



MINNESOTA MARSGRAM



Information for Minnesota Navy-Marine Corps. MARS Members

August, 2009

Volume 13, Number 8

NNN0ALL Minnesota

by NNN0GAZ Tim

Greetings Last month I reported that there was no news concerning the "sun-setting" of the Navy-Marine Corps MARS program. No doubt some of you have read the article in the latest issue of CQ – reporting roughly the same thing. At this time there is a little news and I believe at the Central Area Region Five meeting there will be an update to the situation and perhaps even a plan as to our future.

At this time the billets for Area Directors have been eliminated and the only funded position in the Navy-Marine Corps MARS program will be that of Chief Navy-Marine Corps MARS. What funding the program has will be maintained through fiscal year 2010. What happens after fiscal year 2010 is the question.

Chief Anderson, Central Area Director, will be remaining at Great Lakes. During his remaining time in the Navy, Chief Anderson is close to retirement, he will be working to return the base television station to service, he will not be affiliated with the Navy-Marine Corps MARS program in a professional capacity. Chief Anderson has indicated he will continue to participate as a member of the Illinois Navy-Marine Corps MARS. The

equipment at NAV 4, will be moved to the base television station and retasked to support a club station at Great Lakes.

While this is not entirely good news, it is not all bad either. Lets focus on the positive side – we have a year to prove that the program can operate staffed almost entirely by volunteers. We have time to determine our fate – do we revitalize the program, prove our worth and remain a part of emergency communications community? We also have a year to enlist the aid of our Washington delegation – inform them about the role we play and how we can be of service. Of course, Army and Air Force MARS would be wise to watch what happens – "sun-setting" the first service is difficult, after the first all the others are easy.

As I stated last month – we need your participation to succeed. Attending evening nets is one piece of the puzzle. We need your ideas, input and interest in the program. There has been much talk about served agencies – Who do we serve? Who should we serve?

How do we go about publicizing who we are, what we do, the resources we bring to the table? Many of you have asked and answered these questions in your professional life – now is the time to help formulate and execute the plan for this program, we need your help.

I don't know how else to put it – we need members to participate – this is not just about net participation – perhaps doing a presentation at a club meeting, talking to agencies that use and value amateur radio operators, working with Army and Air Force MARS, etc. We need your ideas and help.

BT OVER



The MINNESOTA MARSGRAM is published for the benefit of Amateur Radio Operators in Minnesota and other interested individuals.

The contents DO NOT reflect official Navy positions.

EDITOR: Bob Reid NNN0XYA / NNN0GAZ3

Snail Mail: 13600 Princeton Circle
Savage, MN. 55378-2625

E-Mail: n0bhc@aol.com

Minnesota State Coordinator:

Tim Isom NNN0XEE / NNN0GAZ

Content Contributions Welcomed and Encouraged

MINNESOTA TRAFFIC NETS

Designator	Frequency	Local Times
5G1B	Pri. NCE Sec. NBG Ter. NAR	18:30 Daily

MINNESOTA ADMIN. NET

5G4A	Pri. NCE	19:00 2nd Sunday
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MARS DATA SYSTEM

NN0DVD	Freq. NCO AFSK/USB
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Website <http://www.mnmars.org>

Intranet site <http://www.communityzero.com/mnmars>



Navy - Marine Corps. MARS

WHEW! Looks like we dodged that bullet. Until September 2010.

What is going to happen in twelve months? No one knows for sure. We have an opportunity to show the value of the Navy-Marine Corps. MARS

program. MARS members know the program is a valuable communications resource. The problem with MARS is that it is the best kept secret in emergency communications.

To sum it up, we have a public relations problem. Public relations as it relates to our situation, is all about building positive relationships among those individuals and agencies that may utilize our skills.

Who are these possible customers, let's call them served agencies, for the MARS program? Start locally and think about who might need communications beyond the range of the local repeater in an emergency.

