB, IL 62225



## ARRL Radiogram

### Written Message Format

The basic role of emergency communicators is to move information (traffic) accurately and rapidly between senders and receivers to resolve a situation. The traffic can be either formal (written in a specific format) or informal (usually verbal) messages. Both types of traffic have their place in emergency communication. Informal messages are best used for non-critical and simple messages, or messages that require immediate action, those are delivered directly from the author to the recipient. Formal messages are more appropriate when two or more people will handle them before reaching the recipient, or where the contents are critical or contain important details.

Over the next several issues of the newsletter we will examine the formal written traffic process. Formal written traffic follows a standard message format so that everyone knows what to expect. This increases the speed and accuracy with which you can handle messages.

There are four basic parts to the message format; Preamble, Address, Text, and Signature. These main parts are identified in the sample message shown below.

**The “Preamble,”** sometimes referred to as “the header,” consists of administrative data such as the message number, originating station, message precedence (importance) and date/time of origination. The combination of the message number and the originating station serves as a unique message identifier, which can be traced if necessary.

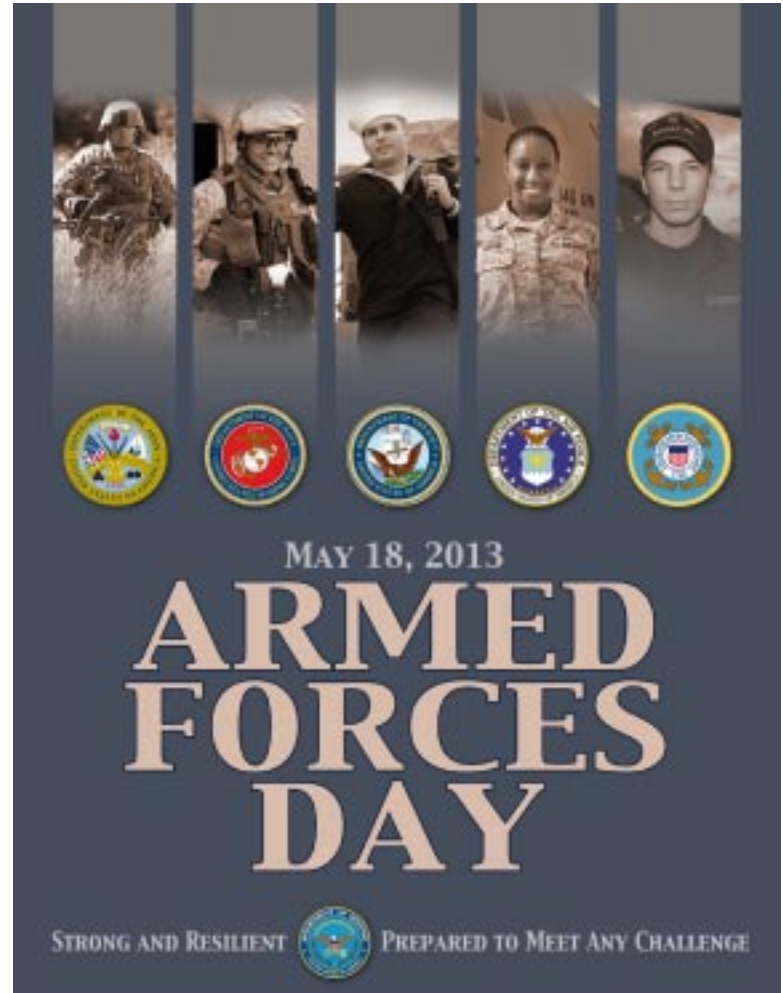
**The “Address”** includes the name, street address or P.O. box, city, state, and ZIP of the recipient. The address should also include the telephone number with area code.

**The “Text”** of the message should be brief and to the point, limited to 25 words or less when possible. The text should be written in lines of five words (ten if using a keyboard) to make it easier and faster to count them for the “check.”

**The “Signature”** can be a single name, a name and call sign, a name and a title, “Mom and Dad”, and occasionally a return address and phone number – whatever is needed to ensure that the recipient can identify the sender and that a reply message can be sent.

Next issue we’ll examine each of the items in the preamble in detail.