Your local government might need a reliable link to a regional ops center. Your county might need to provide information to the capital in St. Paul or coordinate regionally. Local offices of state agencies spread throughout the state may need to coordinate with other locations.

Sure, but there are communications systems in place to handle those needs. Until those systems fail!

What happens when no one at the county knows how to operate the ALE radio or the antenna is down. What happens if the cellular infrastructure is down? What

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MN Navy-Marine Corps MARS Staff

Minnesota State Director

NNNOGAZ - Tim Isom - NNNOXEE

Assistant to the State Director

NNNOGAZ ONE

Al Doree - NNN0KZC

Assistant to the State Director: Em. Comm.

NNNOGAZ TWO

Al Doree - NNN0KZC

Assistant to the State Director: Net Ops/Rpts

NNNOGAZ THREE

Bob Reid - NNN0XYA

Assistant to the State Director: Training

NNNOGAZ FOUR

Robert King - NNN0SXU

Test Your NIMS Knowledge

Each month we take a look at a topic covered in the FEMA on-line courses required of all emergency communications volunteers. See how much you recall from the course.

A delegation of authority:

- Relieves the granting authority of the ultimate responsibility for the incident.
- Is required even if the Incident Commander is acting within his or her existing authorities.
- Specifies the Incident Action Plan to be implemented by the Incident Commander.
- May be needed when the incident scope is complex or beyond existing authorities.

Check in next month's MARSGRAM for the answer.

July NIMS Solution

Branches within the ICS organization can be established:

- Geographically or functionally.

BT OVER

Secret cont'd from col 1

happens to the digital email network when the landline system is down?

You get the idea.

So how do we toot our own horn? Public relations. Building positive relationships is not a linear A to B to C process. PR may be haphazard and unpredictable. For some people this is an uncomfortable situation. The world of public relations just does not function like Ohms Law. So be ready for some unanticipated results.

Each one of us IS Navy MARS in our community. We are the local face of the MARS program. We need to make people aware of what Navy MARS brings to the table in emergency communications.

What do we bring to the table?

- Familiar with local conditions
 - Flexibility to use our knowledge and skills to problem-solve on the fly
 - HF communications
 - Digital HF Traffic Handling (MT63)
 - HF E-mail message handling
 - Report conditions to DoD and Homeland Security.
- You have heard the phrase 'Think Outside the Box' and it applies to our usefulness to a served agency. You may have to move out of your comfort zone and consider non-traditional uses for our HF communications skills. This is a task MARS operators can handle.

There are tools available for your use in spreading the word about MARS. In coming months we will be explaining these tools and how they make the job easier.

BT OVER

Training Corner

Communications Language Review

by: Bob, NNNOGAZ FOUR

"ROGER" - A necessary and important part of our communications language are the workhorses known as prowords. These words relate to procedure, hence the name. The most used and abused proword is "ROGER". When used in communications other than as a name on a FM or TO line of a third party message, "ROGER" means simply that "I have received your transmission satisfactorily". No more, no less. This proword is not meant to be used as a substitute for "yes" or "affirmative", or as a question "is that a roger".

In the realm of formal message transmission "ROGER" is used to indicate accountable receipt for a message or group of messages. A message may be transmitted by a station, but until that station receives an accountable receipt for the message, responsibility for the message has not been transferred. Accountable receipt is made by use of the proword "ROGER".

Movies can be held accountable for some of the bastardized communication portrayals. Screen writers opt for "dramatic impact". "Roger Wilco" becomes almost a real character. Limit your use of "ROGER" to that for which it is intended.

"I SPELL" - A very important proword is "I SPELL". "I SPELL" is used when a word has several spellings and for difficult words such as some ethnic names, abbreviations and address groups. Words which sound alike but for which there is more than one spelling often occur. A message text might read "Use your big fat right hand and write me a letter right away". The name John may also be spelled Jon and there is Cathy, Kathy, Kathie and so on. When the word can be pronounced, the transmitting station pronounces it, then says "I SPELL" and proceeds to spell it, phonetically, one letter at a time, and then pronounces it again. Example, "WRITE. I SPELL WHISKEY ROMEO INDIA TANGO ECHO. WRITE".

An abbreviation is never pronounced unless it is readily recognizable and authorized; for example, USN, USMC, MARS, NMAT, etc. The abbreviation "FSSG" would be transmitted "I SPELL FOXTROT SIERRA SIERRA GOLF". A difficult name (for some of us), such as "Cieslevicz" (See-slevich) would be transmitted "I SPELL CHARLIE INDIA ECHO SIERRA LIMA ECHO VICTOR INDIA CHARLIE ZULU". A group which begins with a letter but which also contains one or more figures will be prefaced with "I SPELL" and then each element of the group, transmitted one at a time. An Amateur Radio call

sign would be transmitted "I SPELL, WHISKEY BRAVO ZERO ZULU ZULU ZULU" for example. Note the proword "FIGURES" is not used in a single group when "I SPELL" is used.

"FIGURES" and "TIME" - The proword "FIGURES" is being considered with the proword "TIME" because of errors often made in the transmission of a message. The proword "TIME" is used in transmitting a message and is spoken immediately following the precedence of a message. For example, "RELAY PRIORITY TIME" or "MESSAGE FOLLOWS ROUTINE TIME". This means that everything that follows it, until the next proword, is concerned with the time the message was originated. This proword is used only when a message heading is being transmitted. The next proword in the heading is the proword "FROM". Looking at what follows to precedence and what is before "FROM", we see a six digit date-time-group, a time type indicator (Z), a three letter month abbreviation and the four digits of the current year. All of these relate to time. The proword "TIME" is only to be used when transmitting the time line of a message. The proword "FIGURES" is not to be used when the time line is transmitted. A date-time group appearing anywhere else, such as in the text of a service message or as a reference, is handled using the proword "FIGURES".

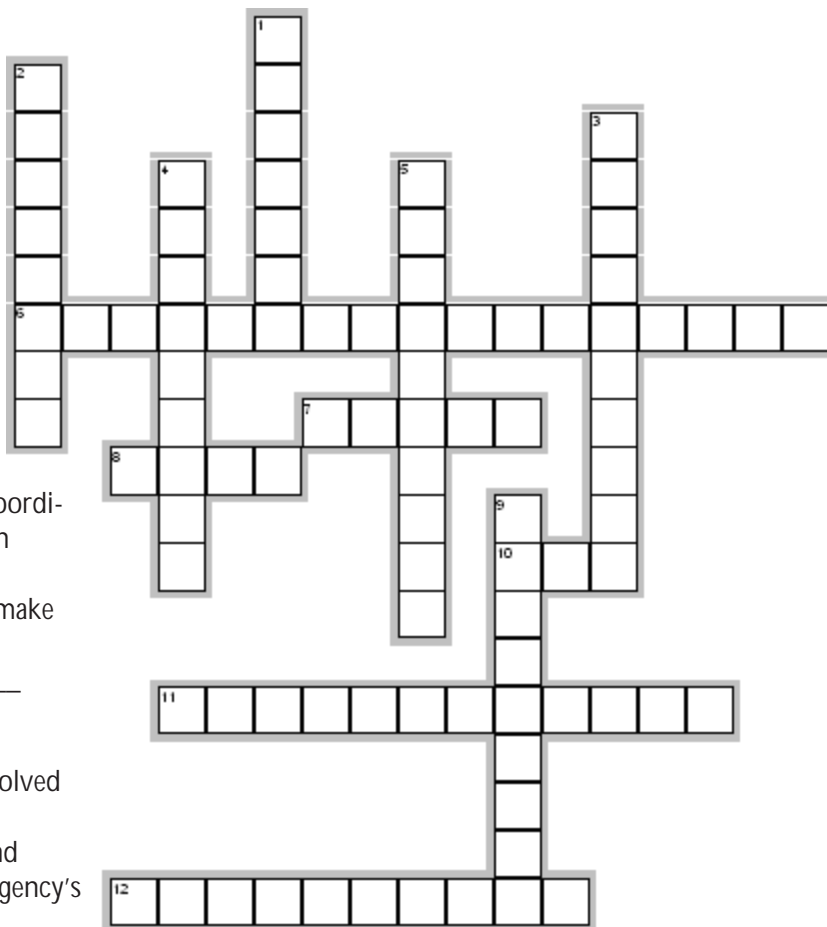
The proword "FIGURES" is used when a number or group of numbers is encountered in transmitting a message. The proword is spoken, then each individual numeral is given until the group is complete, for example, a frequency in kilohertz: "FIGURES FOUR FI-IV ONE FI-YIV KILOHERTZ". When a date-time-group, not on the time line, is to be transmitted the transmission is thus: "FIGURES ZERO TWO WUN THU-REE WUN NINER ZULU FEBRUARY FIGURES TWO ZERO ZERO THU-REE".