BREAK - OVER

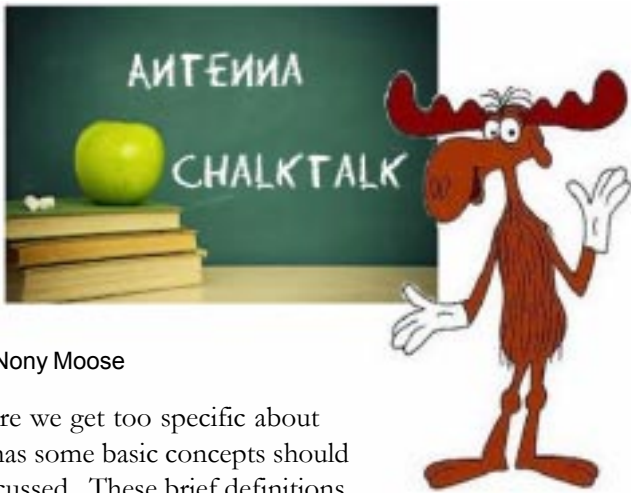


### Greyhound Ready



PACIFIC OCEAN Sailors prepare to launch a C-2 Greyhound assigned to the Providers of Fleet Logistics Squadron Three Zero (VRC 30) off the flight deck of the aircraft carrier USS Ronald Reagan (CVN 76). Ronald Reagan is underway conducting flight deck certifications and carrier qualifications off the coast of Southern California.





by: A. Nony Moose

Before we get too specific about antennas some basic concepts should be discussed. These brief definitions will be our guide. A. Nony's definition of the 'best' antenna is the one you actually use to get on the air!

**Wavelength** - The official formula for a half wave antenna in free space is  $492/f$  where  $f$  is in Megahertz (MHz) and the length is in feet. For a practical 1/2 wavelength dipole length is feet use general formula of  $468/f$  where  $f$  is in megahertz (MHz).

A half wave antenna length (in inches) in free space is calculated by the official  $5904/f$  where  $f$  is in megahertz (MHz) and the calculated length is in inches.

**Impedance** - Antenna impedance is a measure of the resistance to an electrical signal in an antenna. Many factors have an impact on an antenna's ability to transmit a signal, including the environment that the antenna is in and the design and composition of the antenna. The ratio of voltage to current, which is equal to antenna impedance, is expressed in units called ohms. Impedance matching is an important consideration when designing antennas of many different types. as it involves the transfer of electrical energy through the antenna.

**Velocity Factor** – VF of a transmission line is the speed at which a radio signal passes through the transmission line (wire), relative to the speed of light. The speed of radio signals in a vacuum, for example, is the speed of light, and so the velocity factor of a radio wave in a vacuum is unity, or 100%. In electrical cables, the velocity factor mainly depends on the insulating material used in the cable.

VF%	Transmission line type
95-99	Open-wire "Ladder" Line
80	Twin-lead
82	RG-8X coaxial cable (foamed polyethylene dielectric)
66	RG-213 coaxial cable (solid polyethylene dielectric)

**Resonance** - An antenna is a form of tuned circuit consisting of inductance and capacitance, and as a result it has a resonant frequency. This is the frequency where the capacitive and inductive reactances cancel each other out. At this point the

antenna appears purely resistive, the resistance being a combination of the loss resistance and the radiation resistance.

**SWR** – Usually defined as a voltage ratio called the VSWR, for voltage standing wave ratio. Simply put, the SWR indicates the relative amount of signal present at the antenna feedpoint. When a transmitter is connected to an antenna by a feed line, the impedance of the antenna and feed line must match exactly for maximum energy transfer from the feed line to the antenna to be possible.

An ideal transmission line would have an SWR of 1:1, with all the power reaching the antenna and no reflected power.

**Matching** - An antenna's input impedance may range from as low as 15 ohms or as high as 1000 ohms. However, most transmitters have an output impedance of 50 ohms and transmission lines are only available in a limited number of characteristic impedances, so it is necessary to transform the antenna input impedance to the same value as the transmission line characteristic impedance. This process is called matching.

*(A. Nony Note: You will find many common formulas here: [www.nr6ca.org/formulas.html](http://www.nr6ca.org/formulas.html))*

BREAK - OVER



## ARES Breakfast

Saturday May 11th  
7:30AM  
Perkins Restaurant  
Savage, MN

## NECOS Schedule May 2013

6 May	KB0FH Bob
13 May	KC0YHH Tony
20 May	N0PI Dan
27 May	W0NFE Bob
25 May	KB0FH Bob
1 Jun	KC0YHH Tony
8 Jun	N0PI Dan
15 Jun	W0NFE Bob
22 Jun	KB0FH Bob
29 Jun	KC0YHH Tony