When a group is encountered which starts with a figure but contains both letters and figures, the proword "FIGURES" is used. The designator for a typical driver tube would be transmitted "FIGURES WUN TWO BRAVO YANKEE SEVEN" for example.

When using the proword "FIGURES", remember that each numeral in the group is transmitted separately.

Finally, the time line of a message: "RELAY, ROUTINE, TIME WUN NINER WUN FI-IV ZERO ZULU, MAY TWO ZERO ZERO THU-REE"; a date in the text of a message: "FIGURES WUN NINER WUN FI-IV ZERO ZULU MAY FIGURES TWO ZERO ZERO THU-REE": a group combining numerals and letters which begins with a numeral: "FIGURES FO-WER HOTEL WUN BRAVO".

INCIDENT COMMAND SYSTEM



Across

- 6. Under the ICS, the one person in charge is always called the _____ ?
- 7. Each operating section has its own _____ ?
- 8. Incident command system used in Minnesota.
- 10. A model tool for the command, control, and coordination of resources and personnel at the scene of an emergency.
- 11. The Information, Safety, and Liaison Officers make up the IC's _____ ?
- 12. Operating sections may have various _____ working on specific goals.

Down

- 1. The section that uses staff from each agency involved to track the cost of the disaster.
- 2. Section responsible for information gathering and dissemination and working out the details of each agency's response.
- 3. Section involving Police, Fire, Public Works, Red Cross and relief agencies who are actually in the field doing the work to protect the public.
- 4. The section that provides services only for the responding agency personnel, not the general public.

- 5. _____ tasks in the ICS are performed under the overall direction of a single Incident Commander (IC) in a coordinated manner.
- 9. Firefighting Resources of California Organized for Potential Emergencies – early ICS organization.



July Crossword Solution



Across

- 4. JOULE—Measure of a quantity of energy
- 5. OHM—Unit of resistance.
- 6. ALTERNATING _____ current - Flow of charged particles through a conductor first in one direction then another
- 8. COULOMB—Unit of measure of a quantity of electrically charged particles.
- 9. POWER—The rate at which work is done.
- 10. EMF—Term used to define the force of attraction between two points of different charge potential.

Down

- 1. DIRECT _____ current - Flow of charges particles through a conductor in one direction
- 2. ENERGY—Capability of doing work. Measured as watt-seconds or kilowatt-hours.
- 3. VOLT—measure of electromotive force.
- 6. ATOM—The smallest particle of matter that makes up an element.
- 7. AMPERE—Measure of the flow of charged particles per unit of time

Wireless Power Harvesting for Cell Phones

A cell phone that never needs recharging might sound too good to be true, but Nokia says it's developing technology that could draw enough power from ambient radio waves to keep a cell-phone handset topped up.

Ambient electromagnetic radiation—emitted from Wi-Fi transmitters, cell-phone antennas, TV masts, and other sources—could be converted into enough electrical current to keep a battery topped up, says Markku Rouvala, a researcher from the Nokia Research Centre, in Cambridge, U.K.

Rouvala says that his group is working towards a prototype that could harvest up to 50 milliwatts of power—enough to slowly recharge a phone that is switched off. He says current prototypes can harvest 3 to 5 milliwatts.

The Nokia device will work on the same principles as a crystal radio set or radio frequency identification (RFID) tag: by converting electromagnetic waves into an electrical signal. This requires two passive circuits. "Even if you are only getting microwatts, you can still harvest energy, provided your circuit is not using more power than it's receiving," Rouvala says.

To increase the amount of power that can be harvested and the range at which it works, Nokia is focusing on harvesting many different frequencies. "It needs a wideband receiver," says Rouvala, to capture signals from between 500 megahertz and 10 gigahertz—a range that encompasses many different radio communication signals.

Historically, energy-harvesting technologies have only been found in niche markets, powering wireless sensors and RFID tags in particular. If Nokia's claims stand up, then it could push energy harvesting into mainstream consumer devices.

Earlier this year, Joshua Smith at Intel and Alanson Sample at the University of Washington, in Seattle, developed a temperature-and-humidity sensor that draws its power from the signal emitted by a 1.0-megawatt TV antenna 4.1 kilometers away. This only involved generating 60 microwatts, however.

Smith says that 50 milliwatts could require around 1,000 strong signals and that an antenna capable of picking up such a wide range of frequencies would cause efficiency losses along the way.

"To get 50 milliwatts seems like a lot," adds Harry Ostaffe, head of marketing for Pittsburgh-based company Powercast, which sells a system for recharging sensors from about 15 meters away with a dedicated radio signal.

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Steve Beeby, an engineer and physicist at the University of Southampton, U.K., who has researched harvesting vibrational energy, adds, "If they can get 50 milliwatts out of ambient RF, that would put me out of business." He says that the potential could be huge because MP3 players typically use only about 100 milliwatts of power and spend most of their time in lower-power mode.

Nokia is being cagey with the details of the project, but Rouvala is confident about its future: "I would say it is possible to put this into a product within three to four years." Ultimately, though, he says that Nokia plans to use the technology in conjunction with other energy-harvesting approaches, such as solar cells embedded into the outer casing of the handset.

From Technology Review

- BT OVER



Jr. ROTC Afloat

GREAT LAKES, Ill. (June 17, 2009) Navy Junior ROTC cadets paddle a rubber raft on Lake Michigan at the Naval Stations Great Lakes Marina. The cadets, from NJROTC Area 3 units across eight states, are attending the annual NJROTC Leadership Academy. More than 140 cadets from 55 high schools in Minnesota, Iowa, Illinois, Wisconsin, Michigan, Indiana, Ohio and West Virginia, took part in the weeklong event.

W1AW Goes Digital

Update Digital Modes To Its Transmitting Schedule

After a survey of W1AW-listeners, W1AW will begin using two different modes on August 17, 2009.

On August 17, 2009, W1AW will replace its AMTOR and ASCII transmissions with PSK31 and MFSK16, respectively. RTTY (Baudot) will continue to be the first digital mode used in the transmission schedule.

The frequencies used by W1AW for all its digital transmissions will remain the same. All regular 6 PM and 9 PM eastern time digital transmissions will begin with RTTY. PSK31 and MFSK16 will be sent as time allows.

The Tuesday and Friday Keplerian data bulletins will be sent using RTTY and PSK31.

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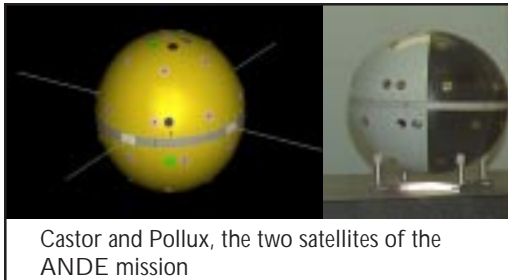
Shuttle Launches Two Student Built Satellites

ARRL Letter vol.28 no.30

The space shuttle Endeavour returned to Earth on Friday, July 31, but before it left orbit, it deployed four student-built satellites, all with telemetry downlinks in the 2 meter (70 cm) amateur bands.

The twin spherical satellites — named Castor and Pollux — were designed by students in cooperation with the Naval Research Laboratory as part of the Atmospheric Neutral Density Experiment (ANDE) <www.nasa.gov/mission_pages/station/science/experiments/STP-H2-ANDE.html>. Both satellites will transmit 1200-baud packet radio telemetry on 145.825 MHz. Hams are encouraged to submit telemetry reports with special QSLs and mission patches planned (check the ANDE Web site for updates).

Castor and Pollux carry an FX.25 experiment that adds Forward Error Correction to standard AX.25 packets.



Castor and Pollux, the two satellites of the ANDE mission

The hope is that FX.25 will improve communication efficiency while still being compatible with existing packet equipment. The satellites also occasionally run GMSK/FX.25 modulation experiments at 9600 baud.

In addition to Castor and Pollux, Endeavour also deployed student satellites from the University of Texas and Texas A&M. The tiny picosatellites, christened BEVO-1 and AggieSat2, respectively, are part of an ambitious experiment that will ultimately culminate in autonomous docking of picosats in orbit. For this mission, however, BEVO-1 and AggieSat2 launched as one unit and then separated to collect position data and test a new NASA Global Positioning System receiver known as DRAGON.

BEVO-1 transmits Morse code beacons (20 WPM) or packet radio data telemetry at 437.325 MHz. AggieSat2 beacons at 436.250 MHz. The satellites primarily transmit 9600-baud packet telemetry when over the United States. As with Castor and Pollux, reception reports are welcome <<http://paradigm.ae.utexas.edu/ops/>>.

Orbiting at a relatively low altitude of 185 miles, these satellites should be easy to receive with standard FM transceivers and omnidirectional antennas. They should enjoy an operational life of 3-6 months and will likely re-enter the Earth's atmosphere within a year.

NBEMS Major Upgrade

Narrow Band Emergency Messaging System Update

This is a major update to the NBEMS software suite. Previous versions used a combination of flarq and vbdigi. This version uses flarq (with major revisions) and a newly released version of fldigi for windows. This version is identical for ALL Microsoft OS version. NBEMS runs on all OS versions after W98. Download the newest version of NBEMS here: www.w1hkj.com/NBEMS/.

If you previously downloaded previous versions of NBEMS you should uninstall the previous version using the Control Panel. Then download and unzip the new NBEMS suite. This zip file contains the required executables and support dynamic link libraries. The target directory is the default unzip directory. You can also install flarq and fldigi as separate applications. The system uses the computer soundcard as the modem and, other than a simple interface connection between the computer and transceiver, no additional hardware is needed.

It consists of the following applications comprise the NBEMS program suite for MS Windows:

This program WILL NOT WORK UNDER WINDOWS 98.

The setup program is a standard installer for windows. It will create desktop icons, and desktop menu entries including an "uninstaller.":

- fldigi-3.12.3_setup.exe - fldigi and flarq for all versions of Windows
- wrap-1.0.zip -_wrap for all versions of Windows

The applications are available for separate download for Linux and Puppy (see the respective web pages for fldigi and/or flarq).

Composing and sending emergency messages on NBEMS utilizes the same Outlook Express, Outlook, Windows Mail or Thunderbird email program used for Internet email, and is no more difficult than sending an email over the Internet. Messages just go over the radio instead, when the Internet or phone service is not reachable in an emergency.

You should be able to run the desired program by simply double clicking on the shortcut icon. Both fldigi and flarq require configuration parameters to be set before they will run correctly. fldigi allows you to fine tune your hardware to the software. If it seems overwhelming the first time you look at all of the configuration parameters, read and re-read the on-line help for guidance in setting the parameters.

However, the defaults are usually sufficient for almost all situations.

This version of flarq IS NOT compatible with previous versions earlier than 3.11.6. Please read through the two on-line help manuals before starting to use these applications.

5G1B Net Schedule

6:30PM 4007 kHz USB

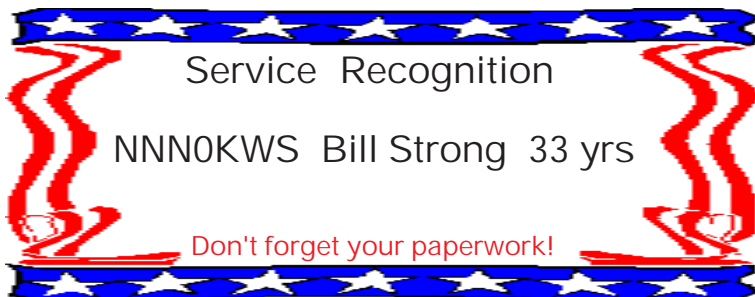
Day	NECOS	Tfc Rep
Sun.	XYA	XEE
Mon.	XEE	XEE
Tue.	BQH	BQH
Wed.	KZC	KZC
Thu.	SXU	SXU
Fri.	???	OCF

Sat. Rotating Duty (see below)

Don't be bashful, if the net has not been called by the net control station within 2 minutes, jump in and start things rolling.



NNN0AAT Frank Karnauskas 8/6
 NNN0AVS Don Drusch 8/10
 NNN0BJJ Curt Dahleen 8/31



Service Recognition

NNN0KWS Bill Strong 33 yrs

Don't forget your paperwork!

Saturday NECOS / TREP Schedule

	NECOS	TREP
Aug 15	XYA	XEE
Aug 22	XEE	XEE
Aug 29	BQH	BQH
Sep 5	KZC	KZC
Sep 12	SXU	SXU
Sep 19	XYA	XEE
Sep 26	XEE	XEE
Oct 3	BQH	BQH



“Nothing can stop the man with the right mental attitude from achieving his goal; nothing on earth can help the man with the wrong mental attitude.”

Thomas Jefferson

First Navy Jack Flag

The U.S. Navy is relying on a historic icon to remind the world of America's strength and courage. The rattlesnake has been a favorite symbol of independence throughout America's history. Adopted as a uniquely American icon by early patriots, such as Benjamin Franklin, the rattlesnake represents American unity. Individually, its rattles have no sound, but united they can be heard by all. And while it does not strike unless threatened, once provoked, the deadly rattlesnake never surrenders.

The rattlesnake was used as a symbol of resistance to British repressive acts in Colonial America. Flags bearing rattlesnakes and bearing the simple warning



“Don't Tread on Me” were flown on the first ships of the Continental Navy in the Delaware River in 1775.

Today, as America faces unprecedented threats, this historic symbol of our founding has emerged as a powerful reminder of our origin and true courage. Since May 2002, all U.S. Navy ships have flown the First Navy Jack from 8 a.m. to sunset daily while in port. The temporary substitution for the Union Jack represents a historic reminder of the nation's and Navy's origin and will to persevere and triumph during the global war on terrorism.

BT OVER

Test Your Analytical Skills

A Lucky Problem

Professor Flunkum challenges you to write a math expression, using seven's 7's, that will equal 100. You have 7 minutes to pass this test.

Answer in the next issue of the Minnesota MARSGRAM

Solution for July Test

What two words, formed from different arrangements of the same eight letters can be used to complete the sentence below?

_____ to say, the tension at the small shop
 _____ a great deal when the missing check turned up.

Answer: Needles, Lessened